

North Central Division American Fisheries Society

Esocid Technical Committee

Chair – Janice Kerns: ODNR (Janice.kerns@dnr.state.oh.us)
Immediate Past Chair – Cory Kovacs: MDNR (kovacsc@michigan.gov)
Chair Elect – TBD at Winter Meeting



July 20, 2017 Summer Business Meeting

The following meeting minutes are from the Esocid Technical Committee (ETC) meeting held in Isle, Minnesota at McQuoid’s Inn and Event Center. The business meeting was held in conjunction with the Joint Technical Committees meeting with Walleye and Centrarchid committees.

Meeting Time: July 20th, 9am-12:00pm (Central time)

Attendance

Janice Kerns (OHDNR)	Jon Meerbeek (IADNR)
Keith Koupal (NGPC)	Dave Woods (MDC)
Doug Kingsley (MNDNR)	Jonah Dagele (MNDNR)
Nate Hodgins (MNDNR)	

Agenda (minutes in italics)

- **Call to order**
- **Approval of Winter Business Meeting minutes (see ETC Webpage)**

Winter Business meeting minutes are available online and approved by the ETC.

- **Budget**

2017 ETC	Description	Expenses	Deposits	Balance
1-Jan				\$5,025.28
16-Jun	plaque	\$25.00		
		\$25.00	\$0.00	\$5,000.28

- **ETC By-laws review/update**

Final copy of ETC history and laws is now available on the ETC website.

- **Committee Status**

*Mike Anderson will be replacing Dave Woods as the representative for Missouri.
Andrew Shaefer will be replacing Jeff Koch as the representative for Kansas.*

- **State Updates**

- Per discussions and agreements from the last summer meeting detailed annual reports from state representatives will be due at the winter meeting. Items below are briefs talking points discussed during the summer meeting.

Ohio (update called in prior to meeting)

Curt Wagner provided an update on Ohio's Reservoir Tagging Project. He stated that the first stocked and tagged musky are now reaching the fishery. Analysis of this data will begin once multiple years of return data are collected.

Musky Symposium Publication Update (emailed update)

Tim Simonson reports that the book is about 98% ready for publication. There is 1 paper (of 66) still completing the review stage, and there are about 3 papers waiting on final page proofs. The book will include 20 abstracts, 20 extended abstracts, 1 management brief, and 25 full articles, organized by session. We're putting the finishing touches on the Preface and other introductory materials. And, AFS has been working on the cover, layout, etc.

The total cost of publication (500 copies) is going to be about \$30,500. We've received donations totaling \$23,092.55, plus an additional \$2,500 from Muskies, Inc., International (for color figures), for a total of \$25,592.55. We anticipate that AFS will kick in the additional money needed to complete the project (about \$4,900). With the help of the Becker Foundation, Muskies, Inc., and all the other donors, we are planning to provide 1 free copy to each person who attended the symposium. Additional copies will be available through the AFS bookstore at \$55 for members.

Wisconsin

Jordan Weeks discussed the new musky regulations going into effect including new minimum size limits and finalizing state/county trolling regulations.

Minnesota

Jonah Dagele discussed new Northern Pike Zone Regulations. He explained the need for these regulations is that certain regions of the state have an abundance of small pike that could be thinned out with new harvest regulations. A map of the new regulations and their associated zones has been included in the notes below.

