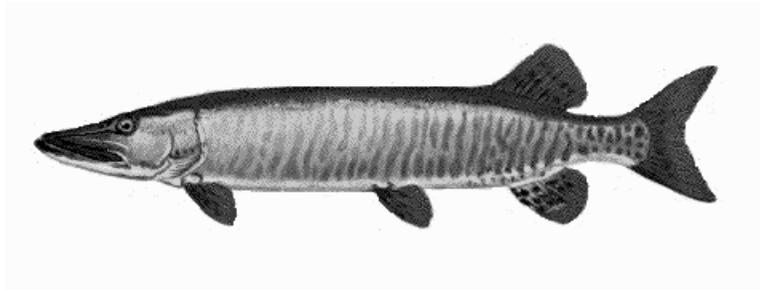


Wisconsin Department of Natural Resources
2012-2013 Ceded Territory
Fishery Assessment Report



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Administrative Report # 75

Treaty Fisheries Assessment Unit
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Walleye illustration Virgil Beck

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INTRODUCTION

The northern portion of Wisconsin, encompassing 22,400 square miles and including all or parts of 30 counties, was ceded by the Lake Superior Chippewa Tribes to the United States in the Treaties of 1837 and 1842 (Figure 1). Although the lands were ceded to the United States, the Chippewa Tribes retained hunting, fishing, and gathering rights throughout this area (USDI 1991). The Wisconsin Ceded Territory contains 77% of Wisconsin's lakes accounting for 53% of the total inland lake surface acreage in Wisconsin (Staggs et al. 1990). Of lakes within the Ceded Territory, over 900 contain walleye (*Sander vitreus*) and more than 600 contain musky (*Esox masquinongy*), and the vast majority of naturally reproducing walleye and musky populations are found within the Ceded Territory.

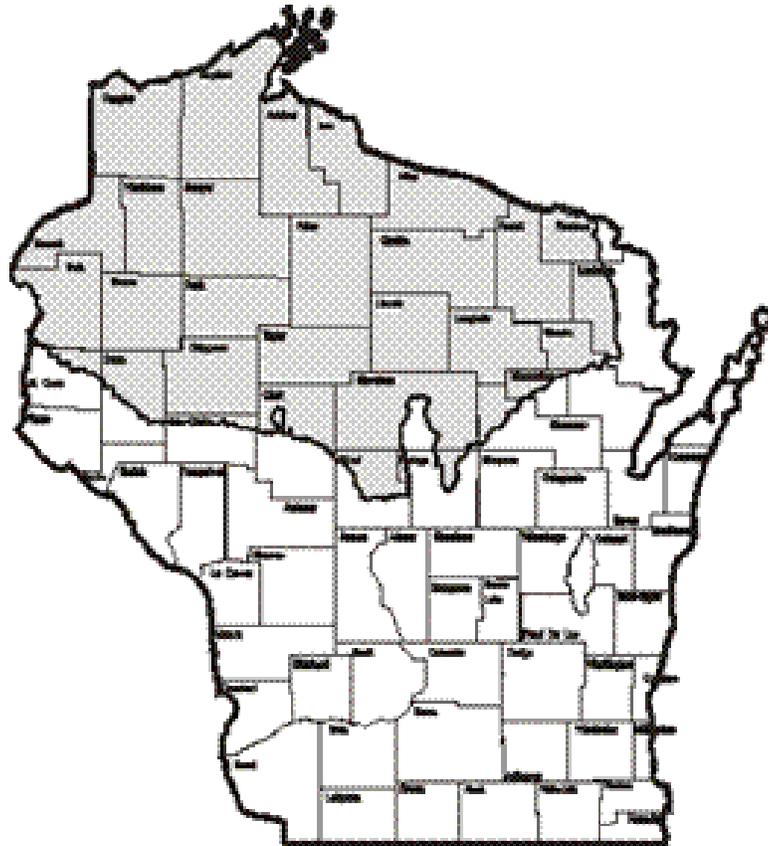


Figure 1. Map of Wisconsin showing the Ceded Territory (shaded).

Walleye and muskellunge are tremendously popular with Wisconsin anglers and are important economically. Chippewa tribal members rely on these same fisheries for preservation of their cultural heritage and as a food source. In 1983, the United States Court of Appeals for the Seventh Circuit affirmed the rights of six Wisconsin Chippewa Bands (Bad River, Lac Courte Oreilles, Lac du Flambeau, Sokaogon, Red Cliff, and St. Croix) to fish off-reservation waters in the Wisconsin Ceded Territory. Tribal fishing uses traditional methods (e.g. spearing and netting) as determined by Treaties of 1837 and 1842 between the Bands and the United States government. Since affirmation of tribal fishing rights in 1983 the Wisconsin Department of Natural Resources (WDNR) has worked to integrate tribal harvest opportunities with sport fisheries in the Ceded Territory.

To facilitate and manage shared tribal and recreational angler harvest, an intensive data collection and analysis effort began in 1987. The program evolved as knowledge of unique aspects of the Ceded Territory shared fisheries increased, and developed into the current program in 1990. The primary goal is to collect information essential to protecting Ceded Territory fish populations from over-exploitation by the combined tribal and recreational fisheries.

As part of this effort WDNR works with the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) to establish safe harvest quotas for walleye and muskellunge and to monitor the shared fisheries throughout the Ceded Territory. The majority of tribal harvest occurs during spring while walleye and muskellunge are congregated in shallow water to spawn and are readily taken by spear. A smaller number are harvested throughout the remainder of the year with a variety of capture methods including spearing, gill netting, fyke netting, set-lining, and angling. Netting and spearing are highly efficient methods and, unlike low efficiency methods such as angling, are not self-regulating (Beard et al. 1997, Hansen et al. 2000). Based on the inclusion of high efficiency tribal harvest in these fisheries, over-exploitation is a strong possibility in the absence of intensive management and could result in long-lasting and potentially irreversible damage.

Wisconsin DNR gathers data from a representative sample of lakes throughout the Ceded Territory each year in order to assess abundance and stability of walleye populations. Walleye populations are evaluated by WDNR using three primary methods: spring adult and total population estimates, fall age-0 (young-of-year) relative abundance estimates, and creel surveys of angler catch and

harvest. When combined, these methods provide information on the current harvestable population, an indication of the future harvestable population, and the degree of exploitation in the walleye fishery. Wisconsin DNR also conducts muskellunge and black bass *Micropterus* spp. population estimates each year and estimates harvest of these species via creel surveys; WDNR does not quantify recruitment of these species via young-of-year (YOY) surveys.

Population estimates are critical to the management of Ceded Territory fisheries. Accurate population estimates allow calculation of “safe harvest” levels that allow harvest while minimizing the potential of jeopardizing a species’ future abundance or persistence.

Creel surveys provide vital information about the use of fisheries by recreational anglers, including angling effort, catch, and harvest; Estimates from surveyed lakes can be extrapolated across larger areas (e.g. Ceded Territory). When coupled with population estimates, creel harvest data can be used to estimate angler exploitation for individual species. The WDNR treaty fisheries program focuses primarily on game species (walleye, muskellunge, largemouth *Micropterus salmoides* and smallmouth *Micropterus dolomieu* bass, and northern pike *Esox lucius*), but creel information on all species is recorded.

In support of this effort, data is collected and provided by GLIFWC and the United States Fish and Wildlife Service (USFWS) which conduct spring adult population estimates and fall age-0 surveys on additional lakes each year. Tribal harvest data is made available by GLIFWC which censuses open-water tribal harvest of all species and conducts periodic creel surveys to assess winter harvest of muskellunge through the ice.

This annual report summarizes WDNR efforts related to management of the shared Ceded Territory fishery from early 2012 through early 2013. In doing so, it reports on one ‘annual cycle’ of work related to management of these fisheries. The typical annual cycle begins with establishment of safe harvest levels prior to spring spearing activities, includes conducting creel surveys, population estimates, and YOY walleye surveys on selected lakes, and results in summarization of tribal and angler exploitation rates for Ceded Territory lakes¹.

¹ For the purposes of this report ‘Tribal’ refers to catch and harvest by traditional methods used by tribal fishers (e.g. spearing and netting); ‘Angler’ indicates catch and harvest by hook and line, and may include tribal members angling during open seasons if interviewed during creel surveys.

METHODS

Estimation of Population Size

With more than 900 walleye lakes and 600 muskellunge lakes in the Wisconsin Ceded Territory it is logistically impossible to obtain precise population estimates from all lakes in a single year. In addition fish populations in general and walleye populations in particular are extremely variable and can change dramatically from year to year. Therefore, WDNR selects a number of lakes each year for walleye population estimates and corresponding nine-month creel surveys². The lakes sampled by the WDNR within the Ceded Territory during 2012-13 were chosen using a stratified random design considering size, historic level of tribal harvest, and primary walleye recruitment source. Of the lakes sampled each year, four are 'trend lakes' which are evaluated every three years to provide meaningful data on temporal trends within walleye populations; trend lakes sampled in 2012 were Grindstone (Sawyer Co.), Plum (Vilas Co.) and Middle Eau Claire (Bayfield Co.) lakes. In addition, at least one large lake or lake chain is chosen to be surveyed each year. In 2012 the Rice River Flowage Chain (includes Rice River Fl., Lake Nokomis and Bridge lakes, Lincoln/Oneida Co.), Big Round (Polk Co.), Caldron Falls (Marinette Co.), Presque Isle Chain (Averill, Presque Isle and Van Vliet lakes), Big Sand, Lac Vieux Desert (Vilas Co.), Long (Chippewa Co.), and Prairie (Barron Co.) lakes were large waters sampled.

The continuing randomized survey of lakes throughout the history of this program (Appendix A) provides data necessary for successful management of the shared fisheries. Data from lake surveys is used to estimate walleye population size and derive safe harvest levels, estimate tribal and angler harvest and exploitation rates, examine temporal and spatial trends in walleye populations and angler effort, and maintain up to date characterizations of population status for each lake.

Walleye

Walleye spawning population estimates³ for various lakes in the Ceded Territory were made using a standard mark-recapture methodology. Walleyes were initially captured for marking using fyke

² Creel surveys are conducted from the first Saturday in May through early March and correspond to the Wisconsin open season for game fish species. The month of November was excluded from analyses due to poor ice conditions and low angler effort.

³ Spawning population estimates may be less than adult population sizes if all adults do not spawn in every year. The degree to which this occurs in Wisconsin is currently unknown and may vary by lake.

nets shortly after ice out. Each fish was measured (total length; inches and tenths) and marked with one of two lake specific fin clip; two clips were used in each lake to classify fish as either 'adult' or 'juvenile'. Adult (mature) walleyes were defined as all fish 15" or longer and all fish for which sex could be determined (regardless of length). Walleye of unknown sex less than 15" long were classified as juvenile (immature). In lakes where previous estimates of walleye spawner abundance were available, the goal was to mark 10% of the anticipated spawning population. Where no preliminary abundance estimate was available, at least one walleye per acre of lake surface area was targeted for marking. Marking continued until the target number was reached or spent females began appearing in the fyke nets.

Two electrofishing recapture runs were conducted in each lake and the data used to estimate abundance of the spawning or total walleye population. Due to rapid dispersal and decreased vulnerability of adult walleye following spawning, only mark-recapture results from the first electrofishing recapture run were used to estimate spawning walleye abundance; results from the second electrofishing recapture run were used to augment those results when estimating total walleye population abundance.

Walleyes were initially recaptured with AC electrofishing gear within one week (typically 1-4 days) after netting and marking were completed. In each lake the entire shoreline (including islands) was sampled to ensure equal vulnerability of marked and unmarked walleyes to capture. All walleyes in the captured were measured and examined for marks; in most lakes any unmarked walleyes collected in the first electrofishing run were fin clipped accordingly for the lake and fish maturity. A second whole-shore electrofishing recapture run was conducted approximately 1-4 weeks after the first electrofishing run.

Based on electrofishing recapture data, population estimates were calculated with the Chapman (1951) modification of the Petersen Estimator as:

$$N = \frac{(M + 1)(C + 1)}{(R + 1)}$$

where N was the population estimate, M was the number of fish marked and released, C was the total number of fish captured and examined for marks in the recapture sample, and R was the total number of marked fish observed in C.

The Chapman Modification method was used because it provides more accurate population estimates in cases when R is relatively small (Ricker 1975). Walleye population and variance estimates

were calculated by length-class ($\leq 11.9''$, $12-14.9''$, $15-19.9''$, and $\geq 20.0''$) and summed accordingly to estimate adult and total walleye abundance.

Fish population size structure is described using proportional stock density (PSD) and relative stock density (RSD) as reviewed by Anderson et al. (1996). Walleye size data were analyzed to compare proportions of both quality (PSD) and preferred (RSD) length fish gathered in spring surveys (April and May); data were limited to spring surveys to minimize bias associated with fish growth throughout the year and to best characterize the size structure of walleye populations near the outset of the harvest seasons. For the purpose of this report stock, quality and preferred walleye lengths were set at 12, 15 and 18 inches, respectively. Walleye length data were taken from WDNR statewide PSD/RSD database. Proportional stock density (PSD) is calculated as:

$$PSD = \frac{\text{number of fish } \geq 15 \text{ inches}}{\text{number of fish } \geq 12 \text{ inches}} \times 100$$

Relative stock density (RSD) is calculated as:

$$RSD = \frac{\text{number of fish } \geq 18 \text{ inches}}{\text{number of fish } \geq 12 \text{ inches}} \times 100$$

Muskellunge

Muskellunge population estimates were conducted over a two-year period, with marking in year-1 and recapture in year-2. In year-1, muskellunge were marked during fyke netting and electrofishing efforts throughout the sampling season. All muskellunge 20" and larger were given a primary fin clip (the same clip given to adult walleye and bass). Muskellunge less than 20" long were given an alternate fin-clip (generally top caudal). In year-2, muskellunge were recaptured using fyke nets in mid-May, to coincide with the muskellunge spawning season. Adult muskellunge population estimates (considered all sexable fish of any size, plus all fish of unknown sex $\geq 30''$ at the time of marking) were made using Chapman modification of the Petersen estimate:

$$N = \frac{(M + 1)(C + 1)}{(R + 1)}$$

Where N is the estimated adult population size; M is the total number of muskellunge marked in the lake in year-1 equal to or larger in length than the smallest sexable fish; C is the number of muskellunge re-captured in year-2, excluding fish smaller than the minimum length counted in year-1 plus 2 inches; and R is the number of marked fish recaptured (Wisconsin Technical Working Group 1999; Margenau and AveLallemant 2000).

Largemouth and Smallmouth Bass

In a subset of sampled lakes designated as “comprehensive survey” lakes, largemouth *Micropterus salmoides* and smallmouth *Micropterus dolomieu* bass encountered during fish surveys were marked by fin clips. Bass larger than 12.0” were given the same primary (adult) fin-clip as was given to walleye in the same lake; bass 8.0- 11.9” were given the secondary (juvenile) fin-clip for the lake. In these lakes, fyke nets were set just after ice-out in the spring and again after the first electrofishing recapture run. A total of four electrofishing surveys were conducted in each lake. The first electrofishing run was conducted within a week of pulling the early fyke nets. The second run was conducted approximately two weeks after the first electrofishing run. Third and fourth electrofishing runs were conducted at approximately weekly intervals thereafter between mid-late May and mid-June. The entire shoreline of the lake (including islands) was sampled. Bass populations were estimated after both the third and fourth runs. For each bass species population estimates were calculated for various size classes (8.0-13.9”, 14.0-17.9” and ≥ 18.0 ”) using the same Chapman modification of the Petersen estimator as described for walleyes. The recapture run yielding the population estimate with the lowest coefficient of variation is reported.

Establishment of Safe Harvest

The Wisconsin joint fishery is managed by calculating total allowable catch for walleye and muskellunge on a lake-by-lake basis. Angler bag limits ranging between 1 and 5 walleye/day in the Ceded Territory are set on an annual basis using a “sliding bag-limit” system in which bags are determined based upon tribal declarations and harvest (Appendix B). “Safe harvest” is set such that the risk of exceeding 35% exploitation for walleye or 27% for muskellunge is less than 1-in-40 (Hansen 1989;

Hansen et al. 1991). This risk-management system differs from a quota system, which would potentially close fisheries once a harvest cap was reached.

Safe harvest levels are set on all Ceded Territory walleye and muskellunge lakes using the most accurate population estimates available. The most reliable estimates are clearly taken from mark-recapture estimates performed in the same year for which safe harvest is calculated. However, because the temporal overlap of the spearing season and spring population estimate sampling make this logistically impossible, these population estimates are used to estimate abundance for the following two years. In addition, given the year-to-year variability associated with fish populations, safety factors are incorporated to account for the largest potential decrease between years (Hansen et al. 1991).

Population estimates older than two years are not considered to accurately represent a lake's current population and are not directly used to set safe harvest. In this case, an estimate is calculated from a regression model using lake acreage as a predictor of population abundance (Hansen 1989). Each year new population estimates are incorporated into the regression model but no estimates are removed.

Lakes with multiple population estimates are averaged before being entered into the regression model. Three regression models are used depending on the primary source of walleye recruitment in the lake (Nate et al. 2000). Separate models are used for: (A) lakes sustained primarily by natural reproduction (NR; Figure 2), (B) lakes sustained primarily through stocking efforts (ST; Figure 3), and (C) lakes with low density populations maintained through intermittent natural reproduction (REM; Figure 4). Refer to Appendix C for a complete description of recruitment code designations used for lakes throughout the Wisconsin Ceded Territory. These models are used to set safe harvest yearly for the majority of the walleye lakes in the Ceded Territory.

A similar method is employed to set safe harvest for muskellunge. Because muskellunge mark-recapture surveys are conducted over a two year period, a population estimate for a given lake is employed to directly set safe harvest only once. In the absence of a recent population estimate, a regression model is used to make an estimate of muskellunge abundance. As with walleye, population predictions in this model are based on lake acreage, but a single model is used for all muskellunge waters in the Ceded Territory (Figure 5).

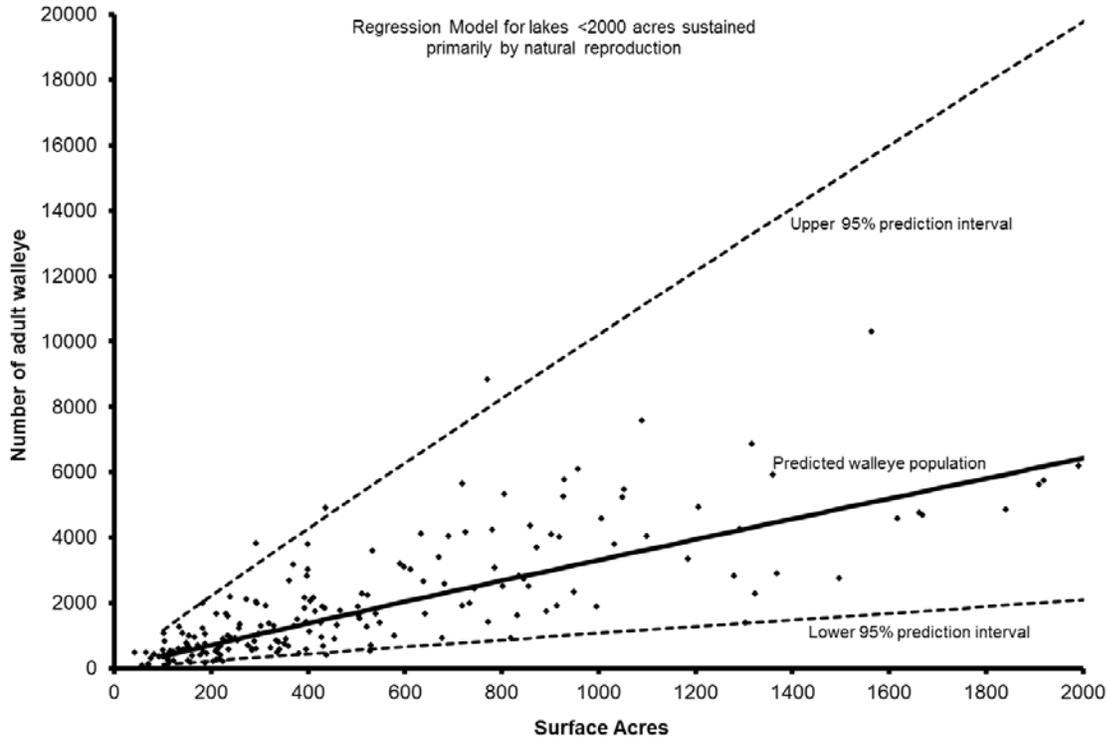


Figure 2. Regression model used to set 2012 safe harvest levels for lakes sustained primarily by natural reproduction (applies to all lake sizes; only lakes <2000 acres are shown for illustrative clarity).

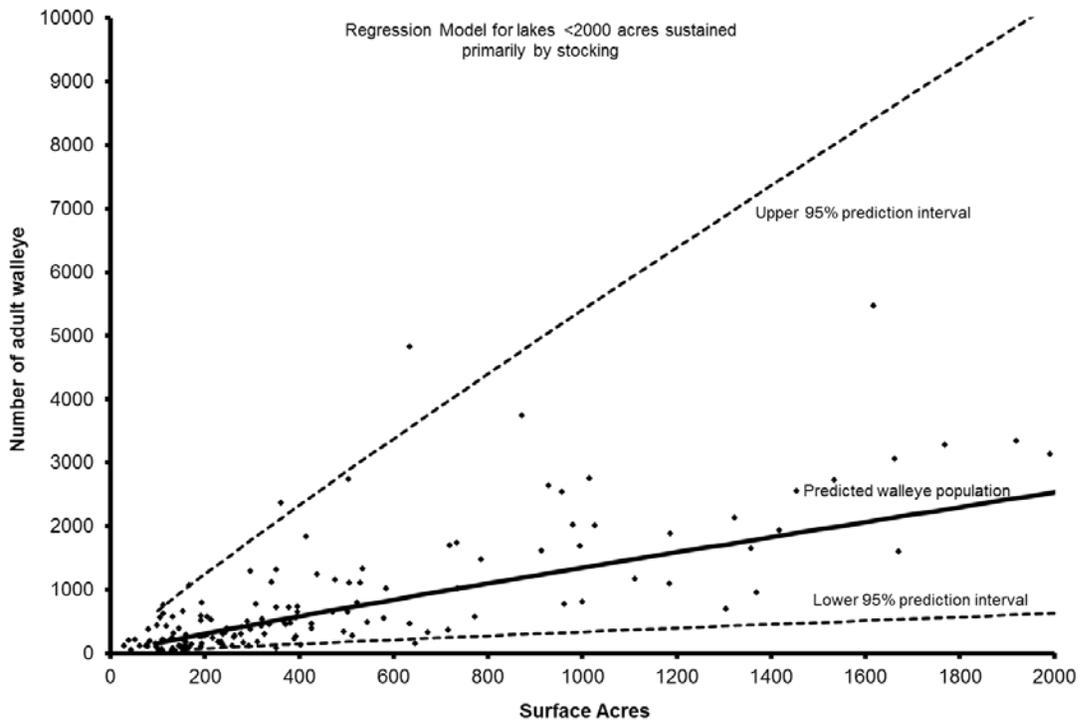


Figure 3. Regression model used to set 2012 safe harvest levels for lakes <2000 acres sustained primarily by stocking (applies to all lakes; only lakes <2000 ac. are shown for illustrative clarity).

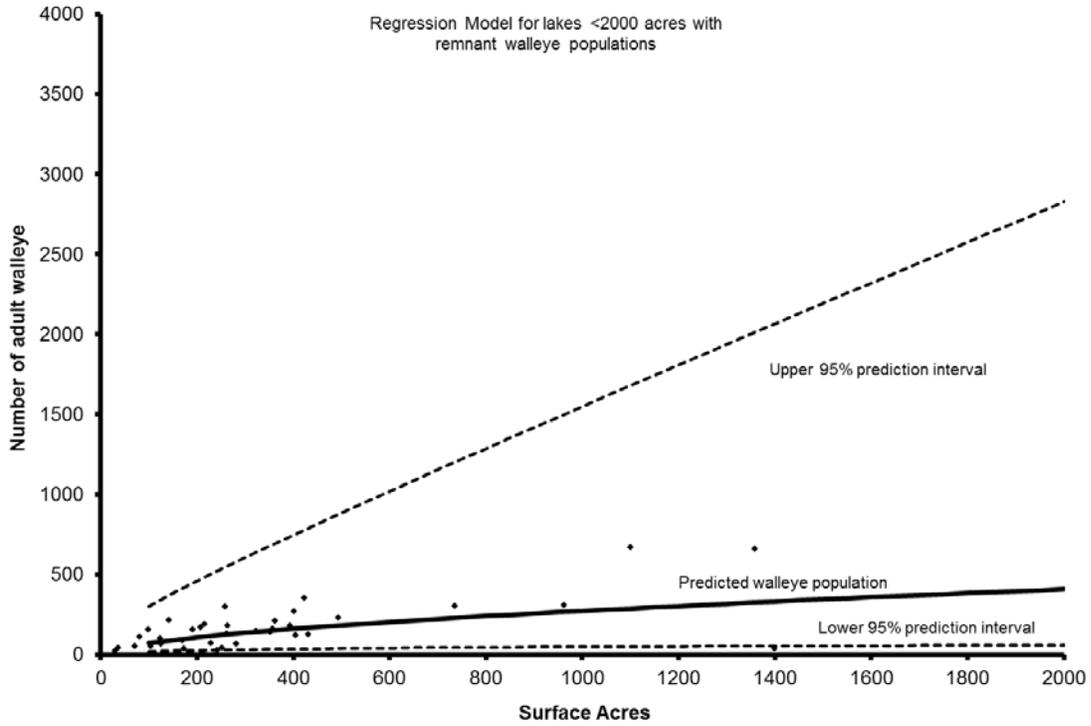


Figure 4. Regression model used to set 2012 safe harvest levels for lakes <2000 acres with remnant walleye populations (applies to all lakes; only lakes <2000 acres are shown for illustrative clarity).

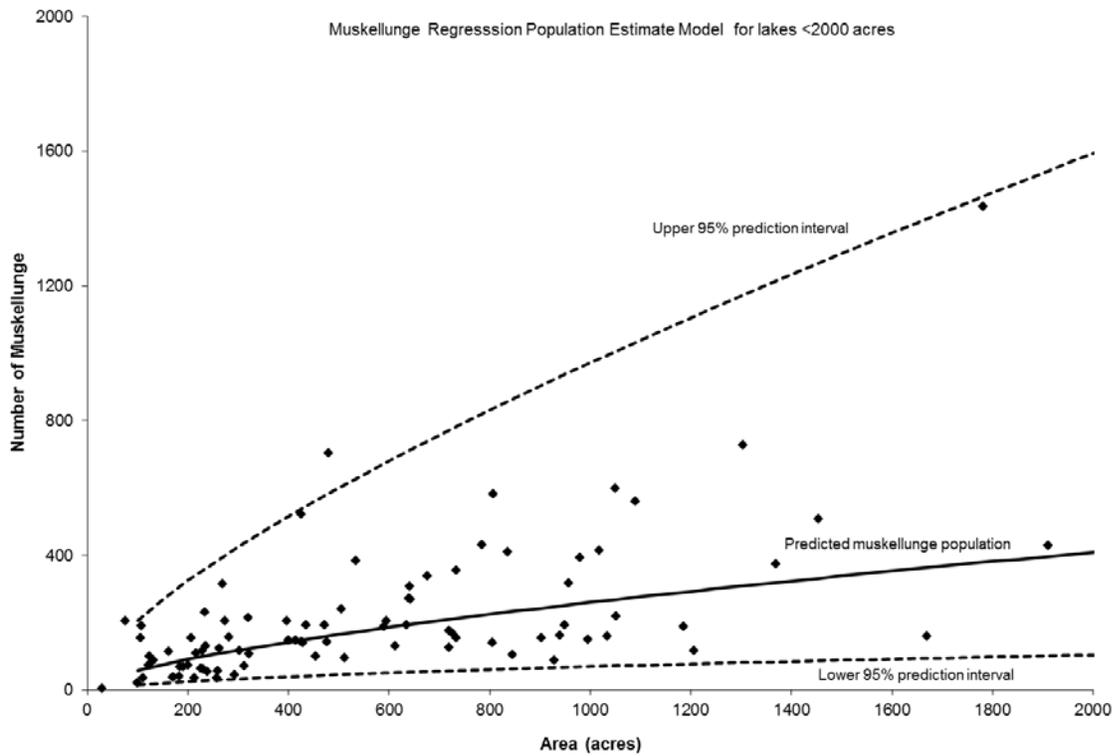


Figure 5. Regression model used to set 2012 safe harvest levels for muskellunge populations in lakes <2000 acres (applies to all lakes; only lakes <2000 acres are shown for illustrative clarity).

Estimating Fishing Effort and Harvest

Tribal Harvest and Exploitation

In lakes where current walleye population estimates are available, tribal harvest numbers are used in conjunction with population estimates to estimate tribal exploitation of walleye populations. Tribal harvest numbers for individual lakes are supplied to WDNR by GLIFWC and encompass all tribal harvest methods used (e.g. spring or winter spearing, netting). Tribal exploitation is estimated by dividing the total tribal walleye harvest within each lake by the estimated adult walleye population size for that same lake.

Angler Harvest and Exploitation - Creel Surveys

Creel surveys are generally conducted each year in the same lakes in which a walleye population estimate is done. Coordinating efforts in this way allows for year-long recovery in the creel of fish marked during spring population estimates, and subsequently allows for estimation angler exploitation of walleye.

WDNR creel surveys use a random stratified roving access design (Beard et al. 1997; Rasmussen et al. 1998). The surveys were stratified by month and day-type (weekend / holiday or weekday), and creel clerks conducted their interviews at random within these strata. Surveys were conducted on all weekends and holidays, and two to three randomly chosen weekdays per week. Angler effort was recorded twice daily based on instantaneous counts of angler activity.

Clerks counted the number of anglers and recorded effort, catch, harvest, and targeted species from anglers completing their fishing trip. Clerks also measured harvested fish and recorded any fin-clips observed. Only completed-trip interview information was used for analyses. Information from interviews was expanded over the appropriate stratum to provide an estimate of total effort, catch, and harvest of each species in each lake for the year. Creel data were summarized according to lake size, population recruitment source and current state regulations (Appendix D). In cases where lakes were connected (as either defined or undefined chains), creel clerks were not necessarily present at each individual lake on a given day; however, during the interview clerks collected information specific to lakes within the chain thereby enabling creel related estimates to be determined for individual lakes.

Angling effort was estimated for each stratum and summed across all strata to estimate total angler effort for each lake (angler hours/lake). Angler catch and harvest (hours/fish) rates were calculated for each game fish species encountered, giving an indication of average angler success and providing an index of the relative abundance of each species. Species-specific catch and harvest rates were calculated using only species-specific fishing effort. General catch and harvest rates were calculated using total angler effort, regardless of the species targeted.

Tribal and angler walleye exploitation rates were calculated in lakes where adult population estimates and creel surveys were conducted. Angler exploitation rates for adult walleye were calculated by dividing the estimated number of marked fish harvested by the total number of marked fish present in the lake (R/M; Ricker 1975). Although anglers are able to harvest immature walleye in some waters, only adult walleye exploitation rates were calculated. Tribal exploitation was calculated as the total number of adult walleyes harvested divided by the adult population estimate (C/N; Ricker 1975). Total adult walleye exploitation rates were calculated by summing angling and tribal exploitation.

Young-of-Year Walleye Surveys

Electrofishing for YOY walleyes was done after sunset in early autumn, beginning when water temperatures had fallen below 70° F. In most cases, the entire shoreline of a lake was electrofished and all sub-adult walleyes were examined and measured. Two-sample t-tests were used to test various hypotheses: that YOY density (fish/mile shocked) observed in natural and stocked model lakes was equal during 2012, that within each recruitment model the YOY density observed in 2012 did not differ from the average over the previous 22 years (1990-2011), and that in stocked model lakes YOY density did not differ between those lakes that were stocked and those that were not stocked during 2012. A general linear model was used to evaluate the effects of recruitment model (natural or stocked), year, and the year*model interaction on YOY walleye/mile over time. The interaction term was evaluated as indicative of significant trends over time in YOY walleye/mile for lakes within one or both recruitment models.

Hansen et al. (2004) updated a previous analysis by Serns (1982) to establish a relationship between the number of YOY walleyes collected per mile of shoreline electrofished and their lake-wide density (#/acre) where:

$$\text{Density} = 0.0345 * (\text{Catch per mile})^{1.564}$$

The Hansen et al. (2004) metric of YOY density is used in evaluation of differences between various lake classes (e.g. Natural or Stocked recruitment model lakes). Use of the Hansen et al. metric for this purpose began with the 2006-2007 annual report; in years prior to 2006 the Serns index was used for the same purpose.

To assess any potential for natural reproduction, a portion of lakes classified as 'stocked', 'remnant', or where the primary component of year class strength is uncertain are selected to receive fish with an internal oxytetracycline (OTC) otolith mark. A proportion of the YOY fish sampled from these lakes in the fall were sacrificed to assess the relevant contribution of stocking to the number of surviving YOY fish and to provide evidence of any contribution by natural reproduction.

RESULTS AND DISCUSSION

Population Estimates and Densities

In 2012, spawning walleye populations were estimated in 34 lakes, ranging in size from 62 to 4,300 acres and representing a range of walleye recruitment categorizations and angler regulations (Table 1). Due to sample size restrictions, separate analyses were conducted to evaluate differences in spawner population size across (1) primary recruitment source (natural, stocked, or remnant; refer to Appendix C) and (2) angling regulations in place during the 2012-13 angling season. Statistical comparisons were made for spawner density (fish/acre) which provides a better comparative measure across lakes of varying size (relative to spawner abundance).

All population estimates were reviewed by a Technical Working Group (TWG) for reliability. Factors considered in determining reliability of estimates included numbers of fish marked and/or recaptured by sex and in total and coefficients of variation associated with derived estimates. In cases where population estimates are not deemed reliable by the TWG, estimates are rejected for use in setting safe harvest levels. For consistency across data groups, any population estimates rejected by the TWG for other purposes were also excluded from summaries and analyses presented in this report.

Table 1. Lakes surveyed by WDNR crews in spring 2012, with corresponding information on adult (spawning) walleye population abundance and density. Only lakes with population estimates accepted for use by the TWG are shown.

WBIC ¹	County	Lake	Acres	Size Limit (in)	Recruitment Code	Recruitment Model	Adult Pop. Estimate	Adult Density (#/Acre)
2406500	Ashland	Gordon	142	1>14	NR	Natural	371	2.61
2094300	Barron	Pokegama	506	15	C-NR	Natural	229	0.45
2897300	Bayfield	Crystal	111	15	C-NR	Natural	59	0.53
2351400	Chippewa	Long	1,052	Slot14-18	NR	Natural	3,030	2.88
2128100	Eau Claire	Altoona	840	15	NR	Natural	3,035	3.61
2318500	Iron	Randall	115	1>14	NR	Natural	322	2.80
1516401	Lincoln	Rice R Fl. Chain ²	3,764	15	NR	Natural	11,279	3.00
1595300	Oneida	Rainbow Fl.	2,035	15	C-NR	Natural	6,768	3.33
2391200	Sawyer	Grindstone	3,111	Slot14-18	C-NR	Natural	4,439	1.43
2339900	Vilas	Escanaba	293	28	NR	Natural	1,742	5.95
2328700	Vilas	Papoose	428	15	C-NR	Natural	1,031	2.41
1592400	Vilas	Plum	1,033	Slot14-18	NR	Natural	3,176	3.07
2956501	Vilas	Presque Isle Chain ³	1,571	1>14	NR	Natural	2,075	1.32
1018500	Vilas	Snipe	239	15	NR	Natural	997	4.17
2094600	Barron	Mud	577	15	C-ST	Stocked	266	0.46
2094100	Barron	Prairie	1,534	15	ST	Stocked	769	0.50
2661100	Barron	Sand	322	15	ST	Stocked	55	0.17
2897100	Bayfield	Diamond	341	Slot 20-28	C-ST	Stocked	158	0.46
2706800	Burnett	Big McKenzie	1,185	18	C-ST	Stocked	609	0.51
2169200	Chippewa	Round	216	15	C-ST	Stocked	92	0.43
651600	Florence	Emily	191	15	C-ST	Stocked	147	0.77
672900	Florence	Keyes	210	18	C-ST	Stocked	95	0.45
995000	Oneida	Julia	238	15	C-ST	Stocked	433	1.82
2627400	Polk	Big Round	1,015	18	ST	Stocked	1,090	1.07
2621100	Polk	Half Moon	579	18	ST	Stocked	270	0.47
2350500	Rusk	Chain	468	18	C-ST	Stocked	342	0.73
2166100	Taylor	Kathryn	62	15	ST	Stocked	62	1.00
1602600	Vilas	Big Sand	1,418	15	C-ST	Stocked	953	0.67
1631900	Vilas	Lac Vieux Desert	4,300	15	C-ST	Stocked	4,962	1.15
1602300	Vilas	Long	872	18	C-ST	Stocked	6,472	7.42
1881900	Vilas	Sparkling	154	28	C-ST	Stocked	285	1.85
672300	Florence	Sea Lion	125	15	O-ST	Remnant	33	0.26
2296500	Iron	McDermott	84	15	O-ST	Remnant	109	1.30
983500	Oneida	Emma	223	15	NR-2	Remnant	81	0.36

1 - WBIC is a Water Body Identification Code unique to each lake.

2 - Includes Rice River Flowage, Lake Nokomis, and Bridge Lake.

3 - Includes Averill, Presque Isle and Van Vliet lakes.

Spawning Adult Walleye Abundance

Adult spawning walleye abundance estimates averaged 1,642 walleye (1.8/acre) across all lakes with population estimates successfully completed during 2012 (Table 1). Average abundance estimates for natural-model lakes (Avg. 2,753, range 59-11,279) were greater than in stocked- (Avg.1,003, range 55-6,472) or remnant-model (Avg.74, range 33-109) lakes during 2012 (Appendix E). Spawning walleye abundance was lowest (33 adult walleye) in Sea Lion Lake, Florence County, and highest in the Rice River Flowage Chain, Lincoln County (11,279 adult walleye; Table 1).

Average spawner density estimates for natural-model lakes sampled in 2012 (Avg. 2.68/acre, range 0.45-5.95) was greater than in stocked- (Avg. 1.17/acre, range 0.17-7.42) or remnant- (Avg. 0.64/acre, range 0.26-1.30) model lakes (Appendix E). Spawning walleye density was lowest (0.17/acre) in Sand Lake, Barron County, and highest in Long Lake, Vilas County (7.42/acre; Table 1).

Consistent with most previous years, differences observed during 2012 in walleye spawner density between lakes in different recruitment classes (natural, stocked, or remnant) were statistically significant (General Linear Model, $P < 0.01$). Spawner densities observed in 2010 were greater in lakes dominated by natural recruitment than in stocked or remnant-model lakes (Tukey-Kramer LS Means, $P = 0.02$ and $P < 0.01$, respectively); no significant difference was found between mean spawner density in stocked and remnant-model lakes (Figure 8).

No significant differences in spawner density were noted between lakes with varying harvest regulation classes surveyed. In 2012 the majority of lakes included in the analysis had 15" minimum regulations in place (19 lakes), with only three 1>14" regulation classifications, six 18" minimum, two 28" minimum, three 14-18" protected slot and one 20-28" protected slot.

There is no statistically significant trend in walleye spawner density in natural-model lakes (GLM, $P = 0.49$) in the Ceded Territory since 1995⁴ (Figure 6). A significant downward trend in density of stocked-model walleye waters since 1995 was noted (GLM, Slope=-.064, $P = 0.022$; Figure 7). The observed statistical trend may not be 'real'; it is probably due to one exceptionally high density (12/acre) observed in Buckskin Lake, Oneida County in 1996. Although in the stocked model in 1996, Buckskin Lake showed substantive natural reproduction at least a few years prior (the lake was shifted from code

⁴ Data prior to 1995 was excluded due to a difference in the protocol used to select lakes for assessment (Hewett No Date)

ST to C-ST in 1993), and natural reproduction dominated in the lake by 1998 when it was moved to the natural recruitment model. The very high density observed in Buckskin Lake in 1996 was probably a function of ongoing natural recruitment at the time although that is not known for certain.

Excluding the three WDNR research lakes, 24 lakes sampled in 2012 had at least one historic WDNR adult walleye population estimate (Table 2). Of the 8 lakes or chains sampled in 2012 with historic population estimates in the natural recruitment model, only one showed an increased population abundance relative to the prior estimate, whereas seven had decreased populations relative to the prior estimate. Clam R. Flowage (Burnett Co.) showed the a population increase of 19 percent relative to the 1997 survey; Crystal Lake (Vilas Co.) showed the most marked population decline of 79 percent relative to the prior survey (2009). Of fourteen lakes sampled in 2012 with historic population estimates in the stocked recruitment model, none showed increased population abundance relative to the previous survey. Lake Nancy (Washburn Co.) showed the most marked population decrease of 97 percent relative to a 1998 survey. Lyman (Douglas Co.) and Sea Lion (Florence Co.) lakes were the only remnant-model lakes sampled during 2012 for which prior population estimates available. As remnant populations, both lakes have historically shown very low walleye abundance, although population levels in these two waters were reduced 45 and 25 percent, respectively, relative to the prior population surveys (done in 1996 and 2005, respectively). Stocking efforts were recently re-initiated in Sea Lion Lake.

Information in Table 2 is intended to present current walleye population levels concurrently with past observations, but is not suitable (nor intended) for defining or illustrating trends in walleye populations. Fish populations in general and walleye populations in particular are extremely variable and can change dramatically from year to year, making interpretation of values in Table 2 difficult at best. This inherent variability in walleye populations is readily evident in Table 2 where many of the lakes with more than two estimates show both positive and negative changes in population levels over time.

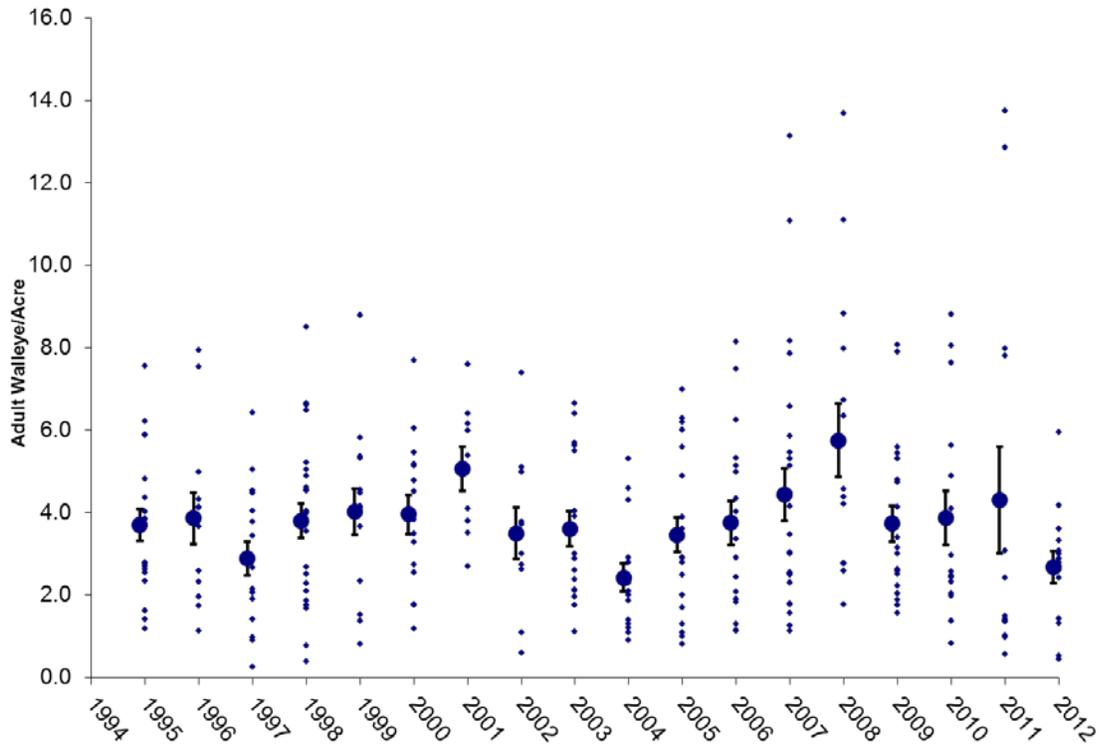


Figure 6. Adult walleye population density estimates recorded in Wisconsin Ceded Territory Lakes with populations sustained primarily by natural reproduction, 1995 – 2012. Small circles represent individual lakes; large circles represent yearly means (\pm SE).

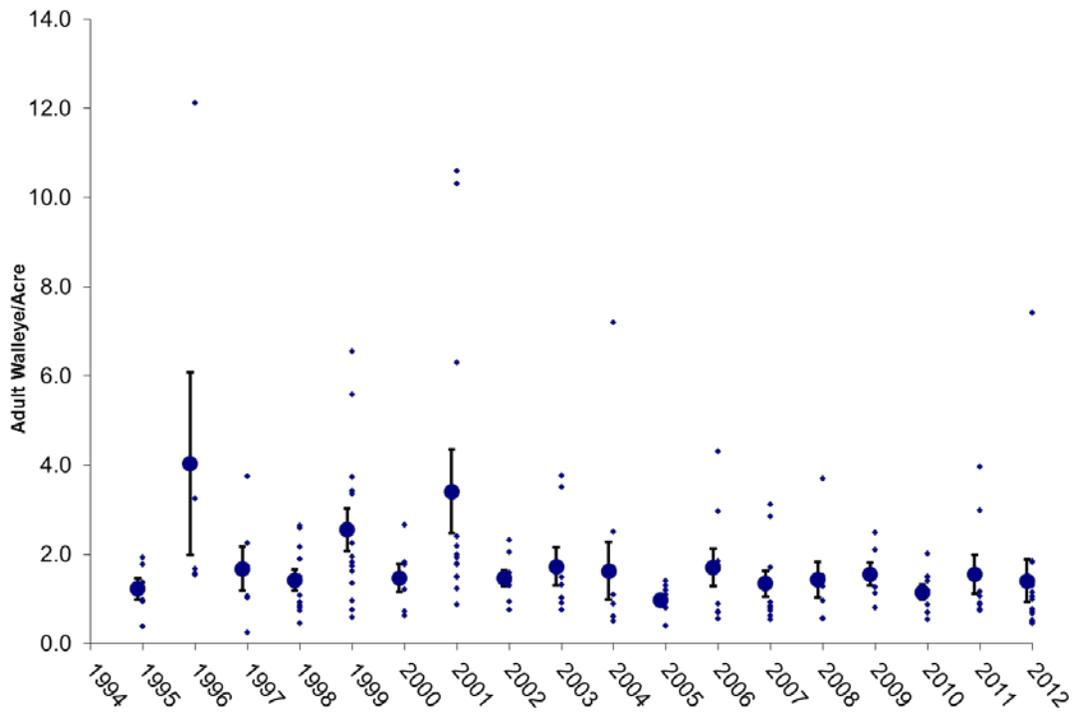


Figure 7. Adult walleye population density estimates recorded in Wisconsin Ceded Territory Lakes with populations sustained primarily by stocking, 1995 – 2012. Small circles represent individual lakes; large circles represent yearly means (\pm SE).

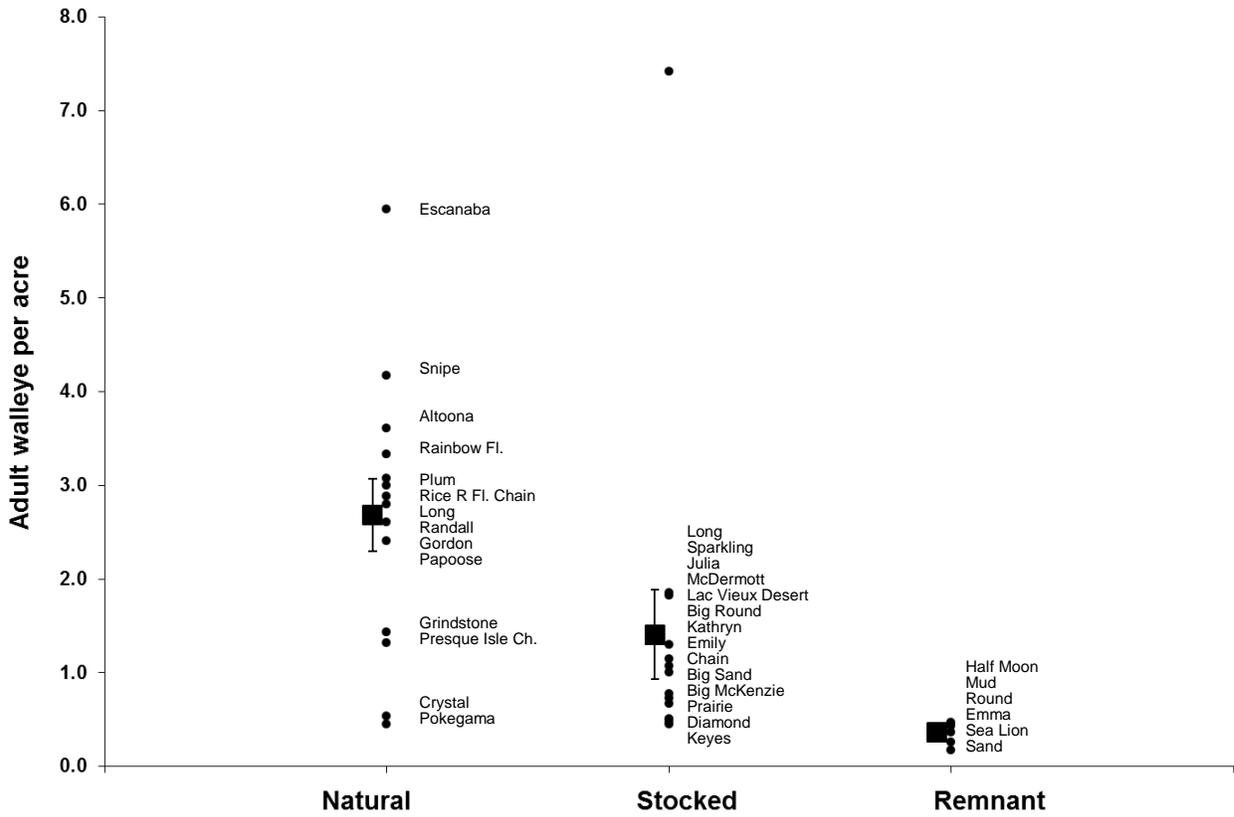


Figure 8. Adult walleye density estimates for lakes sampled by WDNR in spring 2012 based on primary population recruitment source.

Table 2. Comparison of current and historic walleye population estimates and percent change, by recruitment model, for lakes surveyed during 2012.

Lake	Acres	Year	Recruit. Code	Adult PE	Density (#/acre)	Percent Change
Natural Model Lakes						
Clam River Flowage	359	2012	NR	883	2.5	18.9
		1997	NR	743	2.1	58.9
		1991	NR	616	1.3	
Crystal	111	2012	C-NR	59	0.5	-78.8
		2009	C-NR	278	2.5	36.9
		2006	C-NR	203	1.8	-23.1
		2003	C-NR	264	2.4	42.7
		1996	C-ST	185	1.7	
Deer	156	2012	C-NR	63	0.4	-56.0
		1991	C-NR	138	0.9	
Long	1,052	2012	NR	3,030	2.9	-56.7
		2008	NR	7,083	6.7	
Papoose	428	2012	C-NR	1,031	2.4	-13.9
		2004	C-NR	1,187	2.8	46.3
		1997	NR	819	1.9	-37.3
		1994	NR	1,306	3.1	
Presque Isle Chain	1,571	2012	NR	2,075	1.3	-54.2
		1992	NR	4,527	2.9	
Rainbow Flowage	2,035	2012	C-NR	6,768	3.3	-16.5
		1998	NR	8,114	4.0	-7.2
		1990	NR	8,745	4.3	
Rice R Fl. Chain	3,764	2012	NR	11,279	3.0	-18.9
		1991	NR	46,982	3.7	
Stocked Model Lakes						
Big McKenzie	1,185	2012	C-ST	609	0.5	-44.9
		2007	C-ST	1,096	0.9	-52.9
		1996	C-	2,327	2.0	-40.0
		1990	C-	3,880	3.3	
Big Round	1,015	2012	ST	1,090	1.1	-71.4
		1997	C-ST	3,796	3.7	88.7
		1991	ST	2,012	2.0	
Big Sand	1,418	2012	C-ST	953	0.7	-60.0
		1994	ST	2,359	1.7	
Emily	191	2012	C-ST	147	0.8	-66.7
		2002	C-ST	442	2.3	
Half Moon	579	2012	ST	270	0.5	-14.4
		2006	ST	318	0.5	-55.6
		2001	ST	717	1.2	-25.5
		1991	C-	963	1.7	
Kathryn	62	2012	ST	62	1.0	-43.6
		2000	ST	110	1.8	
Keyes	210	2012	C-ST	95	0.5	-74.6
		2007	C-NR	358	1.8	0.8
		2000	NR	355	1.8	81.1
		1997	NR	196	1.0	

Table continued on next page.

Table 2. Continued.

Lake	Acres	Year	Recruit. Code	Adult PE	Density (#/acre)	Percent Change
Stocked Model Lakes (Continued)						
Lac Vieux Desert	4,300	2012	C-ST	4,962	1.2	-52.9
		2006	C-NR	10,505	2.4	
Long	872	2012	C-ST	6,472	7.4	-2.4
		2001	C-NR	6,650	7.6	159.6
		1991	NR	2,553	2.9	
Lake Nancy	772	2012	ST	41	0.1	-97.3
		1998	C-ST	1,447	1.9	169.0
		1993	C-ST	538	0.7	
Pokegama	506	2012	C-NR	229	0.5	-79.4
		2001	C-ST	1,108	2.2	
Prairie	1,534	2012	ST	769	0.5	-71.8
		2001	C-ST	2,724	1.8	
Sand	322	2012	ST	55	0.2	-92.4
		1999	C-ST	723	2.2	33.4
		1993	C-ST	542	1.7	
Sparkling	154	2012	C-ST	285	1.9	-57.1
		2006	C-ST	664	4.3	66.4
		1996	NR	399	2.6	
Remnant Model Lakes						
Lyman	403	2012	NR-2	227	0.6	-45.5
		1996	NR	454	1.1	
Sea Lion	125	2012	0-ST	33	0.3	-25.0
		2005	REM	54	0.4	

Spawning Adult walleye size structure

Spawning adult walleye populations were estimated for each lake by length class in both natural (Figure 9) and stocked (Figure 10) production model lakes. Natural model lakes generally had higher walleye spawner densities than stocked model lakes, although the size structure sampled in stocked lakes tended to be larger relative to that in natural model lakes, particularly those with the highest adult walleye densities.

In natural model lakes spawning walleye abundance was highly variable although the size structure was typically dominated by 14-20" walleye (Figure 9). The natural model lakes sampled had overall densities ranging from <1 to nearly 6 fish/acre. Six of 14 sampled lakes had walleye densities equal to or exceeding 3 fish/acre; Two of 14 sampled lakes had walleye densities exceeding 4 fish/acre. Walleye spawning in the 7-11.9 inch category were very limited in relative abundance in most natural production lakes sampled. It is unclear if the limited abundance of small adult walleye in these waters is

due to a lack of young fish recruiting into the population, fish simply not maturing at young ages (and smaller size), or some other factor.

In stocked model lakes spawning walleye abundance and size structures were less variable than that observed in natural model lakes (Figure 10). With the exception of Long Lake (Chippewa Co.; 7.4/acre), walleye densities observed in stocked model lakes were less than 2 adult fish/acre. Despite lower fish densities than those observed in natural model lakes, stocked model lakes generally had a high percentage (e.g. >50%) of the spawning population made up of relatively large fish (>15") available for angler harvest under general statewide regulations.

As is typical, remnant model lakes had very low adult population densities in 2012. All remnant model waters sampled during 2012 had adult walleye population densities less than 0.5 fish/acre. Also typical of remnant model waters, the size structure of the populations was typically dominated by larger walleye >15", and in some cases, >20" in length (Figure 11).

Data were available for calculation of PSD and RSD-18 for 34 natural, 18 stocked, and ten remnant-model lakes sampled in 2012 (Table 3). In lakes where walleye regulations involve a 15" minimum size limit, calculating PSD as the percent of stock sized fish over 15" essentially makes this value a comparative tool to evaluate the percentage of harvestable fish across lakes.

In natural model lakes observed PSD and RSD-18 values were highly variable, with PSDs ranging from 13 to 100 percent and RSD-18s ranging from 0 to 100 percent (Table 3). In stocked model lakes observed PSD and RSD values showed similar variability to natural model lakes (24-100 percent and 8-100 percent, respectively; Table 3). Remnant model lakes sampled in 2012 showed a high degree of variability in PSD and RSD values between lakes, similar to that noted for natural and stocked model lakes. In remnant model lakes PSDs ranged from 30-100 percent and RSDs ranged from 20-100 percent.

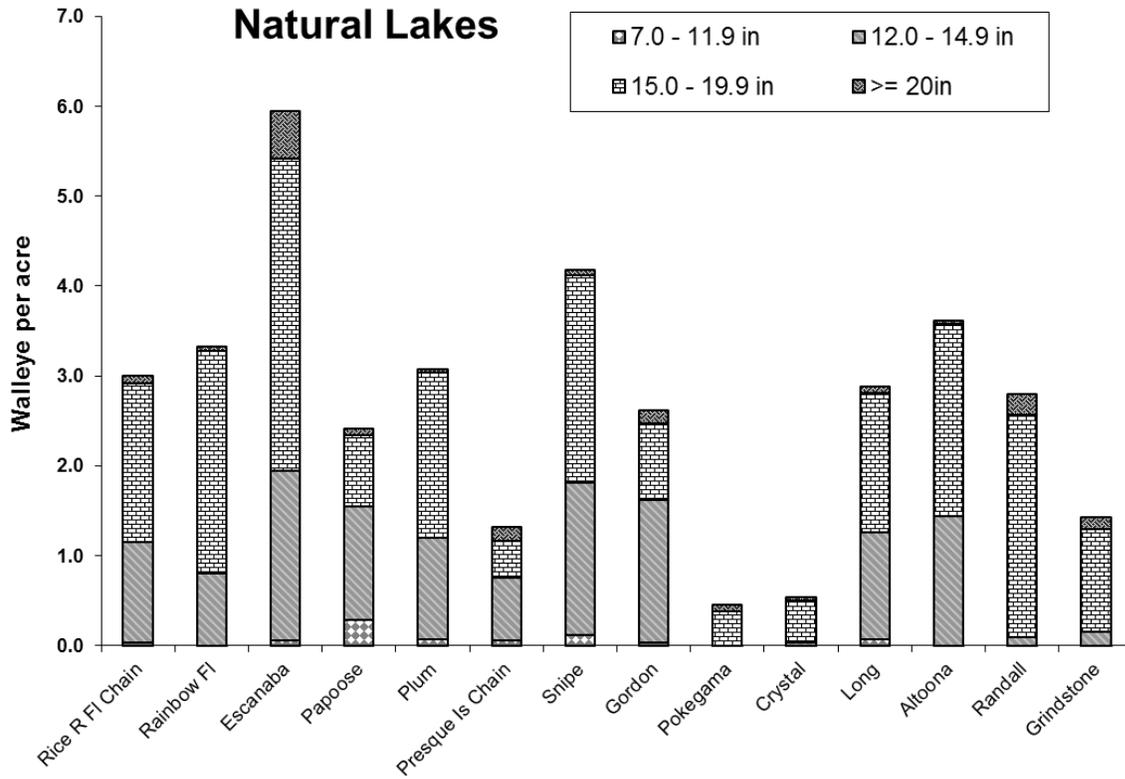


Figure 9. Size distribution of spawning walleye sampled in natural production model lakes during 2012.

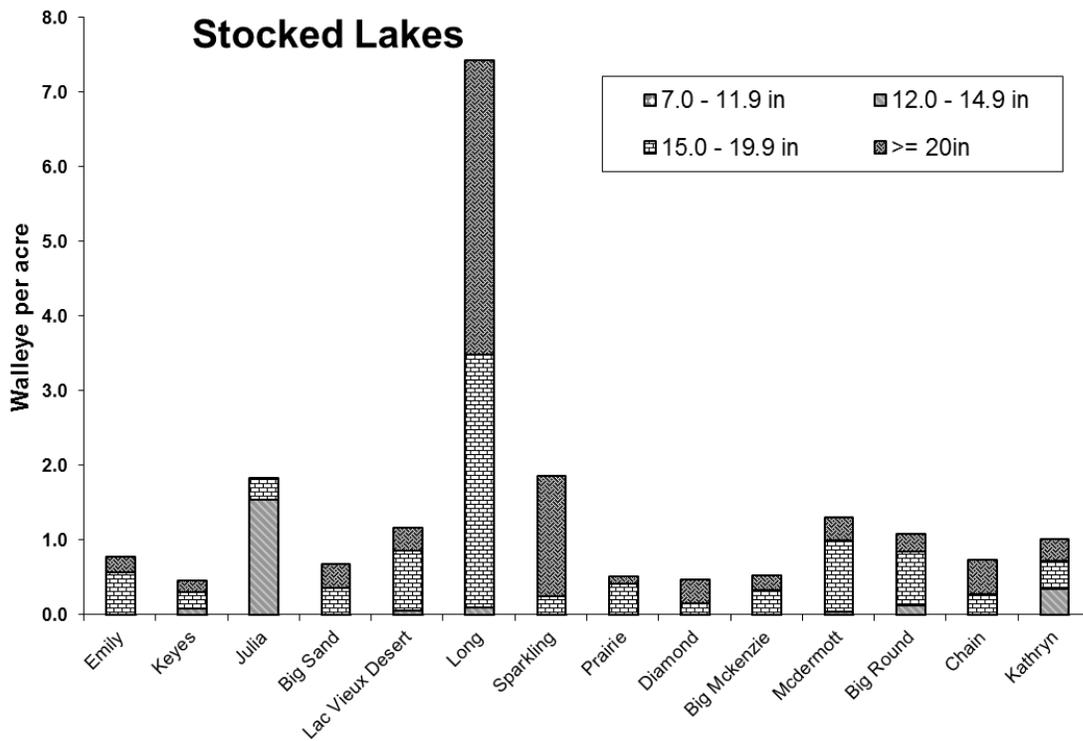


Figure 10. Size distribution of spawning walleye sampled in stocked production model lakes during 2012.

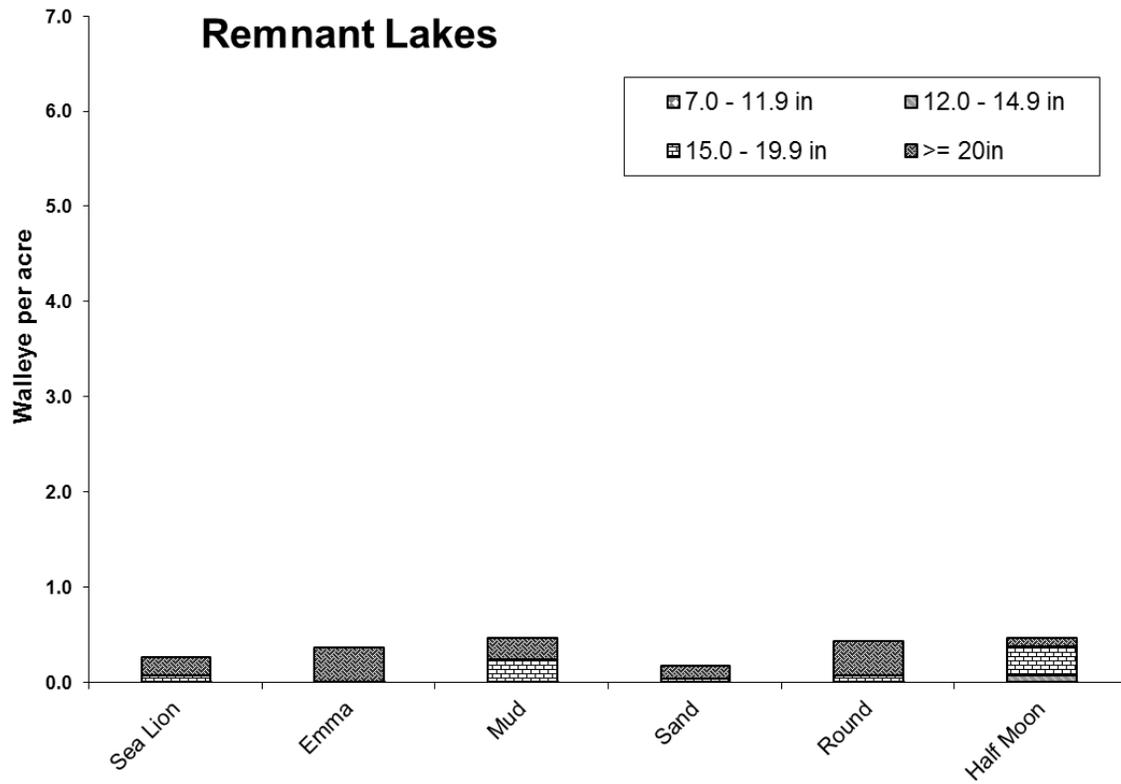


Figure 11. Size distribution of spawning walleye sampled in remnant production model lakes during 2012.

Table 3. Walleye Proportional and Relative Stock Density values for lakes surveyed in spring, 2012.

County	Lake	Acres	Recruitment Code	Walleye Regulation	PSD	RSD-18
Natural Recruitment Lakes						
Ashland	Gordon Lake	142	NR	1>14	47	4
Barron	Pokegama Lake	506	C-NR	15	100	41
Bayfield	Crystal Lake	111	C-NR	15	50	38
Chippewa	Long Lake	1,052	NR	14-18 Slot	38	17
Douglas	Dowling Lake	154	C-NR	15	100	100
Douglas	Lake Nebagamon	914	C-NR	15	41	7
Dunn	Tainter Lake	1,752	NR	15	23	5
Eau Claire	Altoona Lake	840	NR	15	30	0
Iron	Gile Flowage	3,384	NR	1>14	49	17
Iron	Pine Lake	312	NR	1>14	22	11
Iron	Randall Lake	115	NR	1>14	94	36
Iron	Turtle Flambeau Flowage	13,545	NR	No Minimum	48	9
Lincoln	Bridge Lake	411	NR	15	81	43
Lincoln	Lake Nokomis	2,433	NR	15	53	12
Oneida	Rainbow Flowage	2,035	NR	15	72	7
Polk	Indianhead Flowage	776	NR	15	75	25
Price	Crane And Chase Lake	86	NR	15	100	100
Price	Pike Lake	806	NR	No Minimum	32	10
Price	Round Lake	726	NR	No Minimum	34	8
Price	Turner Lake	149	NR	No Minimum	69	25
Rusk	Dairyland Reservoir	1,745	NR	1>14	13	0
Sawyer	Evergreen Lake	200	NR	15	42	34
Sawyer	Grindstone Lake	3,111	C-NR	14-18 Slot	87	20
Sawyer	Lac Courte Oreilles	5,039	C-NR	15	69	30
Sawyer	Lake Chippewa	15,300	C-NR	No Minimum	64	15
Sawyer	Mason Lake	190	NR	15	44	38
Sawyer	Radisson Flowage	255	NR	15	100	67
Sawyer	Windigo Lake	522	C-NR	No Minimum	87	46
Vilas	Averill Lake	71	NR	1>14	74	32
Vilas	Papoose Lake	428	C-NR	15	34	7
Vilas	Plum Lake	1,033	NR	Slot 14-18	67	12
Vilas	Presque Isle Lake	1,280	NR	1>14	29	9
Vilas	Snipe Lake	239	NR	15	29	3
Vilas	Van Vliet Lake	220	NR	1>14	76	39
Remnant Population Lakes						
Barron	Mud Lake	577	O-ST	15	93	58
Barron	Sand Lake	322	O-ST	15	100	85
Bayfield	Lake Ruth	66	O-ST	15	100	50
Douglas	Lyman Lake	403	NR-2	No Minimum	30	26
Marinette	Caldron Falls Reservoir	1,018	O-ST	15	98	81
Oneida	Emma Lake	223	REM	15	100	100
Polk	Half Moon Lake	579	O-ST	18	80	20
Price	Cranberry Lake	512	REM	15	71	21
Sawyer	Island Lake	67	O-ST	18	75	50
Vilas	Amik Lake	224	O-ST	No Minimum	75	34

Table continued on next page.

Table 3. Continued.

County	Lake	Acres	Recruitment Code	Walleye Regulation	PSD	RSD-18
Stocked Recruitment Lakes						
Ashland	English Lake	244	ST	15	83	83
Barron	Lake Chetek	770	C-ST	15	83	61
Barron	Prairie Lake	1,534	C-ST	15	86	35
Barron	Tenmile Lake	376	C-ST	15	75	31
Bayfield	Diamond Lake	341	C-ST	20-28 Slot	77	69
Bayfield	Lake Owen	1,323	C-ST	18	100	100
Burnett	McKenzie Lake	1,185	C-ST	18	90	88
Clark	Mead Lake	320	C-ST	15	33	8
Florence	Emily Lake	191	C-ST	15	100	93
Florence	Keyes Lake	210	C-ST	18	61	22
Forest	Crane Lake	337	ST	18	100	67
Iron	McDermott Lake	84	C-ST	15	91	54
Oneida	Lake Julia	238	C-ST	No Minimum	24	6
Polk	Big Round Lake	1,015	ST	18	73	31
Rusk	Chain Lake	468	C-ST	18	98	92
Rusk	Island Lake	526	C-ST	18	42	42
Sawyer	Spider Lake	1,454	ST	15	59	50
Washburn	Little Sand Lake	74	ST	15	100	100

In 2012, average size structure was generally smallest in natural model lakes, with comparable larger size structures observed in stocked lakes and remnant model lakes (Figure 12). Mean PSDs for natural, stocked, and remnant model lakes were 50, 76 and 79, respectively. Mean RSD-18s for natural, stocked, and remnant model lakes were 20, 47 and 56, respectively. Differences in PSD and RSD-18 values across lakes in various recruitment models could be caused by any number of potential factors including, but not limited to, high or low recruitment levels of younger/smaller fish, differing angler regulations, harvest patterns and harvest levels, or differences in survival or year class strength leading to differences in the relative abundance of quality (PSD, $\geq 15''$) or preferred (RSD, $\geq 18''$) sized fish in some lakes relative to others.

Mean annual PSD values in both natural and stocked model lakes are trending upward over time; the regression of natural model lakes over time has a slope of 1.2 ($p < 0.01$); the regression of stocked model lakes has a slope of 0.7 ($P = 0.03$; Figure 13). PSD and RSD values are highly correlated in both natural and stocked model waters over time ($r^2 > 0.8$), so the trends presented for PSD values are very similar to those observed for RSD values. The implication of increasing trends in PSD (and RSD) is that, over time, both natural and stocked model lakes are seeing an increased percentage of larger walleye in

the overall population. The observed trends in PSD values could be due to introduction and increased use of size selective fishing regulations over time (e.g. minimum or protective slot categories), declining recruitment of young fish into the population, increased growth rates, or other factors.

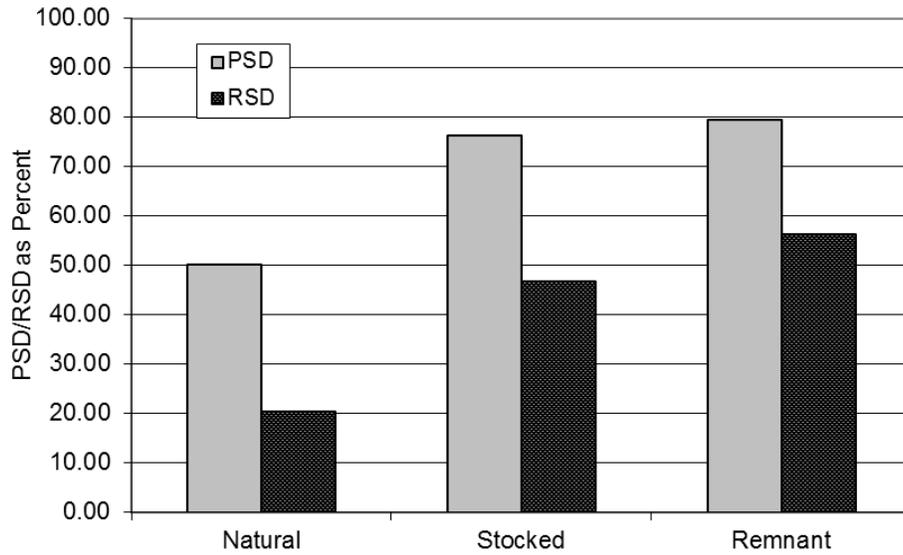


Figure 12. Comparison of mean PSD and RSD-18 values across lakes in various walleye recruitment models for lakes sampled in 2012.

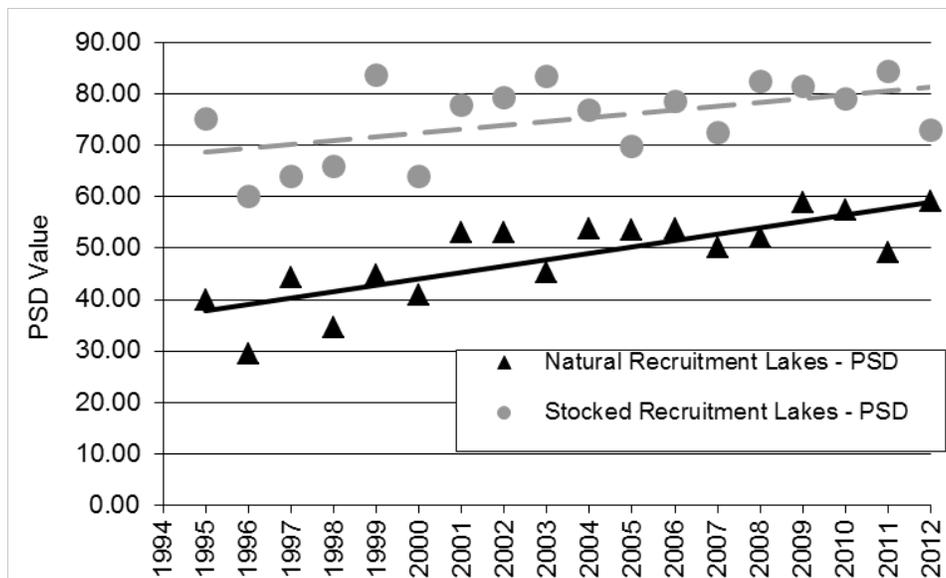


Figure 13. Trends in PSD values observed for walleye in Ceded Territory lakes since 1995.

Muskellunge Abundance

Adult muskellunge population and density estimates were completed in twelve Ceded Territory waters during spring 2012 (Table 4). Population estimates completed in 2012 reflect 2011 population numbers because of the two-year mark-recapture time span used to derive estimates. Muskellunge densities ranged between 0.04 and 0.72 adult fish/ acre and did not appear to be related to lake size or angler regulations (Table 4).

Bass Abundance

Largemouth bass population estimates were completed in three lakes in 2012; Smallmouth bass population estimates were completed in one lake during 2012 (Table 5). Estimated largemouth bass density was 2.8 fish per acre in Long Lake, 8.3/acre in Round Lake, and 12.7/ acre in Kathryn Lake (Table 5). The size structure of largemouth bass populations in all lakes was dominated by fish less than 14" in length (Figure 14). Smallmouth bass density was estimated to be 2.3 fish/acre in Long Lake during 2012 (Table 5) with a more diverse size structure than was typical of largemouth bass populations evaluated (Figure 14).

Table 4. Adult muskellunge population estimates completed in 2012 in the Wisconsin Ceded Territory. Regulations presented are for 2012.

County	Lake	Angler Regulation (inches)	Acres	Minimum length in PE (inches)		Adult PE	CV(%)	Total per acre
				Male	Female			
Ashland	English	28	244	22.0	28.0	176	35.9	0.72
Bayfield	Upper Eau Claire	40	996	30.0	30.0	97	19.8	0.10
Forest	Silver	40	329	23.0	30.0	67	21.2	0.20
Iron	Pine	40	312	20.5	30.0	106	18.3	0.34
Lincoln	Nokomis	40	2,433	27.5	29.5	107	19.2	0.04
Lincoln	Rice R Fl	40	920	27.5	29.5	41	19.2	0.04
Oneida	Bridge	40	411	27.5	29.5	18	19.2	0.04
Oneida	Pelican	50	3,585	23.5	30.0	241	14.1	0.07
Oneida	Two Sisters	40	719	30.0	30.0	65	32.0	0.09
Polk	Bone	50	1,781	26.5	26.0	916	16.7	0.51
Vilas	Big Arbor Vitae	40	1,090	24.0	30.0	449	19.8	0.41
Vilas	Irving	40	403	30.0	30.0	287	18.8	0.71

Table 5. Largemouth and Smallmouth bass population estimates for lakes sampled in the Wisconsin Ceded Territory in spring 2012.

County	Lake	Acres	Angler Regulation	Total PE	CV(%)	Total /acre	8.0-13.9" /acre	14.0-17.9" /acre	18.0"+ /acre
Largemouth Bass									
Chippewa	Long	1,052		2949	52	2.8	2.08	0.7	<0.1
Chippewa	Round	216		1798	27	8.3	6.17	2.2	<0.1
Taylor	Kathryn	62		786	34	12.7	11.84	0.7	0.2
Smallmouth Bass									
Chippewa	Long	1,052		2,444	16	2.3	0.7	1.2	0.5

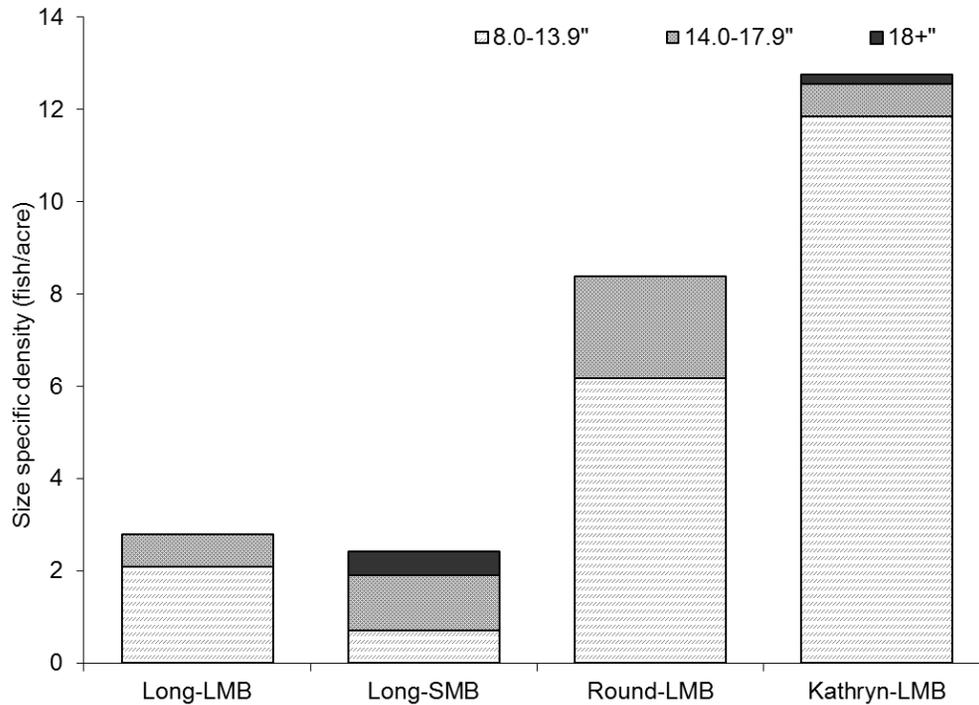


Figure 14. Large- and smallmouth bass population densities (fish \geq 8.0") by size range for lakes sampled in the Wisconsin Ceded Territory in spring 2012.

Creel Surveys

In 2012-2013 (May through March), creel surveys were conducted for 22 waters in which walleye population estimates were made during spring 2012 (Appendix D). Creel surveyed lakes ranged in size from 71 to 3,111 acres (Averil Lake-Vilas Co. and Grindstone Lake-Sawyer Co., respectively) and were located across ten counties within the Ceded Territory.

Overall Angler Effort

From 1995 through 2012 total angler effort has been variable but no trend has been observed across all ceded territory lakes monitored [$F(1; 349) = 0.29, P = 0.59$]. This finding is consistent with other studies and evaluations on angling pressure in Ceded Territory lakes (Cichosz 2009, Hansen 2008, Deroba et al. 2007, Hennessy 2005; Figure 15). Since 1995 when random lake selection began, mean total angler effort has been significantly lower in large lakes (≥ 500 acres; 26.5 hours/ acre) than in small lakes (< 500 acres; 35.8 hours/ acre; t-test (unequal variances) $t = -3.63, df = 250, P < 0.01$). In 2012-13 the mean total angler effort per acre in large lakes (13 lakes, 25.5 hours/acre) did not statistically differ from the effort recorded on small lakes (11 lakes, 31.0 hours/acre, t-test (equal variances) $t = -0.58, df = 22, P = 0.57$).

Walleye Effort, Catch and Exploitation

Directed effort for walleye averaged 4.9 hours per acre in surveyed lakes during the 2012-13 angling season; Directed effort is defined as hours reported by anglers fishing for a specific species. In lakes monitored in 2012-13, directed walleye effort in lakes sustained by natural reproduction (5.4 hours/ acre) was not significantly different than that in lakes sustained by stocking (4.1 hours/ acre; t-test-equal variances, $t = 0.80, df = 22, P = .43$). Similarly, no significant difference was found in directed fishing effort for walleye between large (≥ 500 ac., 6.0 hours/ acre) and small lakes (< 500 ac., 3.6 hours/ acre; t-test (equal variances) $t = 1.57, df = 22, P = 0.13$) surveyed during the 2012-13 angling season. Since 1995, directed angler effort (hours/acre) for walleye has shown a significant decline [Slope = -0.28, $F(1;349) = 16.7, P < 0.01$], although the statistical significance seems driven by high observed value in 1996 and the abnormally low level seen in 2012, rather than by any notable long term trend (Figure 16).

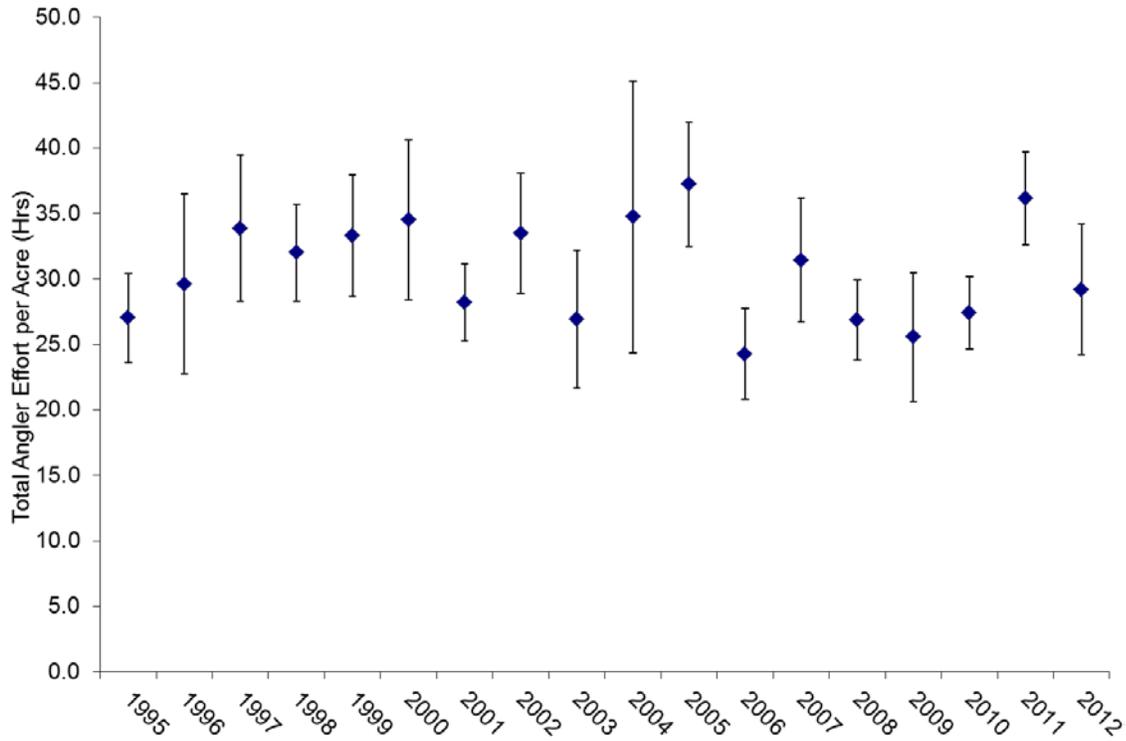


Figure 15. Average total angler effort per acre (\pm SE) in Wisconsin Ceded Territory lakes where WDNR conducted creel surveys, 1995-2012.

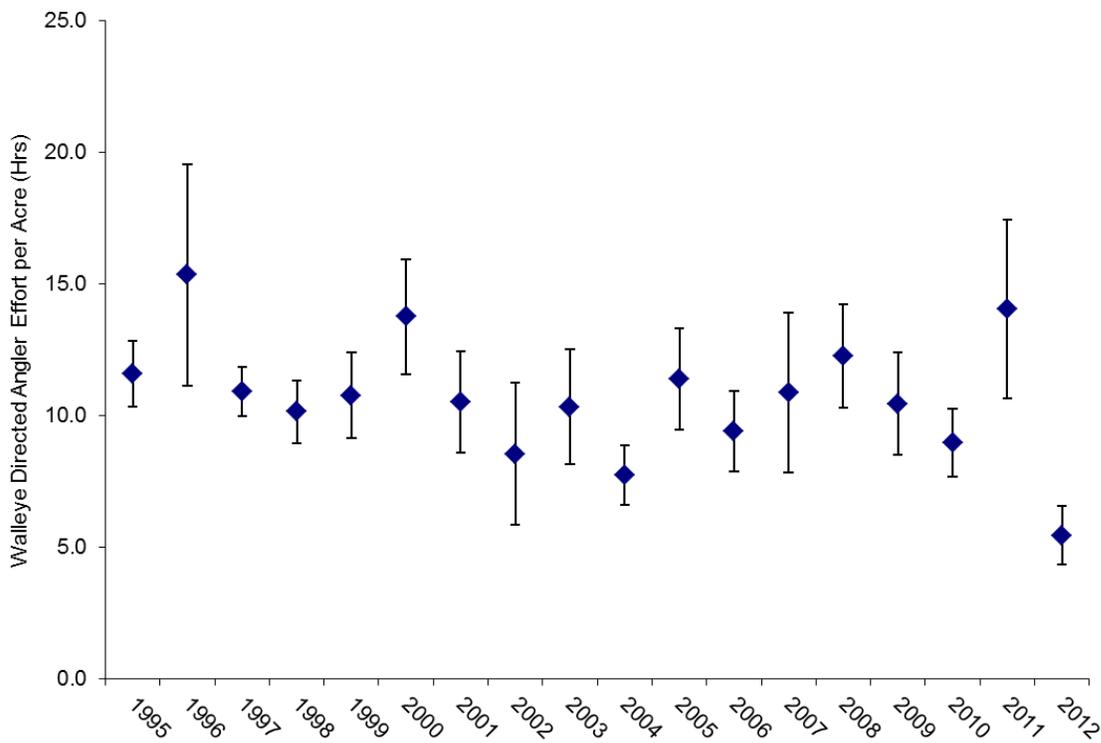


Figure 16. Directed angler effort per acre (\pm SE) for walleye in Wisconsin Ceded Territory lakes where WDNR conducted creel surveys, 1995-2012.

In 2012-13 the mean specific catch rates (SCR) was 0.23 walleye/hour of directed effort (1 fish per 4.3 walleye angling hours). In lakes with naturally sustained or stocked populations, respectively, mean SCR was 0.34 walleye per hour (2.9 hours directed effort/ walleye caught) and 0.05 walleye/ hour (1 fish per 21.3 hours of directed effort). Specific harvest rates averaged 0.04 walleye/hour of directed effort (25.9 hours directed effort/walleye harvested) and ranged between 0.00 and 0.13 walleye/hour for individual lakes surveyed (Appendix D). Based on creel survey results, anglers harvested approximately 22% of all walleye caught during the 2012-13 season; this is well below the average annual percentage estimated between 1995 and 2011 (38%).

Between 1995 and 2012 a statistically relevant downward trend in SCR was observed [Figure 17; Slope = -0.006, $F(1, 349) = 5.80$, $P = 0.017$]. Although statistically relevant this trend appears driven by relatively high catch rates estimated in 1996 and 1997; with a slope very near zero, there is likely no biological or other relevance to this trend. No discernible trend was noted for specific harvest rate by year since 1995 [$F(1, 349) = 0.56$, $P = 0.45$] for walleye in the Wisconsin Ceded Territory (Figure 17).

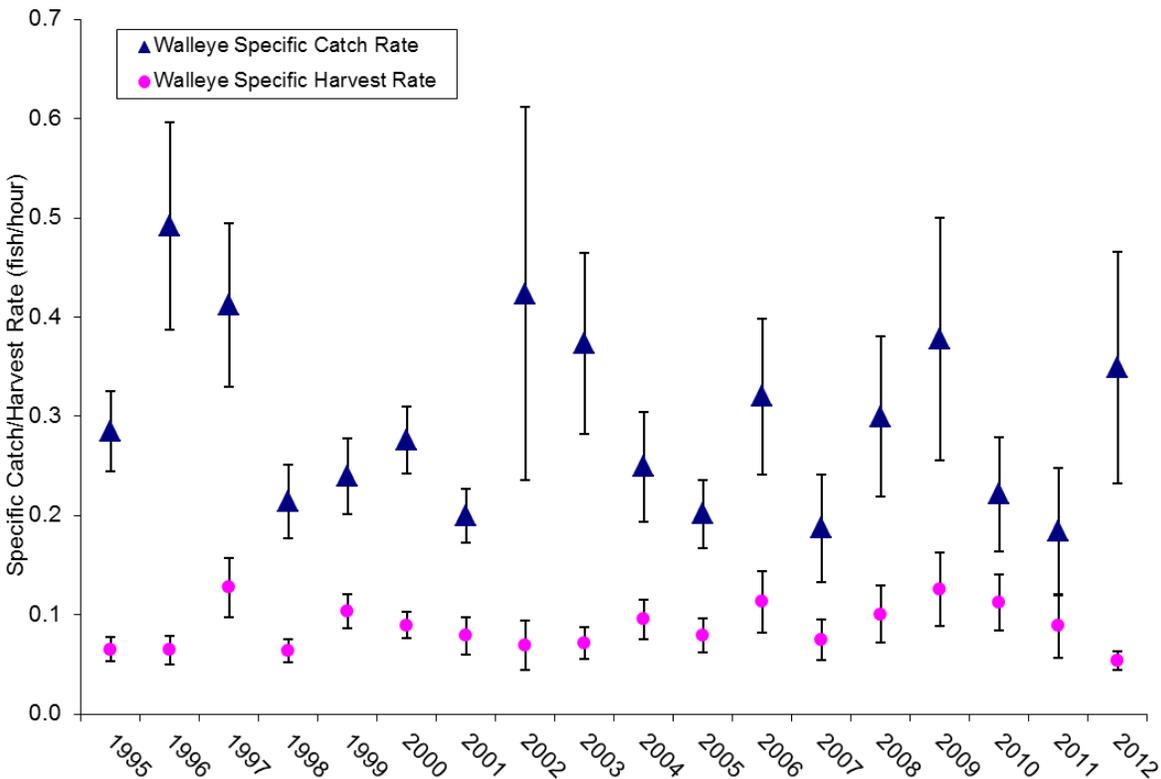


Figure 17. Specific catch and harvest rates (\pm SE) for walleye in surveyed lakes in the Wisconsin Ceded Territory, 1995-2012. Specific catch or harvest rate is number of walleye caught or harvested divided by time spent fishing specifically for walleye.

Walleye exploitation rates were estimated for 13 lakes during 2012-13 (Table 6; Appendix G). Estimates of both angler total (angler + tribal) exploitation of walleye ranged from 0% to 84.4%. Angler exploitation of walleyes in various size classes was variable with exploitation of walleye 14" or longer ranging from 0% to 85.1% whereas that of walleyes 20" or longer ranged from 0.0% to 100%. Tribal exploitation of walleyes ranged from 0.0% to 11.1% across all lakes and exceeded estimates of angler exploitation in five lakes (Rice R. Flowage Chain, Grindstone, Papoose, Plum lakes and Presque Isle Chain). Based on 2012-13 survey results angler exploitation of walleye populations was estimated as zero in two of 13 lakes surveyed; four of the 14 lakes surveyed incurred no tribal exploitation of walleye.

Safe harvest limits are set so that over time there is less than a 1-in-40 chance that exploitation will exceed 35% in any given year on any single lake. In 2012-13 total walleye exploitation was below 35% in all lakes evaluated (Table 6).

Table 6. Adult walleye exploitation rates by lake and harvest type for 2012, with comparison to 1995-2011 mean exploitation rates.

Lake	County	Acres	Angler exploitation	Angler expl. ≥14"	Angler expl. ≥20"	Tribal expl. ¹	Total adult exploitation
Prairie	Barron	1,534	0.844	0.851	0.000	0.000	0.844
Sand	Barron	322	0.000	0.000	0.000	0.000	0.000
Diamond	Bayfield	341	0.039	0.039	0.000	0.000	0.039
Long	Chippewa	1,052	0.020	0.000	0.000	0.008	0.027
Rice R FI Chain	Lincoln	3,764	0.043	0.053	0.040	0.085	0.127
Rainbow Fl.	Oneida	2,035	0.006	0.007	0.000	0.005	0.011
Big Round	Polk	1,015	0.028	0.029	0.045	0.017	0.045
Chain	Rusk	468	0.000	0.000	0.000	0.000	0.000
Grindstone	Sawyer	3,111	0.009	0.009	0.000	0.043	0.051
Papoose	Vilas	428	0.039	0.075	0.000	0.110	0.149
Plum	Vilas	1,033	0.084	0.055	0.314	0.111	0.195
Presque Isle Chain	Vilas	1,571	0.019	0.032	0.036	0.086	0.104
Snipe	Vilas	239	0.127	0.198	1.821	0.028	0.155
2012 mean			0.097	0.104	0.174	0.038	0.135
1995-2011 mean			0.090	0.113	0.133	0.047	0.137

¹ Tribal harvest data used to calculate tribal exploitation provided by the Great Lakes Indian Fish and Wildlife Commission (Ngu 1995 and 1996, Krueger 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, Krueger and Brost 2010, White 2012).

Muskellunge Effort and Catch

Of the 22 lakes and chains surveyed in 2012-13, 20 are classified as musky waters. Creel clerks recorded at least one musky caught from 16 of the 22 lakes surveyed. No musky were reported as

caught from any non-classified musky waters, nor from Averil Lake (Vilas Co.), Rainbow Fl. (Oneida Co.), Big Round Lake (Polk Co.), Diamond Lake (Bayfield Co.), Nancy Lake (Washburn Co.) and Prairie Lake (Barron Co.) which are classified musky waters (Appendix D). For the purpose of analyses and summarization of catch and effort, lakes not classified as musky waters and those without directed fishing effort were excluded even if limited numbers of musky were reported in creel surveys.

In general, the “action classification” assigned to lakes (WDNR 1996) is a better predictor of musky catch and effort than recruitment source or lake size to describe variability in catch and effort (Simonson and Hewett 1999). In most cases the 2012 estimates of angler catch, catch rate, and directed effort were not significantly different than the prior 10 year averages for each lake classification (Analysis of variance, Proc GLM; Table 7). The exceptions was angler catch/acre in Class A2 waters which was significantly less in 2012 than in the ten previous years ($P < 0.05$; Table 7).

Trends in directed effort and catch rates of muskellunge were evaluated since 1995; Trend evaluations were not done independently for each muskellunge ‘action class’ since limited or no data was available for some year/action class categories. There has been no observed trend in muskellunge catch rates [GLM; $F(1, 266) = 2.17, P = 0.14$] in the Ceded Territory since 1995 although directed effort has shown a declining trend [$F(1, 270) = 5.92, P = 0.016$] over the same time period (Figure 18).

Table 7. Comparison of muskellunge catch and effort rates in 2012 and average values from 2002-2011, by musky lake classification.

Class	Class Description	Lakes sampled	Angler catch/acre	Specific catch rate (fish/ hour)	Directed effort (hours/ acre)
2012					
A1	Trophy waters	9	0.15	0.03	4.45
A2	Action waters	5	0.27*	0.04	8.23
B	Intermediate action/ size	4	0.22	0.04	5.68
C	Low importance	2	0.00	0.00	0.32
Total		22	0.16*	0.03	4.75*
2002-2011 Averages (Prior 10 years)					
A1	Trophy waters	50	0.23	0.03	7.17
A2	Action waters	57	0.48*	0.04	10.32
B	Intermediate action/ size	18	0.15	0.03	4.34
C	Low importance	8	0.02	0.01	0.65
Total		133	0.32*	0.03	7.74*

* Difference between 2012 and prior 10 year average is statistically significant ($p < 0.05$).

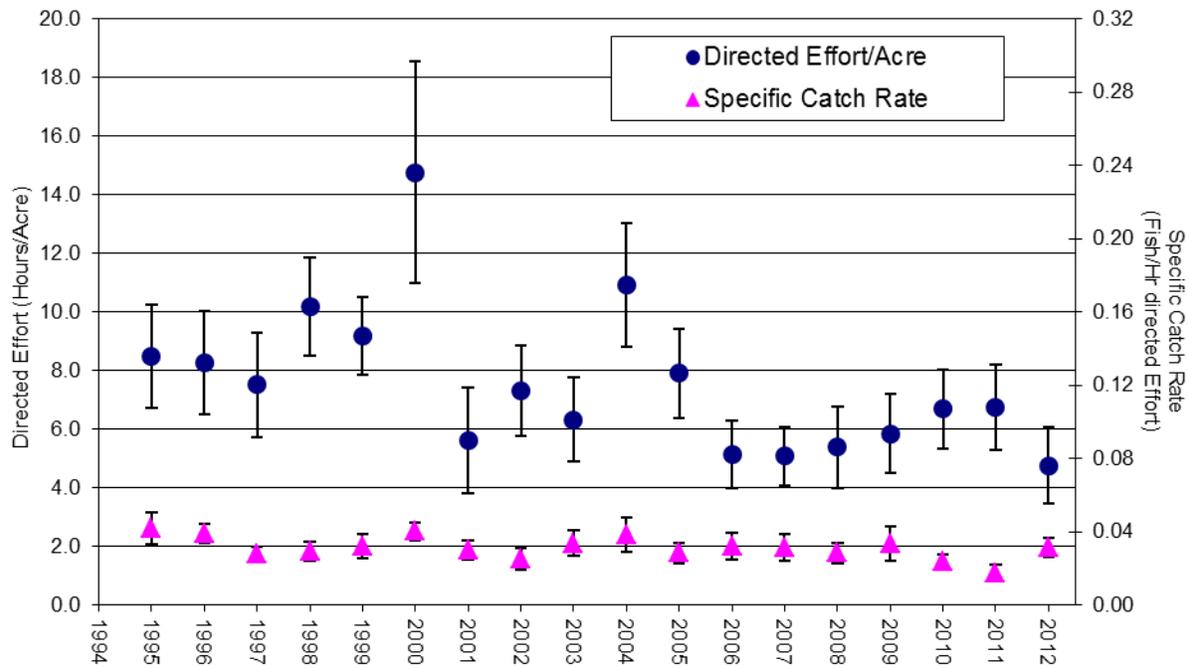


Figure 18. Directed angler effort per lake surface acre and specific catch rate (\pm SE) for muskellunge in surveyed lakes in the Wisconsin Ceded Territory, 1995-2012.

Northern Pike Effort and Catch

Directed effort and catches of northern pike were recorded for all of the 22 lakes surveyed in 2012-13 (Appendix D). Of the 22 lakes with northern pike effort and catch, half (11) were smaller than 500 acres and half were 500 acres or larger (Table 8). Although differences in mean values appeared substantial for some variables, there were no significant differences between large and small lakes with regard to directed angler effort, specific catch rate, angler catch per acre, or specific harvest rate of northern pike during the 2012-13 angling season (Table 8). For northern pike no significant differences were found between 2012-13 creel values and the corresponding prior 10 year averages (2002 -2011) for any of the variables evaluated in Table 8.

Estimates of angler effort directed toward northern pike have been highly variable across years (Figure 19), and since 1995 there has not been a statistically detectable trend in directed angler effort for northern pike [$F(1, 326) = 0.18, P = 0.67$]. Similarly, specific catch rates of northern pike show no significant trend since 1995 [$F(1, 326) = 0.87, P = 0.32$].

Table 8. Mean estimates calculated from 2012 and 2002-2011 northern pike creel survey data.

Year	Lake Size	N	Catch/ Acre	Angler Harvest/ Acre	Specific Catch Rate	Specific Harvest Rate	Directed Effort/ Acre
2012*							
	< 500 acres	11	3.33	0.68	0.47	0.06	7.16
	> 500 acres	11	1.93	0.21	0.17	0.05	3.96
	All lakes	22	2.63	0.44	0.31	0.06	5.56
2002-2011**							
	< 500 acres	80	2.53	0.46	0.21	0.05	5.66
	> 500 acres	101	1.83	0.27	0.18	0.05	3.44
	All lakes	181	2.14	0.35	0.19	0.05	4.42

* No significant differences exist between large and small lakes for any parameter for the 2012-13 angling season (T-test, $p > 0.05$).

** No 2011 values differ significantly (T-test, $p \geq 0.05$) from corresponding 10 yr. averages.

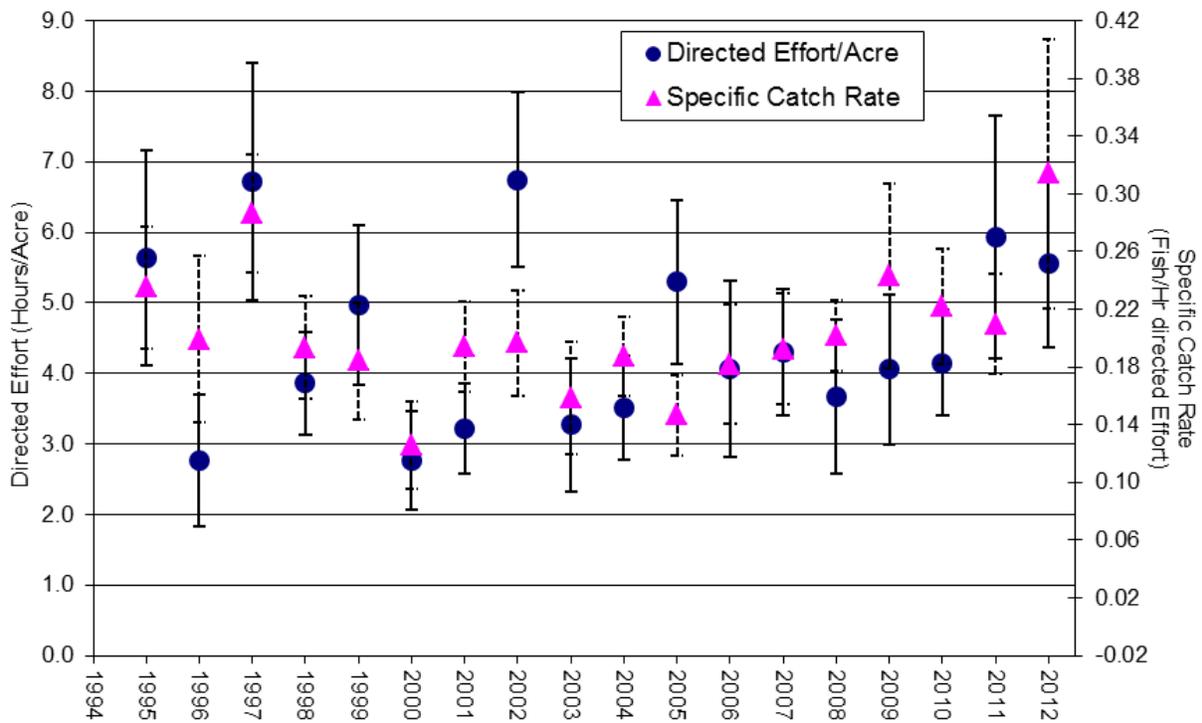


Figure 19. Directed angler effort per lake surface acre and specific catch rate (\pm SE) for northern pike in surveyed lakes in the Wisconsin Ceded Territory, 1995-2012.

Largemouth Bass Effort and Catch

Catches of largemouth bass were reported for 20 of the 22 lakes surveyed in 2012. Papoose and Presque Isle lakes in Vilas Co. both had angler effort directed at largemouth bass, but none caught (Appendix D). Of surveyed lakes with largemouth bass catch, 11 were smaller than 500 acres and 11 were 500 acres or larger (Table 9). In 2012-13, there were no significant differences between large and small lakes with regard to directed angler effort, angler catch or harvest numbers, nor specific catch or harvest rates (T-tests, equal variance, $P > 0.05$) for largemouth bass. None of the creel statistics evaluated during 2012-13 differed from the respective prior 10 year averages for large lakes, small lakes or all lakes combined (T-tests, $P > 0.05$; Table 9).

During the 2012-13 angling season the mean specific catch rate (0.59 fish/angling hour) for largemouth bass in Ceded Territory lakes was higher than that observed in any year since 1995, except 2011 (Figure 20). Since 1995 there has been a statistically detectable increase in both directed angler effort [Slope = 0.150, $F(1, 318) = 6.33$, $P = 0.01$] and specific catch rates [Slope = 0.027, $F(1, 318) = 35.49$, $P < 0.01$] in largemouth bass fishing in Wisconsin Ceded Territory lakes (Figure 20).

Table 9. Mean estimates calculated from 2012 and 2002-2011 largemouth bass creel survey data.

Year	Lake Size	N	Catch/ Acre	Angler Harvest/ Acre	Specific Catch Rate	Specific Harvest Rate	Directed Effort/ Acre
2012*							
Small	< 500 acres	11	5.69	0.66	0.58	0.04	7.60
Large	> 500 acres	11	10.20	0.46	0.59	0.05	5.06
	All lakes	22	7.95	0.56	0.59	0.05	6.33
2002-2011**							
Small	< 500 acres	76	5.75	0.18	0.47	0.02	5.63
Large	> 500 acres	100	4.78	0.21	0.43	0.02	3.99
	All lakes	176	5.20	0.20	0.44	0.02	4.70

* No significant differences exist between large and small lakes for any parameter for the 2012-13 angling season (T-test, $p > 0.05$).

** No significant differences exist between 10 yr. averages and corresponding 2012-13 annual values (T-test, $p \geq 0.05$).

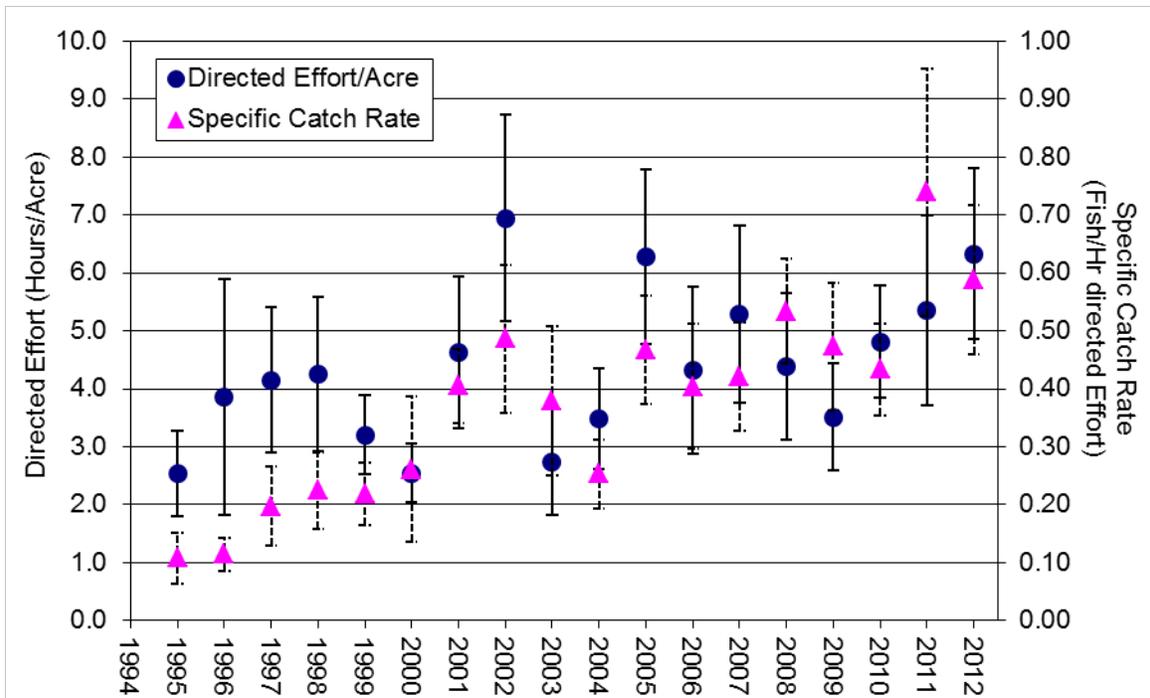


Figure 20. Directed angler effort per lake surface acre and specific catch rate (\pm SE) for largemouth bass in surveyed lakes in the Wisconsin Ceded Territory, 1995-2012.

Smallmouth Bass Effort and Catch

Twenty one of 22 lakes surveyed in the 2012-13 angling season had some level of angler effort directed toward smallmouth bass, and catches of smallmouth bass were reported in 19 of the 22 of the lakes surveyed (Appendix D). Averil Lake (Vilas Co.) had no directed angler effort nor catch of smallmouth bass reported, although two connected waters (Presque Isle and Van Vliet lakes) had both directed effort and catch of smallmouth bass observed. Of the lakes with smallmouth bass catch in 2012-13, eleven were classified as 'small' (<500 ac.) and eleven as 'large' (\geq 500 ac.; Table 10). There were no significant differences in smallmouth bass directed angler effort, catch/acre, specific catch rate, harvest/acre, or specific harvest rate (T-test, $P > 0.05$) between large or small lakes in 2012-13 (Table 10). In large lakes, smallmouth bass harvest/acre was significantly less than the corresponding 10 year average (T-test, $P < 0.05$); no other creel statistics evaluated during 2012-13 in large lakes differed from the respective 10 year averages (Table 10). In small lakes, no creel statistics evaluated during 2012-13 differed from the respective 10 year averages (Table 10).

Both directed effort and specific catch rates of smallmouth bass anglers in the Ceded Territory have been variable over time. The average of both directed effort and specific catch rates in surveyed lakes during 2012-13 was within the observed range of values in other years since 1995 (Figure 21). Since 1995 when a randomized lake selection process was instituted there have been no statistically detectable trends in directed angler effort/acre [F(1, 315) = 0.02, P = 0.89] (Figure 21). Although not visually discernible, there has been a statistically relevant trend in specific catch rates of smallmouth bass over the same timeframe [F(1, 315) = 4.92, P = 0.03], although the slope of that trend (<0.01) is minimal.

Table 10. Mean estimates calculated from 2012 and 2002-2011 smallmouth bass creel survey data.

Year	Lake Size	N	Catch/Acre	Angler Harvest/Acre	Specific Catch Rate	Specific Harvest Rate	Directed Effort/Acre
2012*							
Small	< 500 acres	11	1.38	0.02	0.44	<0.01	2.93
Large	> 500 acres	11	1.32	0.03	0.30	0.01	3.79
	All lakes	22	1.35	0.02	0.37	<0.01	3.36
2002-2011							
Small	< 500 acres	74	1.76	0.04	0.35	0.01	2.85
Large	> 500 acres	101	2.17	0.08**	0.39	0.02	2.98
	All lakes	175	2.00	0.06**	0.37	0.02	2.92

* No significant differences exist between large and small lakes for any parameter for the 2012-13 angling season (T-test, p>0.05).

** 10 yr. averages differ significantly from corresponding 2012-13 annual values (T-test, p≤0.05).

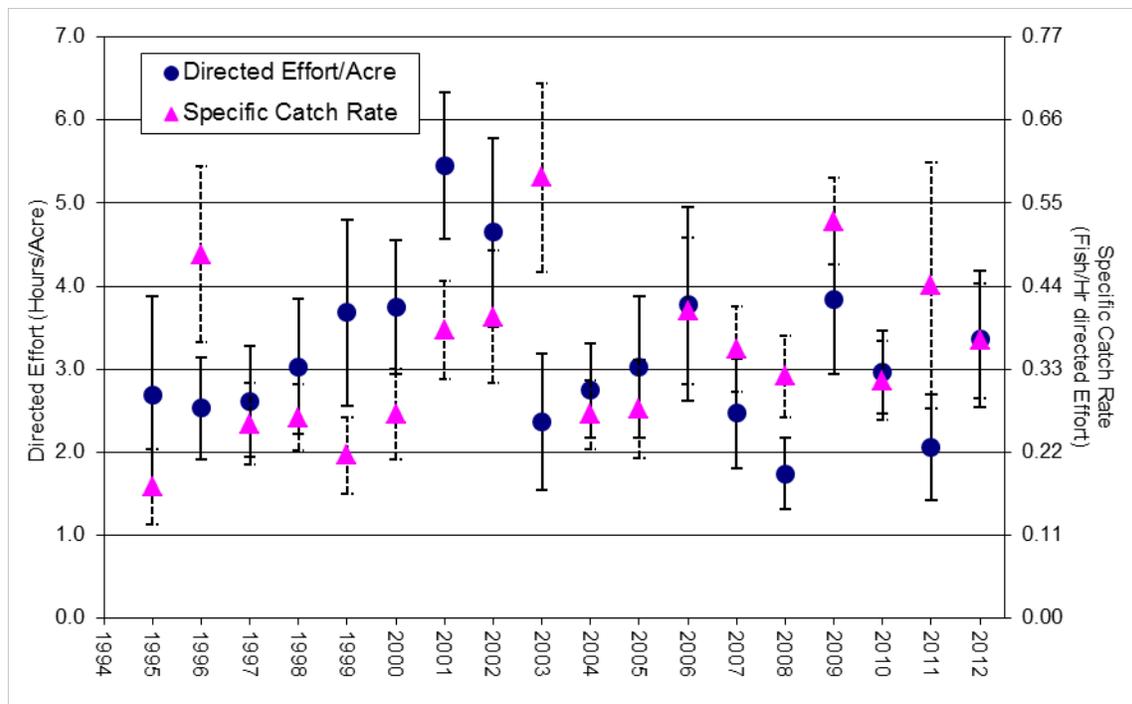


Figure 21. Directed angler effort per lake surface acre and specific catch rate (\pm SE) for smallmouth bass in surveyed lakes in the Wisconsin Ceded Territory, 1995-2012.

Safe Harvest

Safe harvest calculated for the 2012 harvest season was 88,815 walleye and 4,836 musky across the entire Wisconsin Ceded Territory (Table 11). Safe harvest of both walleye and musky has been shown to be highly correlated to the surface acreage of water found in each county (Linear regression, $r^2 > 0.9$; Cichosz 2009). For both walleye and musky the greatest total safe harvest numbers for individual counties were observed in Vilas (20,200 walleye, 1,351 musky), Oneida (17,096 walleye, 995 musky), Sawyer (9,764 walleye, 526 musky) and Iron (7,712 walleye, 365 musky) counties. When totaled, safe harvest from these four counties accounted for 61 percent of overall walleye and 67 percent of overall musky safe harvest for the Wisconsin Ceded Territory during 2012. Safe harvest numbers for individual lakes are listed in Appendix H.

Table 11. Walleye and musky safe harvest levels and ranks by county for the 2012 harvest season.

County	Lake Acreage*	Total Calculated Safe Harvest		Ranks (1 = Greatest #)	
		Walleye	Musky	Walleye	Musky
Ashland	2,862	394	93	23	12
Barron	13,684	1,984	39	11	18
Bayfield	11,871	3,193	130	8	8
Burnett	11,190	1,590	111	14	10
Chippewa	14,418	3,548	172	7	7
Clark	320	21	5	26	24
Douglas	6,211	1,747	48	13	16
Dunn	1,752	639		18	
Eau Claire	2,571	621	34	19	19
Florence	1,756	205		25	
Forest	10,908	2,669	55	10	15
Iron	24,693	7,712	365	4	4
Langlade	4,828	515	40	20	17
Lincoln	12,040	3,721	201	6	6
Marathon	9,541	1,976	61	12	13
Marinette	3,361	735	20	17	23
Oconto	3,083	422	23	21	20
Oneida	56,636	17,096	995	2	2
Polk	11,605	1,270	60	16	14
Portage	74	5		27	
Price	9,153	2,674	240	9	5
Rusk	5,633	1,545	126	15	9
Sawyer	1,100	9,764	526	3	3
St. Croix	48,007	411	21	22	22
Taylor	4,082	259	23	24	20
Vilas	66,303	20,200	1,351	1	1
Washburn	14,935	3,899	97	5	11
Grand Total	352,617	88,815	4,836	---	---

* Sum of acreage for lakes with defined safe harvest of one or both species; does not include total county-wide lake acreage.

Walleye Young-of-Year Surveys

Young of the year (YOY) surveys provide an index of the abundance and survival of the current year class of walleyes from hatching or stocking to their first fall. These surveys provide fisheries managers with insight into potential adult population changes in the near future. Early indication of these potential changes allows fisheries managers to develop management strategies to accommodate expected changes in adult populations. Although YOY relative abundance gives some indication of possible future adult abundance it does not necessarily correspond directly, as survival to adulthood varies (Hansen et al. 1998).

During 2012 WDNR completed fall surveys on 120 different lakes in the Wisconsin Ceded Territory (Appendix F). Of the lakes sampled, 53 had walleye populations classified as sustained by naturally reproduction (recruitment codes NR, C-NR, or C-), 46 as sustained by stocking (ST or C-ST), and 15 as remnant or newly established populations (REM, O-ST, NR-2; Appendix C). Six lakes surveyed were classified as having no known walleye population (NONE/0). Water temperatures during 2012 YOY walleye surveys ranged from 44 - 72° F; mean and median water temperatures during YOY surveys were 56° and 58°F, respectively. Young-of-year walleye lengths ranged from 3.3 to 9.4 inches across all lakes and dates surveyed in 2012 (Appendix F).

Differences in mean YOY walleye density between natural and stocked recruitment categories was significant during 2012 (t-test-unequal variance, $t = 2.23$, $df = 77$, $P = 0.03$). Consistent with all previous years since 1990, lakes sustained primarily by natural reproduction had higher mean walleye YOY density (mean = 18.2/mile of shoreline shocked, range = 0.0–190.5) than lakes sustained by stocking (mean = 5.8/mile, range = 0.0–107.9) during 2012 (Figure 22). The mean YOY walleye density observed in natural recruitment lakes during 2012 (18.2/mile) was statistically dissimilar (t-test unequal variance, $P < 0.01$) to the average across the previous 22 years studied (31.8/mile from 1990-2011). The mean YOY walleye density observed in stocked lakes during 2012 (5.8/mile) was statistically similar to that observed over the previous 22 years studied (5.6/mile from 1990-2011; t-test equal variance, $t = -0.09$, $df = 802$, $P = 0.92$; Figure 22).

It appears that within the Wisconsin Ceded Territory there may be region-wide annual effects on walleye recruitment since mean recruitment varies dramatically from year to year when data from all lakes are combined (Figure 22); In the absence of an annual regional effect one might expect annual percentages to be similar across years. Lack of recruitment in a given lake for one or more years is natural and not necessarily alarming. Sporadic recruitment is common for walleye populations both within and among individual lakes. It is common to have almost complete lack of recruitment in 25% or more of lakes with natural reproduction, and year class failures are even more common in lakes with populations maintained by stocking. Generally, successful recruitment occurs in a given lake every 3-4 years which may reduce competition between year classes of walleye (Li et al. 1996).

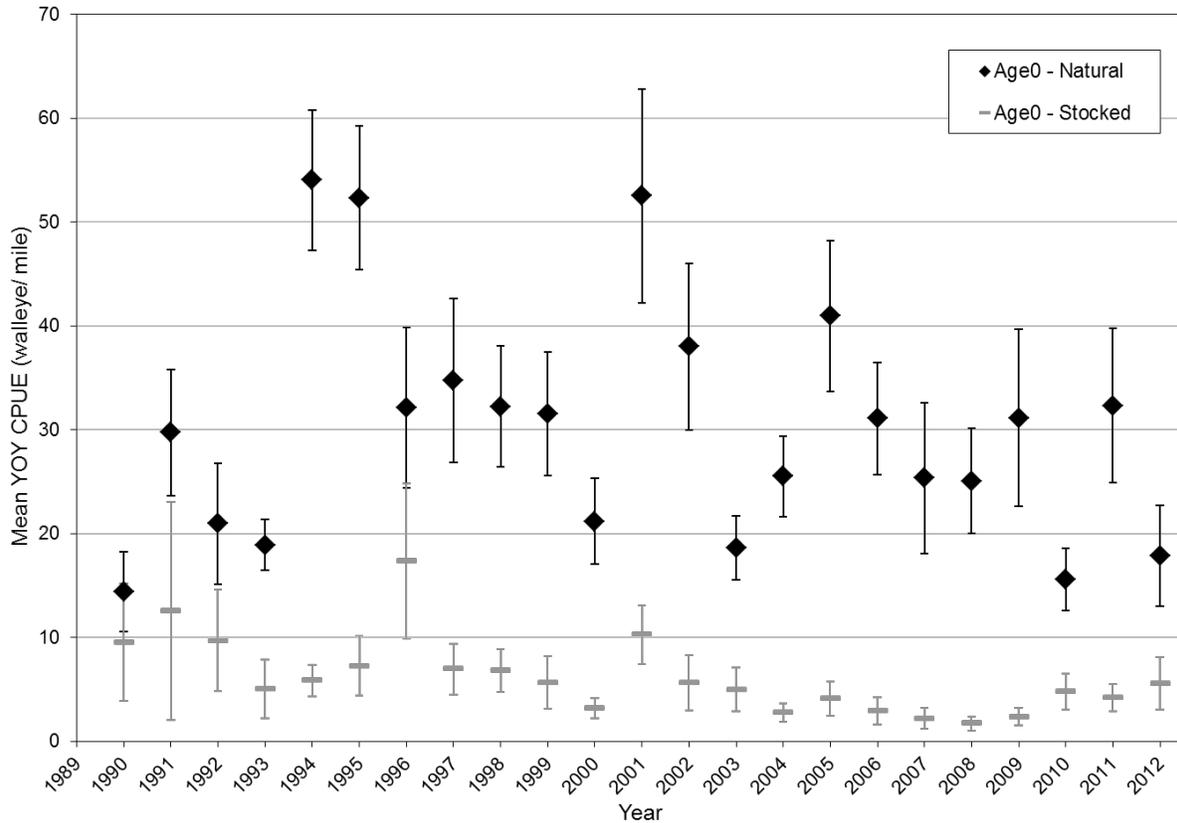


Figure 22. Comparison of mean YOY walleye density (\pm SE) observed in fall electrofishing surveys since 1990 in lakes dominated by natural recruitment or stocking.

A general linear model used to assess the impact of year and/or recruitment model on YOY walleye density was significant ($p < 0.001$; Table 12). The significance of the model was driven by differences in YOY density between recruitment models (natural or stocked; $p < 0.0001$), years ($p < 0.001$), and the interaction of year*recruitment model ($p = 0.014$). Based on the significance of the year*recruitment model interaction term, regressions were done to evaluate trends independently for natural and stocked model lakes. YOY walleye densities have declined significantly over time in both natural (slope = -0.50, $p = 0.02$) and stocked (slope = -0.32, $p = 0.001$) model lakes since 1990 (Figure 22).

Table 12. GLM results comparing YOY walleye density across years and primary walleye recruitment source.

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	45	472105	10491	7.99	<0.0001
Error	1,919	2519687	1313		
		Type III SS	Mean Square	F Value	Pr > F
Year	22	71313	3241	2.47	0.0002
Recruitment Model^a	1	227018	227018	172.90	<0.0001
Year x Recruitment Model	22	51527	2342	1.78	0.0139

a –Recruitment Models compared are ‘natural’ and ‘stocked’.

The percentages of natural-model lakes with greater than 25 YOY walleye per mile and greater than 100 YOY walleye per mile are also used to indicate strong annual year classes in the Wisconsin Ceded Territory. These values are less affected by large values for individual lakes than the mean number of YOY walleye caught per mile. In 2012, 10/52 natural model lakes (19%) had YOY indices > 25 per mile, and 3 NR lakes (6%) had YOY walleye indices > 100 per mile (Appendix F). Overall, the proportion of lakes with YOY catch rates greater than 25 fish per mile in 2012 was less than the mean proportion of lakes observed with the same catch rates between 1990-2011; the proportion of lakes with YOY catch rates greater than 100 fish per mile in 2012 was comparable the mean proportion of lakes observed with the same catch rates (mean percentage > 25 YOY/mi = 35%; 100 >100/mi = 7%). These finding suggest a below average naturally produced walleye year class across the ceded territory in 2012 despite localized conditions that allowed for large year classes to be found in a limited number of waters.

In lakes categorized as being sustained primarily by stocking, differences in the mean number of YOY walleye captured per mile in lakes that were stocked (15.1 YOY/ mile) with fry or small fingerlings was not significantly different (t-test unequal variance, $t = -0.157$, $df = 12.1$, $P = 0.12$) from those that were not stocked (1.3 YOY/ mile) in 2012 (Table 13). Despite the non-significant finding, the mean number of YOY/mile observed in stocked waters was notably higher than that in un-stocked waters. Such differences are commonly observed and most often statistically significant; In 2012, the lack of statistical significance was unusual.

Table 13. Young-of-the-year indices in lakes categorized as being sustained primarily by stocking (ST or C-ST), separated by whether or not the lake was stocked in 2012.

	Stocked in 2012	Not Stocked in 2012
No. Lakes	13	28
Mean YOY walleye/ mile	15.07	1.25
Q1/Median/Q3	0.0 / 2.8 / 10.9	0.0 / 0.0 / 0.23
Lakes with 0 YOY/ mile	4 (31%)	19 (68%)
Lakes with ≤5 YOY/ mile	8 (62%)	26 (93%)
Lakes with ≤10 YOY/ mile	8 (62%)	26 (93%)

The Hansen et al (2004) index of lake-wide YOY walleye density (fish/acre) for natural-model lakes ranged from 0.0–59.4 with a mean of 5.2 during 2012. In stocked-model lakes, the same index ranged from 0.0–52.2 YOY walleye/acre with a mean of 2.1. Within stocked-model lakes, those stocked prior to fall surveys logically had a greater average index value than lakes that were not stocked (5.0 Vs. 0.2, respectively). This generally indicates greater levels of recruitment in natural model lakes relative to stocked model lakes, and within the stocked model lakes greater recruitment in stocked versus un-stocked waters.

Fall surveys were conducted on five lakes that were previously stocked with oxytetracycline (OTC) marked walleyes in 2012 (Table 14). Most stocking of OTC marked fish took place in June. In general, the percent of marked fish tends to align well with and support recruitment code designations for lakes monitored during 2012, with higher values in predominantly stocked (ST or C-ST) lakes, and lower values in lakes presumed to be dominated by natural reproduction (C-NR). Results of OTC sampling are not considered in the designation or recruitment codes unless a minimum of 30 individual fish are sampled from the water body in question, and are not the sole factor used to define recruitment codes.

Table 14. Lakes stocked with oxytetracycline (OTC) marked fish sampled in 2012, number of sampled fish where OTC marks were noted on the otolith, and percent contribution of stocked fish to the total sample.

County	Lake	Recruit Code*	WBIC	With OTC	Without OTC	Total	% Contrib.
Oneida	Manson L	C-NR	1517200	0	3	3	0
Oneida	Minocqua L	C-NR	1542400	0	3	3	0
Iron	Cedar L	C-ST	2309700	18	4	22	82
Vilas	Dead Pike L	C-ST	2316600	3	0	3	100
Vilas	Little Arbor Vitae L	C-ST	1545300	40	17	57	70

* Recruitment code C-ST is in the stocked model, C-NR is in the natural model, and 0-ST is in the remnant model (Appendix C).

REFERENCES

- Anderson, R.O. and R.M. Neumann. 1996. Length, weight, and structural indices. In Fisheries Techniques, Second Edition. Edited by B.R. Murphy and D.W. Willis. American Fisheries Society, Bethesda, Maryland, USA. pp. 447 – 482.
- Bailey, N.J.J. 1951. On estimating the size of mobile populations from recapture data. *Biometrika* 38:293-306.
- Beard, T. D., Jr., S. W. Hewett, Q. Yang, R. M. King, and S. J. Gilbert. 1997. Prediction of angler catch rates based on walleye population density. *North American Journal of Fisheries Management* 17 (4): 621-627.
- Beard, T.D., P.W. Rasmussen, S. Cox and S.R. Carpenter. 2003. Evaluation of a management system for a mixed walleye spearing and angling fishery in northern Wisconsin. *North American Journal of Fisheries Management* 23:481-491.
- Berkes, F. and D. Pocock. 1987. Quota management and “people problems”: a case history of Canadian Lake Erie fisheries. *Transactions of the American Fisheries Society* 116:494-502.
- Chapman, D.G. 1951. Some properties of the hypergeometric distribution with applications to zoological sample censuses. *University of California Publications in Statistics* 1:131-160.
- Cichosz, T.A. 2009. 2005-2006 Ceded Territory Fishery Assessment Report. Wisconsin Department of Natural Resources Bureau of Fisheries Management, Administrative Report 63, Madison, Wisconsin.
- Cichosz, T.A. 2010. 2006-2007 Ceded Territory Fishery Assessment Report. Wisconsin Department of Natural Resources Bureau of Fisheries Management, Administrative Report 63, Madison, Wisconsin.
- Colby, P. J., R. E. McNicol, and R. A. Ryder. 1979. Synopsis of biological data on the walleye *Stizostedion vitreum vitreum* (Mitchill 1818). FAO (Food and Agriculture Organization of the United Nations) Fisheries Synopsis 119.
- Deroba, J.D., M.J. Hansen, N.A. Nate, and J.M. Hennessy. 2007. Temporal profiles of walleye angling effort, harvest rate, and harvest in northern Wisconsin lakes. *North American Journal of Fisheries Management* 27:717-727.
- Hansen, M. J. 1989. A walleye population model for setting harvest quotas. Wisconsin Department of Natural Resources Bureau of Fisheries Management, Fish Management Report 143, Madison, Wisconsin.
- Hansen, M. J., M.D. Staggs, and M. H. Hoff. 1991. Derivation of safety factors for setting harvest quotas on adult walleyes from past estimates of abundance. *Transactions of the American Fisheries Society* 120: 620-628.
- Hansen, M. J., M.A. Bozek, J. R. Newby, S. P. Newman and M. D. Staggs. 1998. Factors affecting recruitment of walleyes in Escanaba Lake, Wisconsin, 1958-1996. *North American Journal of Fisheries Management* 18(4): 764-774.
- Hansen, M. J., T. D. Beard Jr., S. W. Hewett. 2000. Catch rates and catchability of walleyes in angling and spearing fisheries in Northern Wisconsin lakes. *North American Journal of Fisheries Management* 20(1): 109-118.

- Hansen, M. J., S. P. Newman and C. J. Edwards. 2004. A reexamination of the relationship between electrofishing catch rate of age-0 walleye density in northern Wisconsin lakes. *North American Journal of Fisheries Management* 24: 429-439.
- Hansen, S.P. 2008. 2004-2005 Ceded Territory Fishery Assessment Report. Wisconsin Department of Natural Resources Bureau of Fisheries Management and Habitat Protection, Administrative Report 62, Madison, Wisconsin.
- Hatch, R.W., S.J. Nepszy, K.M. Muth, and C.T. Baker. 1987. Dynamics of recovery of western Lake Erie walleye *stizostedion vitreum vitreum* stock. *Canadian Journal of Fisheries and Aquatic Sciences* 44 (Supplement 2):15-22.
- Hennessy, J.M. 2005. 2002-2003 Ceded Territory Fishery Assessment Report. Wisconsin Department of Natural Resources Bureau of Fisheries Management and Habitat Protection, Administrative Report 59, Madison, Wisconsin.
- Hennessy, J.M. 2002. 2001-2002 Ceded Territory Fishery Assessment Report. Wisconsin Department of Natural Resources Bureau of Fisheries Management and Habitat Protection, Administrative Report 55, Madison, Wisconsin.
- Hewett, S. W. No Date. Walleye Population Sampling Plan, Treaty Fisheries Program. Wisconsin Department of Natural Resources, internal document. Madison, WI.
- Hewett, S. W. and T. D. Simonson. 1998. Wisconsin's walleye management plan: moving management into the 21st century. Wisconsin Department of Natural Resources, Administrative Report #43, Bureau of Fisheries Management and Habitat Protection, Madison, Wisconsin.
- Hubert, W. A. 1983. Passive capture techniques. Pages 95–122 in L.A. Nielsen and D.L. Johnson, editors. *Fisheries techniques*. American Fisheries Society, Bethesda, Maryland
- Kope, R.G. 1999. Pacific coast salmon. In our living oceans. Report on the status of U.S. living marine resources, 1999. NOAA Technical Memorandum NMFS-F/SPO-41.
- Krueger, J. 2010. Open water spearing in northern Wisconsin by Chippewa Indians during 2009. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2006-03, Odanah, Wisconsin.
- Krueger, J. 2009. Open water spearing in northern Wisconsin by Chippewa Indians during 2008. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2009-02, Odanah, Wisconsin.
- Krueger, J. 2008. Open water spearing in northern Wisconsin by Chippewa Indians during 2007. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2008-02, Odanah, Wisconsin.
- Krueger, J. 2007. Open water spearing in northern Wisconsin by Chippewa Indians during 2006. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2007-02, Odanah, Wisconsin.
- Krueger, J. 2006. Open water spearing in northern Wisconsin by Chippewa Indians during 2005. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2006-02, Odanah, Wisconsin.
- Krueger, J. 2005. Open water spearing in northern Wisconsin by Chippewa Indians during 2004. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2005-02, Odanah, Wisconsin.
- Krueger, J. 2004. Open water spearing in northern Wisconsin by Chippewa Indians during 2003. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2004-01, Odanah, Wisconsin.

- Krueger, J. 2003. Open water spearing in northern Wisconsin by Chippewa Indians during 2002. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2003-03, Odanah, Wisconsin.
- Krueger, J. 2002. Open water spearing in northern Wisconsin by Chippewa Indians during 2001. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2002-01, Odanah, Wisconsin.
- Krueger, J. 2001. Open water spearing in northern Wisconsin by Chippewa Indians during 2000. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2001-01, Odanah, Wisconsin.
- Krueger, J. 2000. Open water spearing in northern Wisconsin by Chippewa Indians during 1999. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2000-05, Odanah, Wisconsin.
- Krueger, J. 1999. Open water spearing in northern Wisconsin by Chippewa Indians during 1998. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 99-4, Odanah, Wisconsin.
- Krueger, J. 1998. Open water spearing in northern Wisconsin by Chippewa Indians during 1997. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 98-01, Odanah, Wisconsin.
- Krueger, J. 1997. Open water spearing in northern Wisconsin by Chippewa Indians during 1996. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 97-02, Odanah, Wisconsin.
- Krueger, J. and B. Brost. 2011. Open water spearing in northern Wisconsin by Chippewa Indians during 2010. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 2011-02, Odanah, Wisconsin.
- Laarman, P.W. and J.R. Ryckman. 1982. Relative size selectivity of trap nets for eight species of fish. *North American Journal of Fisheries Management* 2:33-37.
- Legault, C.M. 1999. Status review of king mackerel in the Gulf of Mexico. In *our living oceans. Report on the status of U.S. living marine resources, 1999*. NOAA Technical Memorandum NMFS-F/SPO-41.
- Li, E.A.L. 1999. A travel cost demand model for recreational snapper angling in Port Phillip Bay, Australia. *Transactions of the American Fisheries Society* 128:639-647.
- Li, J., Y. Cohen, D. H. Schupp, and I. R. Adelman. 1996. Effects of walleye stocking on year-class strength. *North American Journal of Fisheries Management* 16(4): 840-850.
- Margenau, T. L. and S. P. AveLallemant. 2000. Effects of a 40-inch minimum length limit on muskellunge in Wisconsin. *North American Journal of Fisheries Management* 20: 986-993.
- Milliman, S.R., R.C. Bishop and B.L. Johnson. 1987. Economic analysis of fishery rehabilitation under biological uncertainty: a conceptual framework and application. *Canadian Journal of Fisheries and Aquatic Sciences* 44 (Supplement 2):289-297.
- Nate, N. A., M. A. Bozek, M. J. Hansen, and S. W. Hewett. 2000. Variation in walleye abundance with lake size and recruitment source. *North American Journal of Fisheries Management*. 20: 119-126.
- Ney, J.J. 1993. Practical Use of Biological Statistics. Pages 137-158 *in* C.C. Kohler and W.A. Hubert, editors. *Inland Fisheries Management in North America*. American Fisheries Society, Bethesda, Maryland.
- Ngu, H. H. 1996. Open water spearing in northern Wisconsin by Chippewa Indians during 1995. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 96-01, Odanah, Wisconsin.

Ngu, H. H. 1995. Open water spearing in northern Wisconsin by Chippewa Indians during 1994. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 95-03, Odanah, Wisconsin.

Rasmussen, P. W., M. D. Staggs, T. D. Beard, Jr., and S. P. Newman. 1998. Bias and confidence interval coverage of creel survey estimators evaluated by simulation. Transactions of the American Fisheries Society 127: 460-480.

Ricker, W. E. 1975. Computation and Interpretation of Biological Statistics of Fish Populations. Bulletin of the Fisheries Research Board of Canada 191. Department of the Environment, Fisheries, and Marine Science, Ottawa. 382 p.

SAS Institute, Inc. 2004. SAS Help and Documentation. Cary, NC. SAS Institute, Inc.

Serns, S. L. 1982. Relationship of walleye fingerling density and electrofishing catch per effort in northern Wisconsin lakes. North American Journal of Fisheries Management 2 (1): 38-44.

Simonson, T.D. and S.W. Hewett. 1999. Trends in Wisconsin's Muskellunge Fishery. North American Journal of Fisheries Management 19:291-299.

Staggs, M.D., R.C. Moody, M.J. Hansen, M.H. Hoff. 1990. Spearing and sport angling for walleye in Wisconsin's Ceded Territory. Wisconsin Department of Natural Resources, Administrative Report #31, Bureau of Fisheries Management, Madison, Wisconsin.

United States Department of the Interior (USDI), Bureau of Indian Affairs. 1991. Casting Light Upon the Waters. Minneapolis.

White, K. 2012. Open water spearing in northern Wisconsin by Chippewa Indians during 2011. Great Lakes Indian Fish and Wildlife Commission, Administrative Report 12-03, Odanah, Wisconsin.

Wisconsin Department of Natural Resources. 1996. Wisconsin Muskellunge Waters. Publication RS-919-96.

Wisconsin Technical Working Group. 1999. December meeting minutes.

APPENDICES

Appendix A. WDNR Lake Sampling Rotation 2011-2014.

YEAR	TREATY UNIT	MWBC	COUNTY	LAKE	AREA	CURRENT MODEL	# LAKES	ROTATION
2011	Spooner	2949200	IRON	PINE	312	N	1	TREND
2011	Spooner	2620600	POLK	BALSAM	2,054	S	1	TREND
2011	Spooner	2399700	Sawyer	L Chippewa	15,300	N	1	Spatial
2011	Spooner	2046500	Sawyer	Windfall	102	N	1	Spatial
2011	Spooner	2767099	Bayfield	Long	263	S	1	Spatial
TOTAL	Spooner				18,031		5	
2011	Woodruff	1588200	ONEIDA	TWO SISTERS	719	N	1	TREND
2011	Woodruff	1545600	VILAS	BIG ARBOR VITAE	1,090	N	1	TREND
2011	Woodruff	1579900	Oneida	Pelican	3,585	N	1	Spatial
2011	Woodruff	Multiple	Oneida	Rhineland Chain	2,059	N	4	Spatial
2011	Woodruff	1595600	Oneida	Muskellunge	284	N	1	Spatial
2011	Woodruff	1591100	Vilas	Big St. Germain	1,617	S	1	Spatial
2011	Woodruff	Multiple	Vilas	Ballard Chain	1,025	S	3	Spatial
2011	Woodruff	417400	Oconto	Archibald	430	S	1	Spatial
2011	Woodruff	1630100	Vilas	Black Oak	584	S	1	Spatial
TOTAL	Woodruff				11,393		14	
2011	TOTAL				29,424		19	
2012	Spooner	2897100	BAYFIELD	DIAMOND	341	S	1	TREND
2012	Spooner	2391200	SAWYER	GRINDSTONE	3,111	N	1	TREND
2012	Spooner		Barron	L Chetek Chain	3,763	S	4	Spatial
2012	Spooner	2627400	Polk	Big Round	1,015	S	1	Spatial
2012	Spooner		Rusk	Island Lake Chain	1,222	S	4	Spatial
2012	Spooner	2691500	Washburn	L Nancy	772	S	1	Spatial
2012	Spooner	2351400	Chippewa	Long	1,052	N	1	Spatial
2012	Spooner	2661100	Barron	Sand	322	S	1	Spatial
TOTAL	Spooner				11,598		14	
2012	Woodruff	1018500	VILAS	SNIFE	239	N	1	TREND
2012	Woodruff	1592400	VILAS	PLUM	1,033	N	1	TREND
2012	Woodruff	1516401	Lincoln/Oneida	Nokomis/Rice Chain	3,916	N	3	Spatial
2012	Woodruff	1595300	Oneida	Rainbow Fl	2,035	N	1	Spatial
2012	Woodruff	2956501	Vilas	Presque Isle Chain	1,571	N	3	Spatial
2012	Woodruff	2328700	Vilas	Papoose	428	N	1	Spatial
TOTAL	Woodruff				9,222		10	
2012	TOTAL				20,820		24	

YEAR	TREATY UNIT	MWBC	COUNTY	LAKE	AREA	CURRENT MODEL	# LAKES	ROTATION
2013	Spooner	2678100	BURNETT	LIPSETT	393	S	1	TREND
2013	Spooner	2742100	BAYFIELD	MIDDLE EAU CLAIRE	902	N	1	TREND
2013	Spooner	2496300	Washburn	Shell	2,580	N	1	Spatial
2013	Spooner	1764500	Taylor	Sackett	63	S	1	Spatial
2013	Spooner	2461100	Burnett	Devils	1,001	S	1	Spatial
2013	Spooner	2133200	Eau Claire	L Eau Claire	860	N	1	Spatial
2013	Spooner		Sawyer	Connors/L of the Pines	702	N	2	Spatial
2013	Spooner	2469800	Barron	Horseshoe	115	S	1	Spatial
2013	Spooner	1875900	Rusk	Pulaski	126	N	1	Spatial
TOTAL	Spooner				6,742		10	
2013	Woodruff	394400	FOREST	L METONGA	1,991	S	1	TREND
2013	Woodruff	2331600	VILAS	TROUT	3,816	S	1	TREND
2013	Woodruff	Multiple	Vilas	Eagle Chain	4,174	N	10	Spatial
2013	Woodruff	1586600	Oneida	Spider	118	N	1	Spatial
TOTAL	Woodruff				10,281		14	
2013	TOTAL				17,023		24	
2014	Spooner	2949200	IRON	PINE	312	N	1	TREND
2014	Spooner	2620600	POLK	BALSAM	2,054	S	1	TREND
2014	Spooner	2710800	Washburn	Matthews	263	S	1	Spatial
2014	Spooner	2157000	CHIPPEWA	OTTER LAKE	602	S	1	Spatial
2014	Spooner	1864000	Barron	Lower Devils	162	N	1	Spatial
2014	Spooner	2725500	Sawyer	Hayward	247	S	1	Spatial
2014	Spooner	2470000	Washburn	Horseshoe	194	S	1	Spatial
2014	Spooner	2694000	Douglas	Whitefish	832	N	1	Spatial
TOTAL	Spooner				4,124		9	
2014	Woodruff	1588200	ONEIDA	TWO SISTERS	719	N	1	TREND
2014	Woodruff	1545600	VILAS	BIG ARBOR VITAE	1,090	N	1	TREND
2014	Woodruff	Multiple	Oneida	Three Lakes Chain	6,024	N	16	Spatial
2014	Woodruff	1613500	Oneida	Whitefish	205	R	1	Spatial
2014	Woodruff	1543300	Oneida	Squirrel	590	N	1	Spatial
TOTAL	Woodruff				8,883		21	
2014	TOTAL				13,007		30	

Appendix B. Reduced daily bag limits for walleye angling, based on Tribal Declarations as percentage of safe harvest. Reprinted from Wisconsin Administrative Code (NR 20.36).

Daily bag limit	Current population estimate	Population estimate made 1-2 years ago	Population estimate made 3 years ago or more or regression model
4	1-7	1-14	1-20
3	8-18	15-39	21-54
2	19-36	40-76	55-84
1	37-68	77-94	85-94
0	69 or more	95 or more	95 or more

Appendix C. Walleye Recruitment Code Descriptions (primary source of walleye recruitment; U.S. Department of the Interior, 1991).

Recruitment Code ¹	Recruitment Model ²	Description
blank	None	unknown
NONE/ O	None	No walleye are present
REM	Remnant	Stocking provides the only source of recruitment but was discontinued. The stock is expected to disappear at some time in the future.
0-ST	Remnant	Stocking provides the only source of recruitment but was initiated only recently and has not yet resulted in a harvestable population of adults.
ST	Stocked	Stocking provides the only source of recruitment and is consistent enough to result in a multi-year class adult population.
C-ST	Stocked	Stocking provides the primary source of recruitment but some natural reproduction occurs and may augment the adult population.
C-	Natural	Natural reproduction and stocking provide more or less equal recruitment to the adult population.
C-NR	Natural	Natural reproduction is adequate to sustain the population even though the lake is being stocked.
NR	Natural	Natural reproduction only; consistent enough to result in multi-year class adult populations.
NR-2	Remnant	Natural reproduction only; inconsistent, results in missing year classes.

1 - Recruitment Code = Designation of the *primary* recruitment source and done by a technical working group.

2 - Recruitment Model is used for data analysis and groups various recruitment codes into one of three categories.

Appendix D. 2012-2013 Creel Survey Summaries.

Angler Effort Summary

County	Lake	MWBIC	Acres	Walleye recruit code	Musky recruit code	Total angler effort	Total angler effort/ acre	Directed Effort Walleye	Walleye Effort/ Acre	Directed Effort Musky	Musky Effort/ Acre	Directed Effort Pike	Pike Effort/ Acre	Directed Effort LMB	LMB Effort/ Acre	Directed Effort SMB	SMB Effort/ Acre
Barron	Prairie	2094100	1,534	ST	O	147,967	96.46	19,428	12.66	0	0.00	13,698	8.93	35,800	23.34	26,315	17.15
Barron	Sand	2661100	322	ST	ST	10,358	32.17	263	0.82	5,571	17.30	1,134	3.52	2,715	8.43	12	0.04
Bayfield	Diamond	2897100	341	C-ST	O	4,342	12.73	1,785	5.23	0	0.00	1,034	3.03	2,067	6.06	1,719	5.04
Chippewa	Long	2351400	1,052	NR	ST	26,508	25.20	11,897	11.31	2,551	2.42	3,006	2.86	2,349	2.23	8,723	8.29
Lincoln	Deer	1519600	156	NR	NR	4,682	30.01	568	3.64	705	4.52	1,471	9.43	942	6.04	1,088	6.97
Lincoln	Nokomis	1516500	2,433	NR	NR	43,729	17.97	22,034	9.06	3,059	1.26	11,688	4.80	4,786	1.97	4,264	1.75
Lincoln	Rice R Fl	1516400	920	NR	NR	4,063	4.42	1,932	2.10	373	0.41	744	0.81	466	0.51	301	0.33
Oneida	Bridge	1516800	411	NR	NR	11,253	27.38	1,312	3.19	1,423	3.46	2,356	5.73	1,757	4.27	1,488	3.62
Oneida	Rainbow Fl.	1595300	2,035	NR	C-NR	12,707	6.24	10,911	5.36	0	0.00	11,052	5.43	1,427	0.70	1,610	0.79
Polk	Big Round	2627400	1,015	ST	REM	47,765	47.06	3,047	3.00	80	0.08	4,359	4.29	7,966	7.85	9	0.01
Rusk	Chain	2350500	468	C-ST	ST	13,625	29.11	952	2.03	2,144	4.58	2,585	5.52	6,421	13.72	1,593	3.40
Rusk	Clear	2350600	95	C-ST	ST	3,947	41.55	294	3.09	1,601	16.85	1,082	11.39	1,452	15.28	287	3.02
Rusk	Island	2350200	526	C-ST	ST	18,869	35.87	2,314	4.40	2,602	4.95	2,434	4.63	4,982	9.47	1,136	2.16
Rusk	McCann	2350400	133	C-ST	ST	9,774	73.49	721	5.42	1,281	9.63	2,804	21.08	2,984	22.44	450	3.38
Sawyer	Grindstone	2391200	3,111	C-NR	ST	27,832	8.95	10,840	3.48	2,728	0.88	1,673	0.54	969	0.31	11,581	3.72
Vilas	Averil	2956700	71	NR	C-ST	315	4.44	0	0.00	0	0.00	9	0.13	77	1.08	0	0.00
Vilas	Papoose	2328700	428	C-NR	C-	5,692	13.30	1,376	3.21	2,195	5.13	153	0.36	38	0.09	1,706	3.99
Vilas	Plum	1592400	1,033	NR	C-	29,641	28.69	14,192	13.74	5,964	5.77	8,112	7.85	1,718	1.66	6,326	6.12
Vilas	Presque Isle	2956500	1,280	NR	C-ST	9,349	7.30	3,308	2.58	3,347	2.61	207	0.16	79	0.06	1,606	1.25
Vilas	Snipe	1018500	239	NR	NR	3,804	15.92	2,076	8.69	713	2.98	0	0.00	29	0.12	301	1.26
Vilas	Van Vliet	2956800	220	NR	C-	13,357	60.71	998	4.54	4,658	21.17	4,083	18.56	1,342	6.10	330	1.50
Washburn	Nancy	2691500	772	ST	C-NR	17,944	23.24	160	0.21	435	0.56	2,507	3.25	5,843	7.57	110	0.14

Walleye

County	Lake	MWBIC	Acres	WAE Recruit Code	Initial WAE Bag	Final WAE Bag	WAE Size Reg.	Adult PE	APEAc	Angler Catch	Angler Catch/ Acre	Angler Harvest	Angler Harvest/ Acre	Specific catch rate	Specific harvest rate	No. fish measured	Mean length	General catch rate	General harvest rate
Barron	Prairie	2094100	1,534	ST	2	2	15	769	0.50	4,351	2.84	773	0.50	0.21	0.04	25	16.1	0.03	0.01
Barron	Sand	2661100	322	ST	3	3	15	55	0.17	17	0.05	0	0.00	0.07	0.00	0		0.01	0.00
Bayfield	Diamond	2897100	341	C-ST	2	2	20-28 slot	158	0.46	173	0.51	94	0.28	0.09	0.05	22	16.1	0.04	0.02
Chippewa	Long	2351400	1,052	NR	3	3	14-18 slot	3,030	2.88	2,008	1.91	564	0.54	0.16	0.05	89	14.2	0.08	0.02
Lincoln	Deer	1519600	156	NR	5	5	15	63	0.40	0	0.00	0	0.00	0.00	0.00	0		0.00	0.00
Lincoln	Nokomis	1516500	2,433	NR	2	2	15	--	--	5,916	2.43	1,094	0.45	0.26	0.05	202	16.4	0.14	0.03
Lincoln	Rice R Fl	1516400	920	NR	2	2	15	--	--	1,046	1.14	85	0.09	0.54	0.04	18	17.1	0.44	0.04
Oneida	Bridge	1516800	411	NR	2	2	15	--	--	98	0.24	80	0.19	0.07	0.06	4	16.7	0.01	0.01
Oneida	Rainbow Fl.	1595300	2,035	NR	2	2	15	6,768	3.33	736	0.36	341	0.17	0.07	0.03	121	17.7	0.06	0.03
Polk	Big Round	2627400	1,015	ST	2	2	18	1,090	1.07	346	0.34	54	0.05	0.02	0.01	16	19.7	0.01	0.00
Rusk	Chain	2350500	468	C-ST	3	3	18	342	0.73	0	0.00	0	0.00	0.00	0.00	0		0.00	0.00
Rusk	Clear	2350600	95	C-ST	5	5	18	4	0.04	0	0.00	0	0.00	0.00	0.00	0		0.00	0.00
Rusk	Island	2350200	526	C-ST	3	3	18	326	0.62	90	0.17	0	0.00	0.03	0.00	0		0.01	0.00
Rusk	McCann	2350400	133	C-ST	5	5	18	5	0.04	0	0.00	0	0.00	0.00	0.00	0		0.00	0.00
Sawyer	Grindstone	2391200	3,111	C-NR	1	1	14-18 slot	4,439	1.43	2,670	0.86	389	0.13	0.24	0.04	65	19.0	0.10	0.01
Vilas	Averil	2956700	71	NR	5	5	1>14	--	--	0	0.00	0	0.00	--	--	0		0.00	0.00
Vilas	Papoose	2328700	428	C-NR	3	3	15	1,031	2.41	783	1.83	73	0.17	0.56	0.05	14	17.7	0.14	0.01
Vilas	Plum	1592400	1,033	NR	3	3	14-18 slot	3,176	3.07	3,393	3.28	1,022	0.99	0.24	0.07	201	13.5	0.11	0.03
Vilas	Presque Isle	2956500	1,280	NR	2	2	1>14	--	--	1,325	1.04	288	0.23	0.40	0.08	60	14.9	0.15	0.03
Vilas	Snipe	1018500	239	NR	3	3	15	997	4.17	3,459	14.47	286	1.20	1.56	0.14	61	16.4	0.91	0.08
Vilas	Van Vliet	2956800	220	NR	2	2	1>14	--	--	112	0.51	30	0.14	0.10	0.03	6	16.3	0.01	0.00
Washburn	Nancy	2691500	772	ST	3	3	18	41	0.05	10	0.01	0	0.00	0.00	0.00	0		0.00	0.00

Musky

County	Lake	MWBIC	Acres	MRC	Musky size limit	Angler catch	Angler catch/ acre	Angler harvest	Angler harvest/ acre	Specific catch rate	Specific harvest rate	General catch rate	General harvest rate	No. fish measured	Mean length
Barron	Prairie	2094100	1534	O	40	0	0.00	0	0.00			0.0000	0.0000	0	
Barron	Sand	2661100	322	ST	40	158	0.49	0	0.00	0.0300	0.0000	0.0200	0.0000	0	
Bayfield	Diamond	2897100	341	O	40	0	0.00	0	0.00			0.0000	0.0000	0	
Chippewa	Long	2351400	1052	ST	40	213	0.20	0	0.00	0.0500	0.0000	0.0100	0.0000	0	
Lincoln	Deer	1519600	156	NR	40	67	0.43	0	0.00	0.0662	0.0000	0.0364	0.0000	0	
Lincoln	Nokomis	1516500	2433	NR	40	163	0.07	4	0.00	0.0450	0.0013	0.0059	0.0001	1	43.7
Lincoln	Rice R Fl	1516400	920	NR	40	28	0.03	0	0.00	0.0748	0.0000	0.0135	0.0000	0	
Oneida	Bridge	1516800	411	NR	40	5	0.01	0	0.00	0.0035	0.0000	0.0007	0.0000	0	
Oneida	Rainbow Fl.	1595300	2035	C-NR	40	0	0.00	0	0.00	--	--	0.0000	0.0000	0	
Polk	Big Round	2627400	1015	REM	40	0	0.00	0	0.00	0.0000	0.0000	0.0000	0.0000	0	
Rusk	Chain	2350500	468	ST	40	91	0.19	0	0.00	0.0400	0.0000	0.0100	0.0000	0	
Rusk	Clear	2350600	95	ST	40	29	0.31	0	0.00	0.0100	0.0000	0.0100	0.0000	0	
Rusk	Island	2350200	526	ST	40	209	0.40	0	0.00	0.0700	0.0000	0.0100	0.0000	0	
Rusk	McCann	2350400	133	ST	40	18	0.14	0	0.00	0.0100	0.0000	0.0100	0.0000	0	
Sawyer	Grindstone	2391200	3111	ST	50	82	0.03	0	0.00	0.0100	0.0000	0.0000	0.0000	0	
Vilas	Averil	2956700	71	C-ST	40	0	0.00	0	0.00	--	--	0.0000	0.0000	0	
Vilas	Papoose	2328700	428	C-	40	133	0.31	0	0.00	0.0535	0.0000	0.0244	0.0000	0	
Vilas	Plum	1592400	1033	C-	40	97	0.09	5	0.00	0.0138	0.0008	0.0039	0.0002	1	47.3
Vilas	Presque Isle	2956500	1280	C-ST	40	72	0.06	0	0.00	0.0167	0.0000	0.0081	0.0000	0	
Vilas	Snipe	1018500	239	NR	40	49	0.21	0	0.00	0.0397	0.0000	0.0186	0.0000	0	
Vilas	Van Vliet	2956800	220	C-	40	136	0.62	0	0.00	0.0266	0.0000	0.0125	0.0000	0	
Washburn	Nancy	2691500	772	C-NR	40	0	0.00	0	0.00	0.0000	0.0000	0.0000	0.0000	0	

Northern Pike

County	Lake	MWBIC	Acres	Angler catch	Angler catch/ acre	Angler harvest	Angler harvest/ acre	Specific catch rate	Specific harvest rate	General catch rate	General harvest rate	No. fish measured	Mean length
Barron	Prairie	2094100	1,534	13,608	8.87	118	0.08	0.16	0.01	0.09	0.00	5	30.6
Barron	Sand	2661100	322	1,280	3.98	292	0.91	0.60	0.19	0.12	0.03	36	25.4
Bayfield	Diamond	2897100	341	898	2.63	0	0.00	0.44	0.00	0.21	0.00	0	
Chippewa	Long	2351400	1,052	315	0.30	112	0.11	0.03	0.02	0.01	0.00	22	25.5
Lincoln	Deer	1519600	156	606	3.88	134	0.86	0.23	0.09	0.18	0.04	33	22.0
Lincoln	Nokomis	1516500	2,433	5,232	2.15	859	0.35	0.16	0.04	0.12	0.02	126	25.8
Lincoln	Rice R Fl	1516400	920	455	0.49	146	0.16	0.38	0.19	0.19	0.06	57	22.2
Oneida	Bridge	1516800	411	2,487	6.05	370	0.90	0.45	0.10	0.22	0.03	45	22.9
Oneida	Rainbow Fl.	1595300	2,035	1,028	0.51	644	0.32	0.09	0.06	0.08	0.05	189	23.2
Polk	Big Round	2627400	1,015	1,254	1.24	333	0.33	0.16	0.07	0.03	0.01	59	23.6
Rusk	Chain	2350500	468	224	0.48	34	0.07	0.07	0.01	0.02	0.00	1	26.3
Rusk	Clear	2350600	95	20	0.21	0	0.00	0.02	0.00	0.01	0.00	0	
Rusk	Island	2350200	526	367	0.70	68	0.13	0.09	0.03	0.02	0.00	7	26.2
Rusk	McCann	2350400	133	342	2.57	224	1.68	0.08	0.07	0.04	0.03	25	24.6
Sawyer	Grindstone	2391200	3,111	268	0.09	67	0.02	0.03	0.01	0.01	0.00	11	26.8
Vilas	Averil	2956700	71	18	0.25	0	0.00	2.00	0.00	0.57	0.00	0	
Vilas	Papoose	2328700	428	55	0.13	11	0.03	0.14	0.00	0.02	0.00	1	24.1
Vilas	Plum	1592400	1,033	3,465	3.35	598	0.58	0.26	0.07	0.12	0.02	104	20.1
Vilas	Presque Isle	2956500	1,280	27	0.02	4	0.00	0.01	0.00	0.01	0.00	2	24.8
Vilas	Snipe	1018500	239	33	0.14	0	0.00	--	--	0.07	0.00	0	
Vilas	Van Vliet	2956800	220	3,600	16.36	665	3.02	0.65	0.15	0.27	0.05	162	19.8
Washburn	Nancy	2691500	772	2,668	3.46	189	0.24	0.56	0.07	0.15	0.01	31	20.9

Smallmouth Bass

County	Lake	MWBIC	Acres	Angler catch	Angler catch/ acre	Angler harvest	Angler harvest/ acre	Specific catch rate	Specific harvest rate	General catch rate	General harvest rate	No. fish measured	Mean length
Barron	Prairie	2094100	1,534	776	0.51	0	0.00	0.03	0.00	0.01	0.00	0	
Barron	Sand	2661100	322	47	0.15	0	0.00	1.50	0.00	0.02	0.00	0	
Bayfield	Diamond	2897100	341	815	2.39	38	0.11	0.35	0.02	0.20	0.01	5	16.44
Chippewa	Long	2351400	1,052	5,114	4.86	61	0.06	0.52	0.01	0.22	0.00	10	19.54
Lincoln	Deer	1519600	156	665	4.26	0	0.00	0.56	0.00	0.31	0.00	0	
Lincoln	Nokomis	1516500	2,433	1,404	0.58	115	0.05	0.22	0.03	0.04	0.00	21	18.20
Lincoln	Rice R Fl	1516400	920	132	0.14	0	0.00	0.40	0.00	0.09	0.00	0	
Oneida	Bridge	1516800	411	936	2.28	24	0.06	0.54	0.01	0.12	0.00	2	16.65
Oneida	Rainbow Fl.	1595300	2,035	123	0.06	83	0.04	0.05	0.05	0.01	0.01	8	17.63
Polk	Big Round	2627400	1,015	2	0.00	0	0.00	0.24	0.00	0.00	0.00	0	
Rusk	Chain	2350500	468	139	0.30	0	0.00	0.00	0.00	0.03	0.00	0	
Rusk	Clear	2350600	95	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0	
Rusk	Island	2350200	526	697	1.33	0	0.00	0.09	0.00	0.07	0.00	0	
Rusk	McCann	2350400	133	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0	
Sawyer	Grindstone	2391200	3,111	11,072	3.56	271	0.09	0.87	0.02	0.43	0.01	34	15.19
Vilas	Averil	2956700	71	0	0.00	0	0.00	--	--	0.00	0.00	0	
Vilas	Papoose	2328700	428	1,070	2.50	10	0.02	0.60	0.01	0.20	0.00	2	18.80
Vilas	Plum	1592400	1,033	2,699	2.61	69	0.07	0.40	0.01	0.11	0.00	11	19.47
Vilas	Presque Isle	2956500	1,280	1,126	0.88	13	0.01	0.45	0.01	0.15	0.00	1	18.60
Vilas	Snipe	1018500	239	611	2.56	1	0.00	0.54	0.00	0.19	0.00	1	14.80
Vilas	Van Vliet	2956800	220	174	0.79	0	0.00	0.30	0.00	0.02	0.00	0	
Washburn	Nancy	2691500	772	16	0.02	0	0.00	0.08	0.00	0.01	0.00	0	

Largemouth Bass

County	Lake	MWBIC	Acres	Angler catch	Angler catch/ acre	Angler harvest	Angler harvest/ acre	Specific catch rate	Specific harvest rate	General catch rate	General harvest rate	No. fish measured	Mean length
Barron	Prairie	2094100	1,534	108,443	70.69	425	0.28	2.42	0.00	0.74	0.00	13	15.47
Barron	Sand	2661100	322	4,792	14.88	168	0.52	1.46	0.05	0.51	0.02	16	14.86
Bayfield	Diamond	2897100	341	3,603	10.57	165	0.48	1.36	0.06	0.87	0.04	40	15.31
Chippewa	Long	2351400	1,052	1,217	1.16	0	0.00	0.35	0.00	0.06	0.00	0	
Lincoln	Deer	1519600	156	632	4.05	0	0.00	0.58	0.00	0.25	0.00	1	16.00
Lincoln	Nokomis	1516500	2,433	2,456	1.01	219	0.09	0.33	0.03	0.07	0.01	38	18.17
Lincoln	Rice R FI	1516400	920	210	0.23	25	0.03	0.30	0.05	0.09	0.01	2	17.75
Oneida	Bridge	1516800	411	863	2.10	56	0.14	0.38	0.03	0.09	0.01	5	15.44
Oneida	Rainbow Fl.	1595300	2,035	14	0.01	7	0.00	0.00	0.00	0.00	0.00	1	13.50
Polk	Big Round	2627400	1,015	20,151	19.85	1,110	1.09	1.25	0.10	0.42	0.02	248	14.91
Rusk	Chain	2350500	468	8,086	17.28	1,446	3.09	0.97	0.17	0.63	0.11	22	11.01
Rusk	Clear	2350600	95	495	5.21	150	1.58	0.29	0.10	0.19	0.06	4	11.43
Rusk	Island	2350200	526	4,599	8.74	582	1.11	0.57	0.09	0.27	0.03	26	12.75
Rusk	McCann	2350400	133	542	4.08	196	1.47	0.16	0.06	0.07	0.02	14	13.12
Sawyer	Grindstone	2391200	3,111	440	0.14	21	0.01	0.19	0.01	0.02	0.00	2	16.75
Vilas	Averil	2956700	71	57	0.80	0	0.00	0.74	0.00	0.57	0.00	0	
Vilas	Papoose	2328700	428	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0	
Vilas	Plum	1592400	1,033	346	0.33	7	0.01	0.18	0.00	0.01	0.00	1	18.70
Vilas	Presque Isle	2956500	1,280	0	0.00	0	0.00	0.00	0.00	0.00	0.00	0	
Vilas	Snipe	1018500	239	21	0.09	0	0.00	0.13	0.00	0.02	0.00	0	
Vilas	Van Vliet	2956800	220	775	3.52	4	0.02	0.36	0.00	0.07	0.00	1	15.10
Washburn	Nancy	2691500	772	7,775	10.07	1,915	2.48	0.93	0.26	0.43	0.11	248	12.98

Appendix E. WDNR Walleye Population Estimates Accepted For Use by the Treaty TWG in 2012.

MWBC	County	Lake	Acres	Angler Reg	Recruit Code	Adult PE	CV Adult PE	L95 C.I. Adults	Adult PE/Acre	Adult 0-12"	Adult 12-15"	Adult 15-20"	Adult 20+"
2406500	Ashland	Gordon	142	1>14	NR	371	0.22	215	2.61	4	226	121	20
2094600	Barron	Mud	577	15	C-ST	266	0.19	166	0.46	1	2	131	132
2094300	Barron	Pokegama	506	15	C-NR	229	0.26	113	0.45	1	4	185	39
2094100	Barron	Prairie	1,534	15	ST	769	0.11	599	0.50	1	15	616	138
2661100	Barron	Sand	322	15	ST	55	0.36	16	0.17	1	1	10	43
2897300	Bayfield	Crystal	111	15	C-NR	59	0.18	38	0.53	1	2	52	4
2897100	Bayfield	Diamond	341	Slot20-28	C-ST	158	0.17	105	0.46	1	2	46	109
2706800	Burnett	Big Mckenzie	1,185	18	C-ST	609	0.32	233	0.51	1	8	371	229
2351400	Chippewa	Long	1,052	Slot14-18	NR	3,030	0.15	2,118	2.88	72	1,248	1,638	72
2169200	Chippewa	Round	216	15	C-ST	92	0.16	63	0.43	1	1	12	78
2128100	Eau Claire	Altoona	840	15	NR	3,035	0.21	1,773	3.61	1	1,204	1,800	30
651600	Florence	Emily	191	15	C-ST	147	0.11	114	0.77	1	1	106	38
672900	Florence	Keyes	210	18	C-ST	95	0.20	57	0.45	1	13	47	34
672300	Florence	Sea Lion	125	15	O-ST	33	0.16	23	0.26	1	1	7	24
2296500	Iron	Mcdermott	84	15	O-ST	109	0.19	67	1.30	1	2	80	26
2318500	Iron	Randall	115	1>14	NR	322	0.23	174	2.80	1	10	284	27
1516401	Lincoln	Rice R Fl Chain	3,764	15	NR	11,279	0.08	9,578	3.00	105	4,221	6,650	303
983500	Oneida	Emma	223	15	NR-2	81	0.15	57	0.36	1	1	1	78
995000	Oneida	Julia	238	15	C-ST	433	0.09	359	1.82	5	359	68	1
1595300	Oneida	Rainbow Fl	2,035	15	C-NR	6,768	0.07	5,846	3.33	27	1,606	5,040	95
2627400	Polk	Big Round	1,015	18	ST	1,090	0.13	807	1.07	1	110	737	243
2621100	Polk	Half Moon	579	18	ST	270	0.11	210	0.47	1	38	176	55
2350500	Rusk	Chain	468	18	C-ST	342	0.27	161	0.73	1	2	120	219
2391200	Sawyer	Grindstone	3,111	Slot14-18	C-NR	4,439	0.08	3,768	1.43	14	468	3,520	437
2166100	Taylor	Kathryn	62	15	ST	62	0.26	30	1.00	1	20	23	18
1602600	Vilas	Big Sand	1,418	15	C-ST	953	0.13	715	0.67	1	32	465	455
2339900	Vilas	Escanaba	293	28	NR	1,742	0.10	1,414	5.95	15	552	1,019	156
1631900	Vilas	Lac Vieux Desert	4,300	15	C-ST	4,962	0.08	4,143	1.15	1	172	3,480	1,308
1602300	Vilas	Long	872	18	C-ST	6,472	0.24	3,424	7.42	1	80	2,946	3,445
2328700	Vilas	Papoose	428	15	C-NR	1,031	0.06	912	2.41	121	538	342	30
1592400	Vilas	Plum	1,033	Slot14-18	NR	3,176	0.07	2,730	3.07	74	1,155	1,903	45
2956501	Vilas	Presque Is Chain	1,571	1>14	NR	2,075	0.07	1,794	1.32	86	1,085	650	255
1018500	Vilas	Snipe	239	15	NR	997	0.18	648	4.17	27	405	551	14
1881900	Vilas	Sparkling	154	28	C-ST	285	0.22	161	1.85	1	2	33	249

Appendix E. Continued.

MWBC	County	Lake	Acres	Angler Reg	Recruit Code	PE - Males	CV Male PE	PE - Females	CV Female PE	M:F Ratio
2406500	Ashland	Gordon	142	1>14	NR	242	0.23	69	0.35	3.51
2094600	Barron	Mud	577	15	C-ST	124	0.17	57	0.00	2.18
2094300	Barron	Pokegama	506	15	C-NR	152	0.33	66	0.36	2.30
2094100	Barron	Prairie	1,534	15	ST	558	0.12	173	0.36	3.23
2661100	Barron	Sand	322	15	ST	9	0.00	63	0.58	0.14
2897300	Bayfield	Crystal	111	15	C-NR	56	0.19	7	0.00	8.00
2897100	Bayfield	Diamond	341	Slot20-28	C-ST	34	0.03	139	0.27	0.24
2706800	Burnett	Big Mckenzie	1,185	18	C-ST	495	0.36	107	0.20	4.63
2351400	Chippewa	Long	1,052	Slot14-18	NR	2,375	0.18	2,185	0.68	1.09
2169200	Chippewa	Round	216	15	C-ST	58	0.16	27	0.11	2.15
2128100	Eau Claire	Altoona	840	15	NR	2,580	0.24	345	0.33	7.48
651600	Florence	Emily	191	15	C-ST	114	0.09	49	0.53	2.33
672900	Florence	Keyes	210	18	C-ST	40	0.18	46	0.29	0.87
672300	Florence	Sea Lion	125	15	O-ST	13	0.00	29	0.37	0.45
2296500	Iron	Mcdermott	84	15	O-ST	10	0.00	90	0.19	0.11
2318500	Iron	Randall	115	1>14	NR	145	0.25	191	0.47	0.76
1516401	Lincoln	Rice R Fl Chain	3,764	15	NR	8,183	0.08	6,161	0.37	1.33
983500	Oneida	Emma	223	15	NR-2	41	0.16	44	0.24	0.93
995000	Oneida	Julia	238	15	C-ST	336	0.10	98	0.18	3.43
1595300	Oneida	Rainbow Fl	2,035	15	C-NR	4,491	0.07	4,475	0.33	1.00
2627400	Polk	Big Round	1,015	18	ST	900	0.10	103	0.49	8.74
2621100	Polk	Half Moon	579	18	ST	194	0.11	65	0.27	2.98
2350500	Rusk	Chain	468	18	C-ST	122	0.40	210	0.45	0.58
2391200	Sawyer	Grindstone	3,111	Slot14-18	C-NR	3,205	0.07	2,191	0.39	1.46
2166100	Taylor	Kathryn	62	15	ST	44	0.32	13	0.00	3.38
1602600	Vilas	Big Sand	1,418	15	C-ST	390	0.14	471	0.15	0.83
2339900	Vilas	Escanaba	293	28	NR	1,158	0.09	429	0.25	2.70
1631900	Vilas	Lac Vieux Desert	4,300	15	C-ST	2,690	0.05	4,096	0.34	0.66
1602300	Vilas	Long	872	18	C-ST	940	0.18	5,624	0.36	0.17
2328700	Vilas	Papoose	428	15	C-NR	903	0.06	163	0.38	5.54
1592400	Vilas	Plum	1,033	Slot14-18	NR	2,340	0.07	962	0.24	2.43
2956501	Vilas	Presque Is Chain	1,571	1>14	NR	1,348	0.06	696	0.20	1.94
1018500	Vilas	Snipe	239	15	NR	586	0.12	111	0.44	5.28
1881900	Vilas	Sparkling	154	28	C-ST	8	0.13	267	0.23	0.03

Appendix F. YOY Walleye Survey Summaries.

Lake	County	WBIC	Acres	Walleye Recruit Code	Model	Date	Temp	Total Shore	ShockMI	%Shock	Age0	Age0 Min Length	Age0 Max Length	Age0 Modal Length	Age0MI	Serns	Hansen	Age1	Age1 Min Length	Age1 Max Length	Age1 Modal Length	Age1MI	WESTock
Emily	Florence	651600	191	C-ST	stocked	10/11/2012	44	2.5	2.5	100	0				0.00	0.00	0.00	0				0.00	N
Fisher	Florence	704200	54	O-ST	remnant	09/25/2012	NA	1.4	1.5	107	0				0.00	0.00	0.00	0				0.00	B
Keys	Florence	672900	210	C-ST	stocked	09/24/2012	56	3.3	3.5	106	1	7.9			0.29	0.07	0.00	3	9.9	10.2		0.86	N
Patten	Florence	653700	255	NR	natural	09/24/2012	56	3.9	3.9	100	58	4.8	6.7	6.1	14.87	3.48	2.35	1	8.7	8.7		0.26	N
Sea Lion	Florence	672300	125	O-ST	remnant	10/12/2012	48	3.8	3.2	84	0				0.00	0.00	0.00	0				0.00	N
Jungle	Florence	377900	177	NR	natural	10/01/2012	56	2.2	2.3	105	5	7.1	7.6		2.17	0.51	0.12	0				0.00	N
Lily	Forest	376900	213	NR	natural	10/01/2012	56	2.9	3.4	117	188	5.4	8.2	7.7	55.29	12.94	18.34	0				0.00	N
Ludington	Forest	191900	30	O		09/24/2012	58	0.9	0.9	100	0				0.00	0.00	0.00	0				0.00	N
Metonga	Forest	394400	1991	C-ST	stocked	09/27/2012	58	7.9	10.0	127	1079	3.7	6.9	4.8	107.90	25.25	52.18	21	7	8.7		2.10	B
Pine	Forest	406900	1670	ST	stocked	10/03/2012	58	7.6	8.1	107	8	7.5	8.2		0.99	0.23	0.03	1	9.9	9.9		0.12	B & A
Range Line	Forest	478200	82	C-ST	stocked	09/25/2012	56	1.3	1.3	100	31	6.0	9.4	7.2	23.85	5.58	4.92	0				0.00	B
Stevens	Forest	683000	297	C-ST	stocked	10/04/2012	58	3.3	3.3	100	14	5.9	8.6		4.24	0.99	0.33	0				0.00	B
Van Zile	Forest	608400	81	O		10/04/2012	52	1.8	1.8	100	7	5.8	7.0		3.89	0.91	0.29	0				0.00	N
Indian	Langlade	991900	15	NONE	none	09/12/2012	67	0.7	0.8	114	0				0.00	0.00	0.00	0				0.00	N
Mary	Langlade	496300	156	O		09/25/2012	57	2.0	2.0	100	0				0.00	0.00	0.00	0				0.00	N
Pence	Langlade	1010100	26	NONE	none	10/03/2012	58	0.9	0.9	100	0				0.00	0.00	0.00	0				0.00	N
Rolling Stone	Langlade	389300	672	ST	stocked	10/02/2012	58	4.8	4.6	96	0				0.00	0.00	0.00	0				0.00	N
Snag	Langlade	1018400	21	NONE	none	09/12/2012	67	1.2	1.1	92	0				0.00	0.00	0.00	0				0.00	N
Summit	Langlade	1445600	282	O-ST	remnant	09/25/2012	56	3.3	3.3	100	0				0.00	0.00	0.00	11	8.5	10.9	9.7	3.33	N
Townline	Langlade	1023000	16	NONE	none	10/04/2012	58	0.7	0.8	114	0				0.00	0.00	0.00	0				0.00	N
Upper Post	Langlade	399200	757	C-ST	stocked	09/27/2012	56	7.6	4.7	62	51	4.8	7.6	6.6	10.85	NA	1.44	6	9.8	11.0		1.28	B
Deer	Lincoln	1519600	156	NR	natural	10/31/2012	46	3.0	3.0	100	0				0.00	0.00	0.00	0				0.00	N
Larson	Lincoln	1483200	12	NONE	none	10/01/2012	59	0.5	0.5	100	0				0.00	0.00	0.00	0				0.00	N
Rice River Flowage	Lincoln/Oneida	1516401	3764	NR	natural	10/09/2012	46	72.1	3.9	5	115	4.8	8.3	6.2	29.49	NA	6.86	11	9.3	10.9	10.7	2.82	N
Seven Island	Lincoln	1490300	132	C-ST	stocked	09/17/2012	64	4.0	4.0	100	0				0.00	0.00	0.00	0				0.00	N
Somo	Lincoln	1547700	472	C-ST	stocked	09/24/2012	58	14.2	4.0	28	0				0.00	NA	0.00	0				0.00	N
Spirit Reservoir	Lincoln	1506800	1664	NR	natural	09/26/2012	55	50.3	4.3	9	263	5.2	8.0	6.2	61.16	NA	21.47	36	9.1	10.9	10.6	8.37	N
Tug	Lincoln	1482400	151	NR	natural	09/18/2012	62	2.7	2.3	85	0				0.00	0.00	0.00	0				0.00	N
Caldron Falls	Marinette	545400	1018	O-ST	remnant	10/15/2012	48	22.6	8.0	35	0				0.00	NA	0.00	0				0.00	N
Archibald	Oconto	417400	393	C-ST	stocked	10/10/2012	49	8.8	4.0	45	0				0.00	NA	0.00	0				0.00	B
Boot	Oconto	418700	235	C-NR	natural	10/23/2012	50	3.8	3.8	100	2	6.9	7.4		0.53	0.12	0.01	0				0.00	B
Waubee	Oconto	439500	124	O-ST	remnant	09/24/2012	59	3.3	3.3	100	0				0.00	0.00	0.00	0				0.00	B
Buckskin	Oneida	2272600	634	C-ST	stocked	09/23/2012	58	6.3	6.3	100	80	4.0	7.6	5.4	12.70	2.97	1.84	7	9.7	10.9		1.11	N
Emma	Oneida	983500	223	NR-2	remnant	09/13/2012	64	4.1	3.3	80	0				0.00	0.00	0.00	0				0.00	N
Fifth	Oneida	1571100	240	NR	natural	10/11/2012	44	4.5	3.5	78	10	7.5	9.0		2.86	0.67	0.18	0				0.00	N
Fourth	Oneida	1572000	258	NR	natural	10/11/2012	44	2.6	2.6	100	8	7.4	9.1		3.08	0.72	0.20	0				0.00	N
Julia	Oneida	995000	238	C-ST	stocked	09/26/2012	56	4.6	4.5	98	3	7.1	7.3		0.67	0.16	0.02	0				0.00	B & A
Manson	Oneida	1517200	236	C-NR	natural	09/18/2012	65	5.1	5.1	100	5	6.8	7.8		0.98	0.23	0.03	0				0.00	B
Minocqua	Oneida	1542400	1360	NR	natural	09/24/2012	57	19.1	10.8	57	3	7.5	8.1		0.28	NA	0.00	0				0.00	B
Pelican	Oneida	1579900	3585	NR	natural	09/20/2012	57	16.7	16.7	100	883	4.9	8.5	6.6	52.87	12.37	17.10	37	9.2	11.7	9.8	2.22	N
Rainbow Flowage	Oneida	1595300	2035	NR	natural	10/03/2012	59	22.3	12.5	59	1466	3.3	7.8	5.2	117.28	NA	59.44	370	8	10.9	10.0	29.60	N
Sevenmile	Oneida	1605800	503	C-ST	stocked	09/20/2012	59	6.1	3.5	57	32	5.7	7.5	6.6	9.14	NA	1.10	2	9.7	10.3		0.57	B
Squash	Oneida	1019500	396	NR	natural	09/26/2012	58	7.4	7.1	96	3	6.5	7.8		0.42	0.10	0.01	0				0.00	N
Two Sisters	Oneida	1588200	719	C-NR	natural	09/27/2012	59	9.3	9.2	99	21	6.2	8.0	7.4	2.28	0.53	0.13	3	9.7	10.7		0.33	N
Avenil	Vilas	2956700	71	NR	natural	09/25/2012	55	1.8	1.5	83	3	6.1	6.6		2.00	0.47	0.10	4	9.4	10.4		2.67	N
Big Arbor Vitae	Vilas	1545600	1090	NR	natural	10/15/2012	47	7.8	7.8	100	9	7.2	8.9		1.15	0.27	0.04	0				0.00	N
Big Sand	Vilas	1602600	1418	C-ST	stocked	09/27/2012	58	8.5	5.8	68	10	6.9	8.1		1.72	NA	0.08	0				0.00	N
Carlin	Vilas	2757900	153	NONE	none	10/04/2012	59	2.7	2.7	100	0				0.00	0.00	0.00	0				0.00	N
Circle Lily	Vilas	2326700	223	C-ST	stocked	09/18/2012	60	3.8	3.9	103	19	5.8	7.5	6.3	4.87	1.14	0.41	50	8.2	10.3	9.4	12.82	N
Dead Pike	Vilas	2316600	297	C-ST	stocked	09/10/2012	69	3.8	3.3	86	0				0.00	0.00	0.00	10	9.2	10.8		3.03	A
Lac Vieux Desert	Vilas	1631900	4300	C-ST	stocked	10/01/2012	57	16.5	6.5	39	0				0.00	NA	0.00	10	9.6	10.9		1.54	B
Little Arbor Vitae	Vilas	1545300	534	NR	natural	10/02/2012	58	7.1	5.2	73	300	6.3	9.4	8.5	57.69	NA	19.60	0				0.00	B
Long	Vilas	1602300	872	C-ST	stocked	09/26/2012	57	8.2	7.4	90	0				0.00	0.00	0.00	22	8.4	10.7	9.9	2.97	A
Popose	Vilas	2328700	428	C-NR	natural	09/24/2012	57	7.9	7.9	100	73	4.4	8.6	4.7	9.24	2.16	1.12	4	9	9.8		0.51	N
Plum	Vilas	1592400	1033	NR	natural	10/10/2012	51	14.5	15.1	104	223	4.4	7.6	5.4	14.77	3.46	2.33	65	7.7	10.1	8.8	4.30	N
Presque Isle	Vilas	2956500	1280	NR	natural	09/25/2012	58	9.3	9.7	104	95	4.5	7.6	6.2	9.79	2.29	1.22	13	8.8	10.7		1.34	N
Presque Isle Chain	Vilas	2956501	1571	NR	natural	09/25/2012	58	15.8	16.3	103	99	4.5	7.6	6.2	6.07	1.42	0.58	17	8.8	10.7	10.4	1.04	N
Snipe	Vilas	1018500	239	NR	natural	09/18/2012	60	3.5	3.8	109	7	6.1	7.5		1.84	0.43	0.09	196	7.8	10.0	9.1	51.58	N
Sparkling	Vilas	1881900	154	C-ST	stocked	09/05/2012	72	2.3	2.3	100	53	5.1	7.3	6.1	23.04	5.39	4.66	10	9.1	10.2	9.2	4.35	B & A
Sugar Maple	Vilas	1632200	137	REM	remnant	09/20/2012	58	3.0	3.0	100	1	4	4.4		0.33	0.08	0.01	5	8.5	9.9		1.67	N
Trout	Vilas	2331600	316	C-ST	stocked	10/02/2012	59	17.9	7.6	42	28	4.2	7.9	6.5	3.88	NA	0.27	0				0.00	N
Van Vliet	Vilas	2956800	220	NR	natural	09/25/2012	55	4.7	5.1	109	1	5.4	5.4		0.20	0.05	0.00	0				0.00	N

Lake	County	WBIC	Acres	Walleye Recruit Code	Model	Date	Temp	Total Shore	ShockMi	%Shock	Age0	Age0 Min Length	Age0 Max Length	Age0 Modal Length	Age0MI	Serns	Hansen	Age1	Age1 Min Length	Age1 Max Length	Age1 Modal Length	Age1MI	WESock
Lake Galilee	Ashland	2935500	213	0-ST	remnant	09/19/2012	55	2.9	2.9	100	16	5.8	7.5	6.5	5.52	1.29	0.50	*	-	-	-	-	N
Moquah	Ashland	2918200	50	REM	remnant	10/02/2012	58	2.7	1.4	52	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	N
Potter	Ashland	2917200	29	ST	stocked	10/08/2012	45	0.9	0.9	100	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	N
Spider	Ashland	2918600	103	REM	remnant	10/02/2012	56-59	2.7	2.7	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	N
Spillerberg	Ashland	2936200	75	NR	natural	10/08/2012	47	1.5	1.5	100	9	6.3	7.9	None	6.00	1.40	0.57	36	9.2	11.1	10.5	24.00	N
Lake Chetek	Barron	2094000	770	C-ST	stocked	09/27/2012	59	7.7	3.6	47	4	7.2	8.2	None	1.11	NA	NA	2	11.7	11.8	None	0.56	B
Mud	Barron	2094600	577	C-ST	stocked	09/27/2012	61	8.3	2.5	30	0	-	-	-	0.00	NA	NA	5	9.6	11.7	None	2.00	N
Pokegama	Barron	2094300	506	C-NR	natural	09/27/2012	60	11.3	3.2	28	1	7.7	7.7	None	0.31	NA	NA	2	10.9	11.7	None	0.63	N
Prairie	Barron	2094100	1534	ST	stocked	09/27/2012	58-60	25.4	10.1	40	1	8.0	8.0	None	0.10	NA	NA	1	9.3	9.3	None	0.10	N
Red Cedar	Barron	2109600	1841	C-NR	natural	09/24/2012	61	15.9	12.4	78	268	4.9	7.7	5.8	21.61	NA	NA	124	7.9	10.2	9.2	10.00	B
Sand	Barron	2661100	322	ST	stocked	09/25/2012	60	6.3	6.3	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	N
Tenmile	Barron	2089500	376	C-ST	stocked	09/27/2012	58	8.6	2.7	31	0	-	-	-	0.00	NA	NA	1	11.8	11.8	None	0.37	B
Crystal	Bayfield	2897300	111	C-NR	natural	09/24/2012	58	2.5	2.5	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	N
Diamond	Bayfield	2897100	341	C-ST	stocked	09/17/2012	62	5.0	5.0	100	0	-	-	-	0.00	0.00	0.00	1	9.7	9.7	None	0.20	A
Lake Ruth	Bayfield	2765900	66	0-ST	remnant	09/20/2012	60	1.8	1.8	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	N
Middle Eau Claire	Bayfield	2742100	902	C-NR	natural	09/19/2012	61-62	11.0	7.7	70	305	4.5	8.2	5.9	39.61	NA	NA	*	-	-	-	-	N
Perch	Bayfield	2770700	71	O	stocked	10/01/2012	59	1.9	1.8	95	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	N
Upper Eau Claire	Bayfield	2742700	996	C-NR	natural	09/26/2012	56-59	11.1	11.1	100	1	7.4	7.4	None	0.09	0.02	0.00	0	-	-	-	0.00	N
Big Mckenzie	Burnett	2706800	1185	C-ST	stocked	09/20/2012	63	7.1	7.1	100	6	7.1	8.7	8.5	0.85	0.20	0.03	4	9.2	12.9	None	0.56	A
Clam River Flowage	Burnett	2654500	359	NR	natural	10/03/2012	61	6.4	6.0	94	4	6.5	7.4	7.4	0.67	NA	NA	18	8.4	11.0	11.0	3.00	N
Dunham	Burnett	2651800	243	C-ST	stocked	09/25/2012	61	3.0	3.0	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	B
Lipssett	Burnett	2678100	393	ST	stocked	09/18/2012	64	3.5	3.5	100	0	-	-	-	0.00	0.00	0.00	3	10.4	11.5	None	0.86	A
Lake Wissota	Chippewa	2152600	6300	NR	natural	10/02/2012	57-64	56.3	11.5	20	156	5.4	8.0	6.8	13.57	NA	NA	*	-	-	-	-	N
Long	Chippewa	2351400	1052	NR	natural	09/26/2012	58-61	14.0	14.0	100	251	5.0	7.8	6.0, 6.4, 6.6	17.93	4.20	3.15	*	-	-	-	-	N
Lyman	Douglas	2856400	403	NR-2	remnant	09/22/2012	56-59	6.9	4.0	58	30	5.8	7.3	6.4	7.50	NA	NA	*	-	-	-	-	N
Altoona	Eau Claire	2128100	840	NR	natural	09/25/2012	56	9.4	4.0	43	762	4.2	7.8	6.0	190.50	NA	NA	181	7.9	11.0	8.0	45.25	N
Lake Eau Claire	Eau Claire	2133200	860	NR	natural	10/03/2012	64	24.3	4.0	16	422	5.0	8.1	6.7	105.50	NA	NA	48	8.4	11.7	10.4, 10.7	12.00	N
Cedar	Iron	2309700	193	C-ST	stocked	09/27/2012	52	4.4	3.9	89	139	5.8	8.2	6.3	35.64	NA	NA	0	-	-	-	0.00	B
Echo	Iron	2301800	220	C-NR	natural	09/25/2012	53	4.9	4.2	86	0	-	-	-	0.00	NA	NA	5	9.5	10.8	None	1.19	N
Fisher	Iron	2307300	410	ST	stocked	09/20/2012	54	10.9	5.5	50	0	-	-	-	0.00	NA	NA	*	-	-	-	-	N
Island	Iron	2945500	352	C-ST	stocked	10/10/2012	43	7.4	7.4	100	79	4.5	8.0	6.3, 6.6	10.68	2.50	1.40	59	9.9	11.9	11.0	7.97	N
Pine	Iron	2949200	312	NR	natural	09/18/2012	59	6.0	6.0	100	99	4.3	6.5	5.3	16.50	3.86	2.77	*	-	-	-	-	N
Spider	Iron	2306300	352	NR	natural	10/15/2012	46	7.3	7.3	100	56	4.7	8.1	6.7	7.67	NA	NA	2	10.3	10.6	None	0.27	N
Balsam	Polk	2620600	2054	C-ST	stocked	10/02/2012	57-60	22.7	22.7	100	8	4.8	6.1	None	0.35	0.08	0.01	0	-	-	-	0.00	B
Big Round	Polk	2627400	1015	ST	stocked	09/25/2012	54-57	5.7	5.7	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	N
Half Moon	Polk	2621100	579	ST	stocked	10/03/2012	61	7.1	5.6	79	0	-	-	-	0.00	0.00	0.00	*	-	-	-	-	N
Patterson	Price	1872500	70	0-ST	remnant	10/04/2012	55-57	1.8	1.8	100	5	7.5	8.9	8.5-8.9	2.78	NA	NA	*	-	-	-	-	B
Turner	Price	2268500	149	C-	natural	10/03/2012	58-60	2.6	2.6	100	25	6.1	8.3	6.7, 7.5	9.62	NA	NA	17	9.1	11.1	9.8, 9.9	6.54	N
Chain	Rusk	2350500	468	C-ST	stocked	10/01/2012	60-62	7.9	6.7	85	0	-	-	-	0.00	NA	NA	1	9.3	9.3	None	0.15	A
Clear	Rusk	2350600	95	ST	stocked	10/01/2012	60	1.8	1.8	100	5	8.1	8.7	8.1	2.78	0.65	0.17	0	-	-	-	0.00	B
Island	Rusk	2350200	526	C-NR	natural	10/01/2012	58-60	5.8	5.8	100	2	8.1	8.5	None	0.34	0.08	0.01	0	-	-	-	0.00	B
Mccann	Rusk	2350400	133	C-ST	stocked	10/01/2012	58-60	4.2	1.7	40	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	A
Black Dan	Sawyer	2381900	128	0-ST	remnant	09/11/2012	63	3.0	3.0	100	3	7.5	7.8	None	1.00	0.23	0.03	4	8.2	8.6	8.2	1.33	A
Durpee	Sawyer	2396800	193	C-NR	natural	09/10/2012	66	2.7	2.7	100	0	-	-	-	0.00	NA	NA	5	9.7	10.1	None	1.85	N
Fishtrap	Sawyer	2401100	216	REM	remnant	09/27/2012	55-60	6.8	4.2	62	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	N
Grindstone	Sawyer	2391200	3111	C-NR	natural	09/24/2012	59-60	10.5	10.5	100	456	3.8	7.8	6.8	43.43	10.16	12.57	31	8.0	10.5	9.0	2.95	N
Lake Chetac	Sawyer	2111300	1920	C-NR	natural	09/27/2012	63	17.5	3.7	21	5	6.5	7.9	None	1.35	NA	NA	38	8.5	10.6	9.8, 10.3	10.27	A
Lake Chippewa (Flowage)	Sawyer	2399700	15300	C-NR	natural	09/12/2012	63	232.9	6.0	3	1	6.9	6.9	None	0.17	NA	NA	*	-	-	-	-	Y
Moose	Sawyer	2420600	1670	NR	natural	09/24/2012	58	35.2	4.7	13	38	4.6	7.8	7.7	8.09	NA	NA	13	7.9	8.2	7.9	2.77	N
Sissabagama	Sawyer	2393500	719	C-NR	natural	09/19/2012	62-63	8.2	4.0	49	0	-	-	-	0.00	NA	NA	7	8.0	9.1	None	1.75	A
Teal	Sawyer	2417000	1049	C-NR	natural	09/18/2012	62	11.8	4.0	34	0	-	-	-	0.00	NA	NA	27	8.5	9.7	9.4	6.75	N
Whitefish	Sawyer	2392000	786	ST	stocked	09/13/2012	63	8.1	6.1	75	1	6.5	6.5	None	0.16	NA	NA	1	8.1	8.1	None	0.16	A
Windigo	Sawyer	2046600	522	C-NR	natural	09/20/2012	62	9.0	4.0	44	13	5.4	7.3	7.0	3.25	NA	NA	0	-	-	-	0.00	N
Cedar	St. Croix	2615100	1100	NR	natural	10/02/2012	62	6.3	2.0	32	28	5.9	7.8	6.8	14.00	NA	NA	123	8.1	12.4	9.9, 10.3	61.50	N
Kathryn	Taylor	2166100	62	ST	stocked	09/26/2012	59	2.7	2.7	100	0	-	-	-	0.00	0.00	0.00	0	-	-	-	0.00	A
Dunn	Washburn	2709800	193	C-NR	natural	09/26/2012	60	3.6	3.6	100	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	B
Lake Nancy	Washburn	2691500	772	ST	stocked	09/17/2012	65	10.9	5.9	54	0	-	-	-	0.00	NA	NA	0	-	-	-	0.00	A
Middle Mckenzie	Washburn	2706500	530	C-ST	stocked	09/24/2012	63	4.1	4.1	100	0	-	-	-	0.00	0.00	0.00	2	9.4	9.4	None	0.49	A

Appendix G. Walleye Exploitation Rates.

H-1. Information on fin clipped fish in population (prior to creel) and those observed in angler creels used to estimate angler harvest and exploitation rates during the 2012-2013 fishing season.

WBIC	County	Lake	Acres	Recruit. Code	Size Limit	Clip Given	Clips Given Prior to Creel			Clips Observed in Creel					
							# Clips Given	#Clips	#Clips	# Clips Observed	# Clips Projected	# Clips Obs. ≥14"	# Clips Proj. ≥14"	# Clips Obs. ≥20"	# Clips Proj. ≥20"
								≥14"	≥20"						
2094100	Barron	Prairie	1534	ST	15	LV	385	382	63	10	325	10	325	0	0
2661100	Barron	Sand	322	ST	15	LP	25	25	19	0	0	0	0	0	0
2897100	Bayfield	Diamond	341	C-ST	20-28 slot	LP	128	128	82	1	5	1	5	0	0
2351400	Chippewa	Long	1052	NR	14-18 slot	LP	759	617	30	2	15	0	0	0	0
1516401	Lincoln	Rice R Fl Ch	3764	NR	15	LV	3,033	2,455	126	25	130	25	130	1	5
1595300	Oneida	Rainbow Fl.	2035	NR	15	LV/RV	2,205	2,006	22	5	14	5	14	0	0
2627400	Polk	Big Round	1015	ST	18	LV	677	663	84	5	19	5	19	1	4
2350500	Rusk	Chain	468	C-ST	18	RP	121	121	82	0	0	0	0	0	0
2391200	Sawyer	Grindstone	3111	C-NR	14-18 slot	RP	1,579	1,478	94	2	14	2	14	0	0
2328700	Vilas	Papoose	428	C-NR	15	RV	745	388	23	6	29	6	29	0	0
1592400	Vilas	Plum	1033	NR	14-18 slot	RP	1,592	1,276	61	21	134	11	70	3	19
2956501	Vilas	Presque Isle	1571	NR	1>14	Multiple	1,234	716	159	8	23	8	23	2	6
1018500	Vilas	Snipe	239	NR	15	LV	402	257	7	8	51	8	51	2	13

H-2. Estimated angler and tribal harvest and associated walleye exploitation rates for lakes surveyed during the 2012-2013 fishing season.

County	Lake	Acres	Adult PE	Angler Harvest	Tribal Harvest	Total Harvest	Angler Exploitation	Angler Exploitation ≥14"	Angler Exploitation ≥20"	Tribal Exploitation	Total Exploitation
Barron	Prairie	1534	769	773	0	773	0.8442	0.8508	0.0000	0.0000	0.8442
Barron	Sand	322	55	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Bayfield	Diamond	341	158	94	0	94	0.0391	0.0391	0.0000	0.0000	0.0391
Chippewa	Long	1052	3,030	564	23	587	0.0198	0.0000	0.0000	0.0076	0.0274
Lincoln	Rice R Fl Cha	3764	11,279	1259	954	2213	0.0429	0.0530	0.0397	0.0846	0.1274
Oneida	Rainbow Fl.	2035	6,768	341	34	375	0.0063	0.0070	0.0000	0.0050	0.0114
Polk	Big Round	1015	1,090	54	19	73	0.0281	0.0287	0.0452	0.0174	0.0455
Rusk	Chain	468	342	0	0	0	0.0000	0.0000	0.0000	0.0000	0.0000
Sawyer	Grindstone	3111	4,439	389	189	578	0.0089	0.0095	0.0000	0.0426	0.0514
Vilas	Papoose	428	1,031	73	113	186	0.0389	0.0747	0.0000	0.1096	0.1485
Vilas	Plum	1033	3,176	1022	351	1373	0.0842	0.0550	0.3138	0.1105	0.1947
Vilas	Presque Isle	1571	2,075	318	178	496	0.0186	0.0321	0.0362	0.0858	0.1044
Vilas	Snipe	239	997	286	28	314	0.1269	0.1984	1.8214	0.0281	0.1549

Appendix H. Safe harvest of walleye and musky calculated for individual lakes within the Wisconsin Ceded Territory during 2012.

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Ashland	Augustine L	2410400	166			Other	6
Ashland	Bear L	2403200	204	Other	82	Other	7
Ashland	Beaver Dam L	2916700	118			Other	5
Ashland	Beaver L	2935400	25			Other	2
Ashland	Cub L	1842600	31			Other	2
Ashland	Day L	2430300	641			Other	15
Ashland	E Twin L	2429000	110			Other	5
Ashland	English L	2914800	244	1-2 Year Pe	27	Other	8
Ashland	Eureka L	2935600	39			Other	2
Ashland	Gordon L	2406500	142	Other	58	Other	5
Ashland	L Galilee	2935500	213	Other	9	Other	7
Ashland	Meder L	2935300	135	Other	19		
Ashland	Mineral L	2916900	225	Other	90	Other	7
Ashland	Moquah L	2918200	50			Other	3
Ashland	Pelican L	2404800	46	Other	20	Other	3
Ashland	Potter L	2917200	29	Other	5		
Ashland	Spider L	2918600	103			Other	4
Ashland	Spillerberg L	2936200	75	Other	31	Other	4
Ashland	Tea L	2922700	50	Other	21		
Ashland	Torrey L	2406700	29			Other	2
Ashland	Upper Clam L	2429600	166	Other	23	Other	6
Ashland	Zielke L	2406900	21	Other	9		
Barron	Bass L	1832800	118	Other	6		
Barron	Bear L	2105100	1358	Other	25		
Barron	Beaver Dam L	2081200	1112	Other	129		
Barron	Big Dummy L	1835100	111	Other	16		
Barron	Big Moon L	2079000	191	Other	26	Other	7
Barron	Butternut L	2105800	141	Other	7		
Barron	Duck L	2100300	100	Other	41		
Barron	Echo L	2630200	161	Other	8		
Barron	Granite L	2100800	154	Other	63		
Barron	Hemlock L	2109800	357	1-2 Year Pe	24		
Barron	Horseshoe L	2469800	115	Other	16		
Barron	Horseshoe L	2630100	377	Other	13		
Barron	L Chetek	2094000	770	Other	92		
Barron	L Montanis	2103200	200	1-2 Year Pe	32		
Barron	Little Sand L	2661600	101			Other	4
Barron	Loon L	2478600	94	Other	13		
Barron	Lower Devils L	1864000	162	Other	66		
Barron	Lower Turtle L	2079700	276	Other	36		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Barron	Lower Vermillion	2098200	208	Other	28		
Barron	Minnow L	1866600	26	Other	2		
Barron	Mud L	2094600	577	Other	71		
Barron	Pokegama L	2094300	506	Other	196		
Barron	Poskin L	2098000	150	1-2 Year Pe	12		
Barron	Prairie L	2094100	1534	Other	172		
Barron	Red Cedar L	2109600	1841	1-2 Year Pe	525		
Barron	Rice L	2103900	939			Other	19
Barron	Sand L	2661100	322	Other	42	Other	9
Barron	Scott L	2630700	81	Other	5		
Barron	Silver L	1881100	337	Other	133		
Barron	Spring L	1882800	60	Other	25		
Barron	Staples L	2631200	305	Other	40		
Barron	Tenmile L	2089500	376	Other	48		
Barron	Upper Devils L	2043500	86	Other	5		
Barron	Upper Turtle L	2079800	438	1-2 Year Pe	67		
Bayfield	Armstrong L	2754600	48	Other	20		
Bayfield	Atkins L	2734000	176	Other	71		
Bayfield	Bellevue L	2755800	65	Other	4		
Bayfield	Bladder L	2756200	81	Other	34		
Bayfield	Bony L	2742500	191	1-2 Year Pe	44	Other	7
Bayfield	Buffalo L	1837700	179	Other	8	Other	6
Bayfield	Buskey Bay	2903800	100	1-2 Year Pe	23	1-2 Year Pe	2
Bayfield	Camp One L	2965700	37	Other	16		
Bayfield	Chippewa L	2431300	274			Other	8
Bayfield	Cisco L	2899200	95	Other	14		
Bayfield	Cranberry L	2732800	58	Other	4		
Bayfield	Crystal L	2874700	94	Other	6		
Bayfield	Crystal L	2897300	111	Other	46		
Bayfield	Deep L	2760100	125	Other	7		
Bayfield	Diamond L	2897100	341	Other	44		
Bayfield	Drummond L	2899400	99	Other	14		
Bayfield	Eagle L	2902900	170			1-2 Year Pe	4
Bayfield	Everett L	2761600	34	Other	3		
Bayfield	Finger L	2965500	76	Other	5		
Bayfield	Flynn L	2902800	29			1-2 Year Pe	1
Bayfield	Ghost L	2423900	142			Other	5
Bayfield	Hammil L	2467900	83	Other	12		
Bayfield	Hart L	2903200	259	1-2 Year Pe	61	1-2 Year Pe	5
Bayfield	Hildur L	2902600	67			Other	3
Bayfield	Iron L	2877000	248	Other	10		
Bayfield	Jackson L	2734200	142	Other	7		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Bayfield	Kelly L	2472000	56	Other	4		
Bayfield	Kern L	2900500	91	Other	38		
Bayfield	L Millicent	2903700	183	1-2 Year Pe	43	1-2 Year Pe	4
Bayfield	L Owen	2900200	1323	Other	151		
Bayfield	L Ruth	2765900	66	Other	4		
Bayfield	L Tahkodah	2473500	152	Other	8		
Bayfield	Little Siskiwit L	2882200	37	Other	16		
Bayfield	Long L	2767100	263	Other	35		
Bayfield	Marengo L	2921100	99	Other	41		
Bayfield	Mccarry L	2903400	32			Other	2
Bayfield	Middle Eau Claire	2742100	902	1-2 Year Pe	240	Other	18
Bayfield	Mill Pond L	2899700	62	Other	26		
Bayfield	Mullenhoff L	2876500	69	Other	5		
Bayfield	Muskellunge L	2903600	45	Other	3		
Bayfield	Namekagon L	2732600	3227	1-2 Year Pe	1851	Other	41
Bayfield	Perch L	2770800	25	Other	11		
Bayfield	Samoset L	2494800	46	Other	4		
Bayfield	Siskiwit L	2882300	330	1-2 Year Pe	56		
Bayfield	Spider L	2774200	75	Other	5		
Bayfield	Spider L	2876200	124	Other	7		
Bayfield	Swett L	2743700	88	Other	37		
Bayfield	Trapper L	2734500	84	Other	35		
Bayfield	Twin Bear L	2903100	172	1-2 Year Pe	40	1-2 Year Pe	4
Bayfield	Upper Eau Claire	2742700	996	1-2 Year Pe	80	Other	20
Burnett	Big Mckenzie L	2706800	1185	Other	136	Other	22
Burnett	Big Sand L	2676800	1400	Other	26		
Burnett	Big Trade L	2638700	304			Other	9
Burnett	Clam R Fl	2654500	359	Other	141		
Burnett	Danbury Fl	2674500	256			Other	8
Burnett	Des Moines L	2674200	229			Other	7
Burnett	Devils L	2461100	1001	Other	117		
Burnett	Dunham L	2651800	243	Other	32		
Burnett	Elbow L	2463100	233	Other	10		
Burnett	Fish L	2464500	356	Other	12		
Burnett	Lipsett L	2678100	393	1-2 Year Pe	32		
Burnett	Little Mcgraw L	2477000	55	Other	8		
Burnett	Little Trade L	2639300	130			Other	5
Burnett	Little Yellow L	2674800	348	Other	137	Other	10
Burnett	Poquettes L	2491100	97	Other	14		
Burnett	Rice L	2677900	311			Other	9
Burnett	Rooney L	2493100	322	Other	42		
Burnett	Round L	2640100	204	Other	28		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Burnett	Sand L	2495100	962	Other	21		
Burnett	Twenty-Six L	2672500	230			Other	8
Burnett	Viola L	2598600	285	Other	11		
Burnett	Yellow L	2675200	2287	Other	823	Other	33
Chippewa	Axhandle L	2092500	84	Other	5		
Chippewa	Chippewa Falls FI	2152600	282	Other	112		
Chippewa	Cornell FI	2181400	577	Other	222	Other	14
Chippewa	Cornell L	2171000	194	Other	9		
Chippewa	Holcombe FI	2184900	3890	Other	1359	Other	47
Chippewa	L Wissota	2152800	6300	1-2 Year Pe	924	Other	63
Chippewa	Long L	2351400	1052	Other	394	Other	20
Chippewa	Old Abe L	2174700	1072	Other	401	Other	21
Chippewa	Otter L	2157000	661	Other	80		
Chippewa	Popple L	2173900	90	Other	13		
Chippewa	Round L	2169200	216	Other	29	Other	7
Clark	Mead L	2143900	320	Other	21	Other	5
Douglas	Amnicon L	2858100	426	Other	166	Other	11
Douglas	Bass L	2451700	126	Other	52		
Douglas	Bear L	2857700	49	Other	21	Other	3
Douglas	Beauregard L	2452400	93	Other	39		
Douglas	Bond L	2693700	293	Other	116		
Douglas	Clear L	2457700	36	Other	15		
Douglas	Dowling L	2858300	154	Other	63	Other	6
Douglas	Hoodoo L	2763900	32	Other	3		
Douglas	L Minnesuing	2866200	432	Other	169		
Douglas	L Nebagamon	2865000	914	Other	108		
Douglas	Leader L	2693800	165	Other	67		
Douglas	Lower Eau Claire	2741600	802	1-2 Year Pe	246	Other	17
Douglas	Lund L	2480300	75	Other	5		
Douglas	Lyman L	2856400	403	Other	13	Other	11
Douglas	Person L	2488600	172	Other	8		
Douglas	Peterson L	2488700	33	Other	3		
Douglas	Red L	2492100	258	Other	10		
Douglas	Round L	2493900	34	Other	3		
Douglas	Upper St Croix L	2747300	855	Other	323		
Douglas	Whitefish L	2694000	832	Other	315		
Douglas	Wilson L	2600800	27	Other	2		
Dunn	Tainter L	2068000	1752	Other	639		
Eau Claire	Altoona L	2128100	840	Other	159	Other	9
Eau Claire	Dells Pond	2149900	739	Other	281	Other	16
Eau Claire	Halfmoon L	2125400	132	Other	18		
Eau Claire	L Eau Claire	2133200	860	Other	163	Other	9

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Florence	Emily L	651600	191	Other	26		
Florence	Fay L	677100	282	Other	37		
Florence	Fisher L	704200	54	Other	4		
Florence	Halsey L	679300	512	Other	15		
Florence	Keyes L	672900	210	Other	28		
Florence	Patten L	653700	255	1-2 Year Pe	36		
Florence	Pine R Fl	651300	127	Other	52		
Florence	Sea Lion L	672300	125	Other	7		
Forest	Arbutus L	181400	158	Other	22		
Forest	Birch L	555500	468	Other	182		
Forest	Butternut L	692400	1292	1-2 Year Pe	808		
Forest	Crane L	388500	337	Other	44		
Forest	Franklin L	692900	892	Other	337		
Forest	Ground Hemlock L	395900	88	Other	13		
Forest	Howell L	691800	177	Other	72		
Forest	Jungle L	377900	182	1-2 Year Pe	134		
Forest	King L	501700	33	Other	14		
Forest	L Lucerne	396500	1026	1-2 Year Pe	94		
Forest	L Metonga	394400	1991	1-2 Year Pe	369		
Forest	Lily L	376900	211	Other	85	Other	7
Forest	Little Long L	190500	102	Other	6		
Forest	Mole L	390600	73	Other	5		
Forest	Pine L	406900	1670	Other	186		
Forest	Quartz L	591000	47			Other	3
Forest	Range Line L	478200	82	Other	12		
Forest	Riley L	557100	213			Other	7
Forest	Roberts L	378400	414	1-2 Year Pe	211	Other	11
Forest	Silver L	555700	334	Other	12	Other	10
Forest	Stevens L	683000	297	Other	39		
Forest	Trump L	479300	172	Other	24		
Forest	Wabikon L	556900	594			Other	14
Forest	Windfall L	373500	55			Other	3
Iron	Bearskull L	2265100	75	Other	11		
Iron	Big Pine L	2270700	632	Other	242	Other	15
Iron	Boot L	2297800	180	Other	8	Other	6
Iron	Catherine L	2309100	118	Other	17		
Iron	Cedar L	2309700	193	Other	26	Other	7
Iron	Charnley L	1840400	71	Other	5		
Iron	Clear L	2303700	67	Other	4	Other	3
Iron	Echo L	2301800	220	Other	88	Other	7
Iron	Fisher L	2307300	452	Other	57	Other	12
Iron	French L	1849600	92	Other	6	Other	4

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Iron	Gile Fl	2942300	3384	Other	1192	Other	43
Iron	Grand Portage L	2314100	144	Other	20	Other	5
Iron	Grant L	2312500	107	Other	6	Other	5
Iron	Hewitt L	2763300	78			Other	4
Iron	Island L	2945500	352	Other	45	Other	10
Iron	L Of The Falls	2298300	338	Other	44	Other	10
Iron	L Tahoe	2314000	37	Other	3	Other	2
Iron	Little Martha L	2314700	35	Other	3	Other	2
Iron	Long L	2303500	396	1-2 Year Pe	68	Other	11
Iron	Lower Springstead	2267000	95	Other	39	Other	4
Iron	Martha L	2314300	146	Other	60		
Iron	Mcdermott L	2296500	84	Other	5		
Iron	Mercer L	2313600	184	Other	25	Other	6
Iron	Moose L	2299300	269			Other	8
Iron	Mud L	2316400	56	Other	24		
Iron	Muskie L	2266800	81	Other	34	Other	4
Iron	N Bass L	1868900	180	Other	8	Other	6
Iron	Owl L	2307600	129	Other	18	Other	5
Iron	Oxbow L	2302300	80	Other	33	Other	4
Iron	Pardee L	2308000	206	Other	83	Other	7
Iron	Pike L	2299900	165	Other	67	Other	6
Iron	Pine L	2949200	312	1-2 Year Pe	357	Other	9
Iron	Plunkett L	2325200	48	Other	4		
Iron	Randall L	2318500	115	Other	47	Other	5
Iron	Rice L	2300600	125	Other	51	Other	5
Iron	Sandy Beach L	2316100	111	Other	46		
Iron	Saxon Falls Fl	2941100	41	Other	18	Other	2
Iron	Second Black L	2298600	60	Other	25		
Iron	Spider L	2306300	352	Other	139	Other	10
Iron	Stone L	2267200	82	Other	5	Other	4
Iron	Third Black L	2298800	68	Other	29		
Iron	Trude L	2295200	781	Other	297	Other	17
Iron	Turtle-Flambeau F	2294900	13545	Other	4401	Other	101
Iron	Upper Springstead	2267100	126	Other	52	Other	5
Iron	Virgin L	2304500	119			Other	5
Iron	Wilson L	2297000	162			Other	6
Langlade	Big Twin L	182200	60	Other	4		
Langlade	Deep Wood L	1445100	72			Other	3
Langlade	Duck L	981500	123	Other	7		
Langlade	Enterprise L	1579700	505	1-2 Year Pe	124	Other	13
Langlade	Goto L	348700	28	Other	3		
Langlade	Greater Bass L	1445500	258			Other	8

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Langlade	Jessie L	188700	35	Other	3		
Langlade	Lawrence L	997300	50	Other	4		
Langlade	Moccasin L	1005600	110	Other	16	Other	5
Langlade	Mueller L	194000	88	Other	13		
Langlade	Otter L	387200	83	Other	35		
Langlade	Pickerel L	388100	1256	Other	24		
Langlade	Rolling Stone L	389300	672	Other	82		
Langlade	Rose L	494200	112	Other	46		
Langlade	Sawyer L	198100	149	1-2 Year Pe	44		
Langlade	Summit L	1445600	282	Other	11	Other	9
Langlade	Upper Post L	399200	757	Other	91		
Langlade	Water Power L	1445400	22			Other	2
Langlade	White L	365500	166	Other	8		
Lincoln	Alexander L	1494600	677	1-2 Year Pe	132	Other	15
Lincoln	Bass L	969600	100	Other	6		
Lincoln	Clear L	1555400	272	Other	11		
Lincoln	Crystal L	979100	109	Other	6		
Lincoln	Deer L	1519600	152	Other	62	Other	6
Lincoln	Grandfather FI	1502400	223	Other	9		
Lincoln	Grandmother FI	1503000	119	Other	6		
Lincoln	Jersey City FI	1516000	404	Other	158	Other	11
Lincoln	L Alice	1555900	1369	Other	506	Other	24
Lincoln	L Mohawksin	1515400	1910	Other	694	Other	30
Lincoln	L Nokomis	1516500	2433	Other	872	Other	35
Lincoln	Long L	1001000	132	Other	18		
Lincoln	Merrill FI	1481100	164	Other	67		
Lincoln	Muskellunge L	1555500	167	Other	8		
Lincoln	Pesabic L	1481600	146	Other	20		
Lincoln	Pine L	1012100	134	Other	7	Other	5
Lincoln	Rice R FI	1516400	920	Other	347	Other	19
Lincoln	Seven Island L	1490300	132	Other	18	Other	5
Lincoln	Silver L	1017400	82	Other	34		
Lincoln	Somo L	1547700	472	Other	59	Other	12
Lincoln	Spirit R FI	1506800	1663	Other	608	Other	27
Lincoln	Squaw L	1564400	79	Other	11	Other	4
Lincoln	Thompson L	1022200	30			Other	2
Lincoln	Tug L	1482400	151	Other	62	Other	6
Marathon	Big Eau Pleine Re	1427400	6830	Other	1849	Other	53
Marathon	L Wausau	1437500	1918	Other	70	Other	3
Marathon	Mayflower L	310500	98	Other	14		
Marathon	Mission L	1005400	107			Other	5
Marathon	Norrie L	310100	99	Other	6		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Marathon	Pike L	1406300	205	Other	28		
Marathon	Wausau Dam L	1469700	284	Other	9		
Marinette	Big Newton L	498800	68	Other	29		
Marinette	Caldron Falls Res	545400	1018	Other	22	Other	20
Marinette	Eagle L	500200	56	Other	4		
Marinette	High Falls Reserv	540600	1498	Other	551		
Marinette	Hilbert L	501200	247	Other	33		
Marinette	Johnson Falls FI	533300	68	Other	29		
Marinette	Little Newton L	502300	60	Other	25		
Marinette	Oneonta L	503300	66	Other	4		
Marinette	Sandstone FI	531300	153	Other	31		
Marinette	Thunder L	533600	127	Other	7		
Oconto	Archibald L	417400	393	1-2 Year Pe	66	Other	11
Oconto	Bass L	417900	142	Other	58		
Oconto	Bear L	471200	78	Other	5		
Oconto	Boot L	418700	235	Other	94	Other	8
Oconto	Boundary L	499000	37	Other	3		
Oconto	Crooked L	462000	143	Other	7		
Oconto	Horn L	467100	132	Other	7		
Oconto	John L	470600	104	Other	6		
Oconto	Maiden L	487500	290	Other	11		
Oconto	Munger L	470900	97	Other	6	Other	4
Oconto	Paya L	425600	121	Other	7		
Oconto	Reservoir Pond	466700	418	Other	14		
Oconto	Townsend FI	465000	476	Other	15		
Oconto	Waubee L	439500	124	Other	7		
Oconto	Wheeler L	439800	293	Other	116		
Oneida	Aldridge L	967400	134	Other	55		
Oneida	Alva L	968100	201	Other	81		
Oneida	Baker L	1546000	42	Other	18		
Oneida	Bass L	1580300	124	Other	51	Other	5
Oneida	Bear L	1527800	312	Other	41		
Oneida	Bearskin L	1523600	400	1-2 Year Pe	467	Other	11
Oneida	Big Carr L	971600	213	Other	29	Other	7
Oneida	Big Fork L	1610700	690	Other	264	Other	15
Oneida	Big L	1613000	865	Other	327	Other	18
Oneida	Big Stone L	1612200	548	Other	212	Other	13
Oneida	Birch L	1523800	180	Other	73		
Oneida	Bird L	972000	99	Other	41		
Oneida	Blue L	1538600	456	Other	178		
Oneida	Bolger L	973000	119	Other	17		
Oneida	Boom L	1580200	437	Other	14	Other	11

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Oneida	Booth L	1537800	207	Other	28	Other	7
Oneida	Bridge L	1516800	411	Other	161	Other	11
Oneida	Brown L	973700	98	Other	6		
Oneida	Buckskin L	2272600	634	Other	54	Other	10
Oneida	Buffalo L	974200	104	Other	43		
Oneida	Burrows L	975000	156	Other	8	Other	6
Oneida	Carrol L	1544800	352	Other	45	Other	10
Oneida	Chain L	1598000	219	Other	88	Other	7
Oneida	Clear L	977100	36	Other	3		
Oneida	Clear L	977200	30	Other	13	Other	2
Oneida	Clear L	977400	62	Other	26	Other	3
Oneida	Clear L	977500	846	Other	320	Other	18
Oneida	Clear L	2272555	212	Other	84	Other	7
Oneida	Clearwater L	1616400	351	Other	138	Other	10
Oneida	Columbus L	1616900	670	Other	256		
Oneida	Crescent L	1564200	612	1-2 Year Pe	407	1-2 Year Pe	14
Oneida	Crooked L	1613300	176	Other	8		
Oneida	Cunard L	1590000	43	Other	18		
Oneida	Currie L	979300	96	Other	40		
Oneida	Dam L	1596900	744	Other	283	Other	16
Oneida	Deer L	1612300	177	Other	72	Other	6
Oneida	Diamond L	1537100	124	Other	51	Other	5
Oneida	Dog L	1590200	37	Other	3		
Oneida	Dog L	1612900	216	Other	87	Other	7
Oneida	E Horsehead L	1523000	184	Other	75	Other	6
Oneida	Echo L	1597800	107	Other	44	Other	5
Oneida	Emma L	983500	223	Other	9		
Oneida	Fifth L	1571100	240	Other	96	Other	8
Oneida	Fish L	1570600	70	Other	29	Other	3
Oneida	Fourmile L	1610800	218	Other	88	Other	7
Oneida	Fourth L	1572000	258	Other	103	Other	8
Oneida	Franklin L	986000	161	Other	22	Other	6
Oneida	Fuller L	2272000	101	Other	6		
Oneida	Garth L	986600	114	Other	47		
Oneida	George L	1569600	435	1-2 Year Pe	246	1-2 Year Pe	20
Oneida	Gilmore L	1589300	320	Other	42	Other	9
Oneida	Hancock L	1517900	259	Other	10	Other	8
Oneida	Hasbrook L	1589100	302	1-2 Year Pe	199	Other	9
Oneida	Hat Rapids Fl	1567325	650	Other	249		
Oneida	Hemlock L	989200	39	Other	17		
Oneida	Hill L	990200	30	Other	3		
Oneida	Hixon L	1568900	50	Other	4		

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Oneida	Hodstradt L	990700	126	Other	18		
Oneida	Indian L	1598900	397	Other	156		
Oneida	Island L	1610500	295	Other	117	Other	9
Oneida	Jennie Webber L	1574300	226	Other	30		
Oneida	Julia L (Three La	1614300	401	Other	51	Other	11
Oneida	Kate Pier L	1586300	34	Other	15		
Oneida	Kathan L	1598300	189	Other	76		
Oneida	Katherine L	1543300	590	Other	227	Other	14
Oneida	Kawaguesaga L	1542300	670	Other	256	Other	15
Oneida	Killarney L	1520900	421	Other	14		
Oneida	L Creek	1580500	172	Other	70	Other	6
Oneida	L Julia (Rhinelan	995000	238	Other	32	Other	8
Oneida	L Seventeen	996100	172	Other	24		
Oneida	L Thompson	1569900	382	Other	49	Other	10
Oneida	Laurel L	1611800	232	Other	93	Other	8
Oneida	Little Bearskin L	1523500	164	Other	23		
Oneida	Little Carr L	998800	52	Other	4		
Oneida	Little Fork L	1610600	354	Other	139	Other	10
Oneida	Little Tomahawk L	1543900	160	Other	22	Other	6
Oneida	Lone Stone L	1605600	172	Other	8	Other	6
Oneida	Long L	1001300	113	Other	47	Other	5
Oneida	Long L	1609000	620	Other	238	Other	14
Oneida	Long L	1618300	56	Other	24	Other	3
Oneida	Lost L	1575100	155	Other	63		
Oneida	Lower Kaubashine	1534800	187	Other	25	Other	7
Oneida	Lumen L	1002800	49	Other	21		
Oneida	Madeline L	1544700	159			Other	6
Oneida	Manson L	1517200	236	Other	95	Other	8
Oneida	Maple L	1609900	144	Other	7		
Oneida	Margaret L	1615900	88	Other	37		
Oneida	Mars L	1577100	41	Other	18		
Oneida	Mccormick L	1526600	118	Other	17		
Oneida	Medicine L	1611700	372	Other	146	Other	10
Oneida	Mercer L	1538900	257	Other	103	Other	8
Oneida	Mid L	1542600	215	Other	9	Other	7
Oneida	Mildred L	1004600	191	Other	9		
Oneida	Minocqua L	1542400	1360	Other	503	Other	24
Oneida	Moccasin L	1612100	95	Other	39	Other	4
Oneida	Moen L	1573800	460	Other	179	Other	12
Oneida	Mud L	1544000	41	Other	18		
Oneida	Mud L	1612500	124	Other	7	Other	5
Oneida	Muskellunge L	1595600	284	1-2 Year Pe	60	Other	9

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Oneida	Muskie L	1524300	43	Other	3		
Oneida	N Nokomis L	1595800	476	Other	60	Other	12
Oneida	N Two L	1007500	146	Other	60		
Oneida	Nose L	1008200	40	Other	3		
Oneida	Oatmeal L	1597300	97	Other	6		
Oneida	Oneida L	1518200	255	Other	102	Other	8
Oneida	Paradise L	1009400	89	Other	13		
Oneida	Pelican L	1579900	3585	1-2 Year Pe	1239	Other	44
Oneida	Pickereel L	1583000	49	Other	4		
Oneida	Pickereel L	1590400	736	Other	18	Other	16
Oneida	Pier L	1529700	257	Other	34		
Oneida	Pine L	1012200	203	Other	82		
Oneida	Pine L	1581700	240	Other	96	Other	8
Oneida	Planting Ground L	1609100	1012	Other	380	Other	20
Oneida	Prairie L	1013000	58	Other	25		
Oneida	Rainbow FI	1595300	2035	Other	737	Other	31
Oneida	Range Line L	1610300	123	Other	51	Other	5
Oneida	Rhineland FI	1580100	1326	Other	491	Other	24
Oneida	Rocky Run FI	1525500	96	Other	40		
Oneida	Round L	1610400	150	Other	61	Other	6
Oneida	S Blue L	1015100	80	Other	5		
Oneida	S Pine L	1580700	77	Other	32		
Oneida	S Two L	1015500	214	Other	86		
Oneida	Sand L	1597000	540	Other	209	Other	13
Oneida	Second L	1572300	111	Other	46	Other	5
Oneida	Sevenmile L	1605800	503	Other	63	Other	13
Oneida	Shepard L	1576100	179	Other	8	Other	6
Oneida	Shishebogama L	1539600	716	Other	43	Other	8
Oneida	Skunk L	1533200	130	Other	53		
Oneida	Soo L	1018900	135	Other	55	Other	5
Oneida	Spider L	1586600	118	Other	49	Other	5
Oneida	Spirit L	1612000	368	Other	145	Other	10
Oneida	Squash L	1019500	396	Other	155		
Oneida	Squirrel L	1536300	1317	1-2 Year Pe	814	Other	23
Oneida	Stella L	1575700	405	Other	13	Other	11
Oneida	Stone L	1597600	188			Other	7
Oneida	Stone L	2272700	248	Other	99		
Oneida	Sunday L	1020600	88	Other	5		
Oneida	Sunset L	1572500	33	Other	14	Other	2
Oneida	Swamp L	1522400	296	Other	11		
Oneida	Swamsauger L	1528700	141	1-2 Year Pe	124		
Oneida	Sweeney L	1589600	187	Other	76	Other	7

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Oneida	Tamarack L	1582200	99	Other	41		
Oneida	Third L	1572200	103	Other	43	Other	4
Oneida	Thunder L	1580400	172	Other	70	Other	6
Oneida	Thunder L	1618100	1768	Other	195		
Oneida	Tim Lynn L	1597400	84	Other	35		
Oneida	Tom Doyle L	1586800	102	Other	15	Other	4
Oneida	Tomahawk L	1542700	3392	Other	350	Other	43
Oneida	Townline L	1609600	152	Other	62	Other	6
Oneida	Turtle L	1587400	53	Other	4		
Oneida	Two Sisters L	1588200	719	1-2 Year Pe	143	Other	16
Oneida	Upper Kaubashine	1535000	190	Other	77	Other	7
Oneida	Venus L	1577000	65	Other	27		
Oneida	Virgin L	1614100	276	Other	110	Other	8
Oneida	W Horsehead L	1522900	145	Other	7	Other	6
Oneida	Walters L	1582800	61	Other	26		
Oneida	Whitefish L	1613500	205	Other	9	Other	7
Oneida	Wildwood L	1178600	28	Other	4		
Oneida	Willow Fl	1528300	5135	Other	1767	Other	55
Oneida	Willow L	1529500	395	Other	13	Other	11
Polk	Antler L	2449400	101	Other	6		
Polk	Apple R Fl	2624200	639			Other	15
Polk	Balsam L	2620600	2054	1-2 Year Pe	219		
Polk	Bear L	2452200	155	Other	63		
Polk	Bear Trap L	2618100	241	Other	10		
Polk	Big Butternut L	2641000	378	1-2 Year Pe	150		
Polk	Big L	2615900	259	Other	10		
Polk	Big Round L	2627400	1015	Other	119		
Polk	Bone L	2628100	1781			Other	28
Polk	Church Pine L	2616100	107	Other	6		
Polk	Clear L	2623500	30	Other	3		
Polk	Deer L	2619400	807			Other	17
Polk	Half Moon L	2621100	579	Other	71		
Polk	Indianhead Fl	2634400	776	Other	295		
Polk	Little Butternut	2640700	189	Other	26		
Polk	Magnor L	2624600	231	Other	31		
Polk	N Pipe L	2485700	58	Other	25		
Polk	N Twin L	2623900	135	Other	7		
Polk	Pike L	2624000	159	Other	8		
Polk	Pipe L	2490500	284	Other	37		
Polk	Poplar L	2491000	125	Other	7		
Polk	Sand L	2495000	187	Other	25		
Polk	Wapogasset L	2618000	1186	Other	136		

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Polk	Ward L	2599400	91	Other	13		
Polk	Wind L	2616000	38	Other	3		
Portage	Tree L	289400	74	Other	5		
Price	Amik L	2268600	224			Other	7
Price	Bass L	2279800	84	Other	5		
Price	Bass L	2282200	58	Other	25	Other	3
Price	Big Dardis L	2244200	144	Other	20	Other	5
Price	Butternut L	2283300	1006	Other	377	Other	20
Price	Crane + Chase L	2237500	86	Other	36	Other	4
Price	Crowley Fl	2287200	422	Other	14	Other	11
Price	Deer L	2239100	145			Other	6
Price	Duroy L	2240100	379	Other	149	Other	10
Price	Elk L	2240000	88	Other	37	Other	4
Price	Grassy L	2238100	81	Other	34	Other	4
Price	Island L	2260900	29	Other	3		
Price	Lac Sault Dore	2236800	561	Other	216	Other	13
Price	Long L	2239300	418	Other	163	Other	11
Price	Long L	2282000	241	Other	97	Other	8
Price	Lower Park Falls	2290100	71	Other	30	Other	3
Price	Miles L	2271100	32			Other	2
Price	Musser L	2245100	563	Other	70	Other	14
Price	N Spirit L	1515200	213	Other	29	Other	7
Price	Patterson L	1872500	70	Other	5		
Price	Pike L	2268300	806	Other	306	Other	17
Price	Pixley Fl	2288900	334	Other	132	Other	10
Price	Round L	2267800	726	Other	277	Other	16
Price	Schnur L	2284000	158	Other	64	Other	6
Price	Solberg L	2242500	859	Other	325	Other	18
Price	Spirit L	1513000	126	Other	7	Other	5
Price	Thompson L	2265900	111	Other	6	Other	5
Price	Turner L	2268500	149	Other	61	Other	6
Price	Upper Park Falls	2290500	431			Other	11
Price	Upper Price L	2235300	43			Other	2
Price	Whitcomb L	2266100	44	Other	7	Other	2
Price	Wilson L	2239400	351	Other	138	Other	10
Price	Worcester L	2210900	100	Other	41		
Rusk	Amacoy L	2359700	278	Other	37	Other	9
Rusk	Audie L	2368700	128			Other	5
Rusk	Bass L	2090900	88	Other	5		
Rusk	Big Falls Fl	2230100	369	Other	145	Other	10
Rusk	Chain L	2350500	468	Other	59	Other	12
Rusk	Clear L	2350600	95	Other	14	Other	4

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Rusk	Dairyland Reservo	2229200	1745	Other	637	Other	28
Rusk	Fireside Lakes	2349500	302	Other	120		
Rusk	Island L	2350200	526	Other	65	Other	13
Rusk	Ladysmith Fl	2228700	288	Other	114	Other	9
Rusk	Mccann L	2350400	133	Other	19	Other	5
Rusk	Perch L	2368500	23			Other	2
Rusk	Potato L	2355300	534	Other	66	Other	13
Rusk	Pulaski L	1875900	126	Other	52		
Rusk	Sand L	2353600	262	Other	105	Other	8
Rusk	Thornapple Fl	2227500	268	Other	107	Other	8
St. Croix	Cedar L	2615100	1100	Other	411	Other	21
Sawyer	Barber L	2382300	238	1-2 Year Pe	15	Other	8
Sawyer	Barker L	2400000	238	Other	95	Other	8
Sawyer	Beverly L	2387200	9			Other	1
Sawyer	Black Dan L	2381900	128	Other	7	Other	5
Sawyer	Black L	2401300	129	Other	7	Other	5
Sawyer	Blaisdell L	2402200	356	Other	12	Other	10
Sawyer	Boos L	2425000	37	Other	16	Other	2
Sawyer	Burns L	2436400	37	Other	3	Other	2
Sawyer	Callahan L	2434700	106			Other	4
Sawyer	Clear L	1841300	77			Other	4
Sawyer	Connors L	2275100	429	1-2 Year Pe	149	Other	11
Sawyer	Durphee L	2396800	193	Other	78		
Sawyer	Evergreen L	2277600	200	Other	81	Other	7
Sawyer	Fawn L	2435900	23	Other	2		
Sawyer	Fishtrap L	2401100	216			Other	7
Sawyer	Ghost L	2423000	372	Other	48	Other	10
Sawyer	Grimh Fl	2385100	86			Other	4
Sawyer	Grindstone L	2391200	3111	Other	539	Other	20
Sawyer	Ham L	1852300	100	Other	41		
Sawyer	Hayward L	2725500	247	Other	33	Other	8
Sawyer	Holmes L	2419600	62			Other	3
Sawyer	Hunter L	2400600	126	Other	52	Other	5
Sawyer	Island L	2381800	67	Other	4	Other	3
Sawyer	L Chetac	2113300	1920	1-2 Year Pe	327		
Sawyer	L Chippewa	2399700	15300	1-2 Year Pe	4483	Other	72
Sawyer	L Of The Pines	2275300	273	Other	109	Other	8
Sawyer	L Placid	2436500	160	Other	22	Other	6
Sawyer	L Winter	2381100	676	Other	18	Other	15
Sawyer	Lac Courte Oreill	2390800	5039	1-2 Year Pe	423	Other	36
Sawyer	Lewis L	1860200	52	Other	4		
Sawyer	Little Round L	2395500	229	1-2 Year Pe	7		

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Sawyer	Little Sissabagam	2394100	299			Other	9
Sawyer	Loretta L	2382700	126			Other	5
Sawyer	Lost Land L	2418600	1304	Other	149	Other	23
Sawyer	Lovejoy L	2395900	76	Other	32		
Sawyer	Lower Clam L	2429300	229	Other	31	Other	7
Sawyer	Mason L	2277200	190	Other	77	Other	7
Sawyer	Meadow L	2424800	39	Other	17	Other	2
Sawyer	Mirror L	1866900	38	Other	3		
Sawyer	Moose L	2420600	1670	Other	611	Other	27
Sawyer	Mud L	2434800	480	Other	15	Other	12
Sawyer	Nelson L	2704200	2503	Other	267		
Sawyer	North L	2436000	129	Other	7	Other	5
Sawyer	Partridge Crop L	2424600	45	Other	19	Other	3
Sawyer	Perch L	1873600	129	Other	18	Other	5
Sawyer	Radisson FI	2397400	255	Other	102	Other	8
Sawyer	Round L	2395600	3054	1-2 Year Pe	293	Other	40
Sawyer	Sand L	2393200	928	Other	109	Other	19
Sawyer	Sissabagama L	2393500	719	1-2 Year Pe	202	1-2 Year Pe	7
Sawyer	Smith L	2726100	323	Other	12		
Sawyer	Spider L	2435700	1454	Other	164	Other	25
Sawyer	Spring L	2724900	220	Other	8		
Sawyer	Squaw L	2395100	208	Other	14		
Sawyer	Teal L	2417000	1049	1-2 Year Pe	413	Other	20
Sawyer	Teal R FI	2416900	75	Other	31	Other	4
Sawyer	Tiger Cat FI	2435000	819	Other	98	Other	17
Sawyer	Whitefish L	2392000	786	Other	94	Other	17
Sawyer	Windfall L	2046500	102	1-2 Year Pe	201		
Sawyer	Windigo L	2046600	522	Other	202		
Taylor	Anderson L	2165700	43	Other	3		
Taylor	Chelsea L	2200400	59	Other	4		
Taylor	Chequamegon Water	2160700	2714	Other	35		
Taylor	Diamond L	1757200	49	Other	21		
Taylor	Esadore L	1764000	46	Other	4		
Taylor	Hulls L	1762700	67	Other	4		
Taylor	Kathryn L	2166100	62	Other	9		
Taylor	Mondeaux FI	2193300	416			Other	11
Taylor	N Harper L	2204000	54	Other	23	Other	3
Taylor	Rib L	1469100	320	Other	127	Other	9
Taylor	Richter L	1760000	45	Other	3		
Taylor	S Harper L	2204100	80	Other	12		
Taylor	Sackett L	1764500	63	Other	9		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Taylor	Shearer L	2197600	21	Other	2		
Taylor	Wellington L	1467800	43	Other	3		
Vilas	Alder L	2329600	274	Other	109	Other	8
Vilas	Allequash L	2332400	426	1-2 Year Pe	59	Other	11
Vilas	Alma L	967900	55	Other	8	Other	3
Vilas	Annabelle L	2953800	213	1-2 Year Pe	89	Other	7
Vilas	Anvil L	968800	398	Other	156		
Vilas	Apeekwa L	2269400	188	Other	76	Other	7
Vilas	Armour L	2953200	320	Other	127	Other	9
Vilas	Arrowhead L	1541500	99	Other	14	Other	4
Vilas	Averill L	2956700	71	Other	30	Other	3
Vilas	Ballard L	2340700	505	1-2 Year Pe	288	Other	13
Vilas	Bass L	1604200	266	Other	10	Other	8
Vilas	Bear L	2335400	76	Other	11	Other	4
Vilas	Beaver L	2960600	68	Other	5		
Vilas	Belle L	2955700	53	Other	23	Other	3
Vilas	Benson L	2327100	28	Other	12	Other	2
Vilas	Big Arbor Vitae L	1545600	1090	1-2 Year Pe	1222	Other	21
Vilas	Big Crooked L	2338800	682	1-2 Year Pe	109	Other	15
Vilas	Big Donahue L	971700	92	Other	6		
Vilas	Big Gibson L	1835200	116	Other	48	Other	5
Vilas	Big Hurst L	2756000	48	Other	4		
Vilas	Big Kitten L	2336700	55	Other	4	Other	3
Vilas	Big L (Boulder Jc	2334700	835	Other	316	Other	17
Vilas	Big L (Mi Border)	2963800	771	Other	233	Other	13
Vilas	Big Muskellunge L	1835300	930	1-2 Year Pe	1182	Other	19
Vilas	Big Portage L	1629500	638	Other	245		
Vilas	Big Sand L	1602600	1418	Other	160	Other	25
Vilas	Big St Germain L	1591100	1617	1-2 Year Pe	695	Other	27
Vilas	Bills L	1835500	37			Other	0
Vilas	Birch L	2311100	528	Other	204	Other	13
Vilas	Black Oak L	1630100	584	1-2 Year Pe	73		
Vilas	Boot L	1619100	284	Other	11	Other	9
Vilas	Boot L	2756400	29	Other	3	Other	2
Vilas	Boulder L	2338300	524	Other	203	Other	13
Vilas	Brandy L	1541300	110	Other	6	Other	5
Vilas	Carpenter L	976100	333	Other	12		
Vilas	Catfish L	1603700	1012	Other	380	Other	20
Vilas	Circle Lily L	2326700	223	Other	30	Other	7
Vilas	Clear L	2329000	555	Other	214	Other	13
Vilas	Cleveland L	2758600	32	Other	3		
Vilas	Cochran L	2963500	126	Other	7	Other	5

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Vilas	Crab L	2953500	949	Other	357	Other	19
Vilas	Crampton L	2759000	59	Other	4		
Vilas	Cranberry L	1603800	956	Other	360	Other	19
Vilas	Crystal L	1842400	88	Other	5		
Vilas	Dead Pike L	2316600	297	Other	39	Other	9
Vilas	Deer L	980600	65	Other	4		
Vilas	Deer L	2311500	37	Other	3		
Vilas	Deerskin L	1601300	309	Other	40	Other	9
Vilas	Diamond L	1844700	122	Other	7	Other	5
Vilas	Dorothy Dunn L	1845600	70	Other	5	Other	3
Vilas	Duck L	1599900	108	Other	45	Other	5
Vilas	E Ellerson L	2331300	136	Other	56	Other	5
Vilas	E Witches L	982500	34	Other	3		
Vilas	Eagle L	1600200	572	Other	220	Other	14
Vilas	Eleanore L	1631500	28	Other	12	Other	2
Vilas	Erickson L	983600	106	Other	15		
Vilas	Escanaba L	2339900	293	1-2 Year Pe	541	Other	9
Vilas	Fawn L	1591000	22	Other	10	Other	2
Vilas	Fawn L	2328900	74	Other	31	Other	4
Vilas	Finger L	984700	90	Other	5		
Vilas	Fishtrap L	2343200	329	Other	130	Other	10
Vilas	Forest L	2762200	466	Other	181		
Vilas	Found L	1593800	326	Other	42	Other	9
Vilas	Frank L	985900	141	Other	7		
Vilas	Harmony L	988300	88	Other	5		
Vilas	Harris L	2958500	507	Other	196	Other	13
Vilas	Helen L	2964400	111	Other	46	Other	5
Vilas	Hiawatha L	2328400	36	Other	3		
Vilas	High L	2344000	734	Other	280	Other	16
Vilas	Horsehead L	2953100	234	1-2 Year Pe	221	Other	8
Vilas	Hunter L	991700	184	Other	25		
Vilas	Imogene L	586800	66	Other	4		
Vilas	Indian L	2764400	68			Other	3
Vilas	Irving L	2340900	403	Other	13	Other	11
Vilas	Island L	2334400	1023	Other	383	Other	20
Vilas	Jag L	1855900	158	Other	64	Other	6
Vilas	Jenny L	1856400	59	Other	25		
Vilas	Johnson L	1541100	78	Other	11	Other	4
Vilas	Jute L	1857400	194			Other	7
Vilas	Katinka L	2957000	172	Other	70		
Vilas	Kentuck L	716800	957	1-2 Year Pe	222	Other	19
Vilas	Kenu L	1629800	73	Other	5		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Vilas	Kildare L	1631700	54	Other	4	Other	3
Vilas	L Content	1592000	244	Other	98	Other	8
Vilas	L Laura	995200	599	Other	230	Other	14
Vilas	Lac Des Fleurs	1630900	49	Other	4		
Vilas	Lac Vieux Desert	1631900	4300	Other	280	Other	32
Vilas	Little Arbor Vita	1545300	534	Other	206	Other	13
Vilas	Little Crooked L	2335500	153	Other	8	Other	6
Vilas	Little Horsehead	2953000	52	Other	22		
Vilas	Little John L	2332300	166	Other	68	Other	6
Vilas	Little Papoose L	2328200	46	Other	4	Other	3
Vilas	Little Portage L	1629200	170	Other	69	Other	6
Vilas	Little Presque Is	2959700	85			Other	3
Vilas	Little Rice L	2338900	59	Other	4	Other	3
Vilas	Little Spider L	1540400	235	Other	31	Other	8
Vilas	Little St Germain	1596300	980	Other	115	Other	19
Vilas	Little Star L	2334300	244	Other	98	Other	8
Vilas	Little Trout L	2321600	978	Other	110	Other	6
Vilas	Lone Pine L	2961600	142	Other	7	Other	5
Vilas	Long L	1602300	872	1-2 Year Pe	605	Other	18
Vilas	Loon L	1001600	31	Other	3		
Vilas	Lost Canoe L	2339800	249	Other	100		
Vilas	Lost L	1593400	544	1-2 Year Pe	71	Other	13
Vilas	Lower Aimer L	2955000	34	Other	3		
Vilas	Lower Buckatabon	1621000	352	1-2 Year Pe	16	Other	10
Vilas	Lower Gresham L	2330300	149			Other	6
Vilas	Lynx L	1600000	22	Other	10	Other	2
Vilas	Lynx L	2954500	339	1-2 Year Pe	95	Other	10
Vilas	Mamie L	2964100	400	Other	151	Other	10
Vilas	Manitowish L	2329400	506	Other	196	Other	13
Vilas	Mann L	2332000	261	Other	10		
Vilas	Marshall L	1626600	87	Other	5	Other	4
Vilas	Mccullough L	2960400	216	Other	9	Other	7
Vilas	Mermaid L	2768100	60	Other	4		
Vilas	Meta L	1004400	175	Other	8		
Vilas	Middle Ellerson L	1866100	60			Other	2
Vilas	Middle Gresham L	2330700	53	Other	4	Other	3
Vilas	Moccasin L	1005700	83	Other	5	Other	4
Vilas	Moon L	1005800	131	Other	18	Other	5
Vilas	Morton L	2960300	163	Other	8	Other	6
Vilas	Murphy L	2769700	81	Other	5	Other	4
Vilas	Muskellunge L	1596600	272	Other	36	Other	8
Vilas	N Crab L	2953400	56	Other	24	Other	3

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Vilas	N Turtle L	2310400	369	1-2 Year Pe	343	Other	10
Vilas	N Twin L	1623800	2788	Other	992	Other	38
Vilas	Nelson L	1007600	104	Other	6	Other	4
Vilas	Nelson L	1869900	27			Other	2
Vilas	Nixon L	2341200	110	Other	6	Other	5
Vilas	No Mans L	2312100	225	Other	90	Other	7
Vilas	Norwood L	1008100	125	Other	13		
Vilas	Oswego L	1871800	66			Other	3
Vilas	Otter L	1600100	196	Other	79	Other	7
Vilas	Oxbow L	2954800	511	Other	198	Other	13
Vilas	Palette L	1872100	173			Other	6
Vilas	Palmer L	2962900	635	Other	78	Other	15
Vilas	Papoose L	2328700	428	Other	167	Other	11
Vilas	Partridge L	2341500	228	Other	10	Other	7
Vilas	Pickereel L	1619700	293	Other	38	Other	9
Vilas	Pine Island L	1011900	79	Other	5	Other	4
Vilas	Pioneer L	1623400	427	Other	54	Other	11
Vilas	Plum L	1592400	1033	Other	387	Other	20
Vilas	Plum L	2963200	100	Other	10		
Vilas	Presque Isle L	2956500	1280	Other	474	Other	23
Vilas	Rainbow L	2310800	146	Other	60	Other	6
Vilas	Razorback L	1013800	362	Other	142	Other	10
Vilas	Rest L	2327500	608	Other	234	Other	14
Vilas	Rice L	1618600	71	Other	30	Other	3
Vilas	Roach L	1014000	51	Other	22	Other	3
Vilas	Roach L	2772500	125	Other	2		
Vilas	Rock L	2311700	122	Other	50	1-2 Year Pe	8
Vilas	Rosalind L	1877900	43			Other	2
Vilas	Round L	2334900	116	Other	6	Other	5
Vilas	Rudolph L	2954300	79			Other	4
Vilas	Rush L	2343600	44	Other	19	Other	2
Vilas	S Turtle L	2310200	454	1-2 Year Pe	155	1-2 Year Pe	10
Vilas	S Twin L	1623700	642	Other	246	Other	15
Vilas	Sanford L	2335300	88	Other	37	Other	4
Vilas	Scattering Rice L	1600300	267	Other	106	Other	8
Vilas	Sherman L	1880700	123	1-2 Year Pe	47	Other	5
Vilas	Smoky L	1018300	610			Other	1
Vilas	Snipe L	1018500	239	Other	96	Other	8
Vilas	Sparkling L	1881900	154	Other	21	Other	6
Vilas	Spectacle L	717400	171	Other	8		
Vilas	Spider L	2329300	272	Other	108	Other	8
Vilas	Spring L	2964800	205	Other	83		

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Vilas	Squaw L	2271600	785	1-2 Year Pe	440	Other	17
Vilas	Star L	1593100	1206	1-2 Year Pe	663	Other	22
Vilas	Stateline L	2952100	199	Other	3		
Vilas	Stewart L	1020000	39	Other	17		
Vilas	Stone L	2328800	139	Other	57	Other	5
Vilas	Sturgeon L	2327200	32	Other	14	Other	2
Vilas	Sumach L	1020500	60	Other	4	Other	3
Vilas	Sunset L	1020900	185	Other	8	Other	6
Vilas	Tenderfoot L	2962400	437	Other	149	Other	10
Vilas	Towanda L	1022900	146	Other	20	Other	6
Vilas	Trout L	2331600	3816	1-2 Year Pe	665	1-2 Year Pe	26
Vilas	Twin Island L	2959300	205			Other	7
Vilas	Upper Aimer L	2955100	33	Other	3		
Vilas	Upper Buckatabon	1621800	494	1-2 Year Pe	27	Other	12
Vilas	Upper Gresham L	2330800	366	Other	47	Other	10
Vilas	Van Vliet L	2956800	220	Other	88	Other	7
Vilas	Vance L	2327300	30	Other	13	Other	2
Vilas	Verna L	1540300	77			Other	4
Vilas	Voyageur L	1603400	130	Other	53	Other	5
Vilas	W Bay L	2964000	368	Other	68	Other	5
Vilas	W Plum L	1592500	75	Other	31	Other	4
Vilas	W Witches L	1177500	30	Other	3		
Vilas	Watersmeet L	1599400	100	Other	41	Other	4
Vilas	White Birch L	2340500	112	1-2 Year Pe	24	Other	5
Vilas	White Sand L	2339100	734	Other	88	Other	16
Vilas	Wild Rice L	2329800	379	Other	119	Other	8
Vilas	Wildcat L	2336800	305	Other	40	Other	9
Vilas	Wolf L	2336100	393	1-2 Year Pe	186	Other	11
Vilas	Yellow Birch L	1599600	202	Other	81	Other	7
Washburn	Balsam L	2112800	295	Other	117		
Washburn	Bass L	1833300	130	Other	53		
Washburn	Bass L	2451300	144	Other	20		
Washburn	Bass L	2451900	188	1-2 Year Pe	93	Other	7
Washburn	Bean L	2718500	100	Other	6		
Washburn	Beartrack North L	2452399	33	Other	14		
Washburn	Beartrack South L	2452300	65	Other	27		
Washburn	Big Bass L	2453300	203	Other	27		
Washburn	Birch L	2113000	368	Other	47		
Washburn	Cable L	2456100	185	Other	25		
Washburn	Chippanazie L	2722800	58	Other	25		
Washburn	Colton Fl	2702100	58	Other	25		
Washburn	Deep L	1844000	43	Other	18		

County	Lake Name	WBIC Code	Area (acres)	Walleye Method	Walleye SH	Musky Method	Musky SH
Washburn	Dunn L	2709800	193	Other	78		
Washburn	Gilmore L	2695800	389	Other	13		
Washburn	Horseshoe L	2470000	194	Other	26		
Washburn	Island L	2470600	276	Other	36		
Washburn	L Nancy	2691500	772	Other	93	Other	17
Washburn	Leach L	2474400	30	Other	13		
Washburn	Leisure L	2475000	75			Other	4
Washburn	Little Long L	2664500	112	Other	6		
Washburn	Little Mud L	2107100	71	Other	30		
Washburn	Little Sand L	2477700	74	Other	11		
Washburn	Little Stone L	1862400	27	Other	2		
Washburn	Long L	2106800	3290	Other	1160		
Washburn	Matthews L	2710800	263	Other	35	Other	8
Washburn	Mclain L	2481600	150	Other	21		
Washburn	Middle Mckenzie L	2706500	530	Other	66	Other	13
Washburn	Minong FI	2692900	1564	Other	574		
Washburn	Mud L	2107700	103	Other	6		
Washburn	Pavlas L	2488100	44	Other	3		
Washburn	Rice L	2696000	132	Other	54		
Washburn	Ripley L	2492600	190	Other	26		
Washburn	S Twin L	2494500	115	Other	16		
Washburn	Shell L	2496300	2580	Other	922	Other	36
Washburn	Silver L	2496900	188	Other	26		
Washburn	Slim L	2109300	224	Other	30		
Washburn	Spider L # 5	1882500	177	Other	8		
Washburn	Spring L	1882900	42	Other	3		
Washburn	Spring L	2498600	211	Other	28		
Washburn	Stone L	1884000	39	Other	3		
Washburn	Stone L	1884100	523	1-2 Year Pe	53		
Washburn	Tozer L	2502000	36	Other	3		
Washburn	Trego L	2712000	451	Other	57	Other	12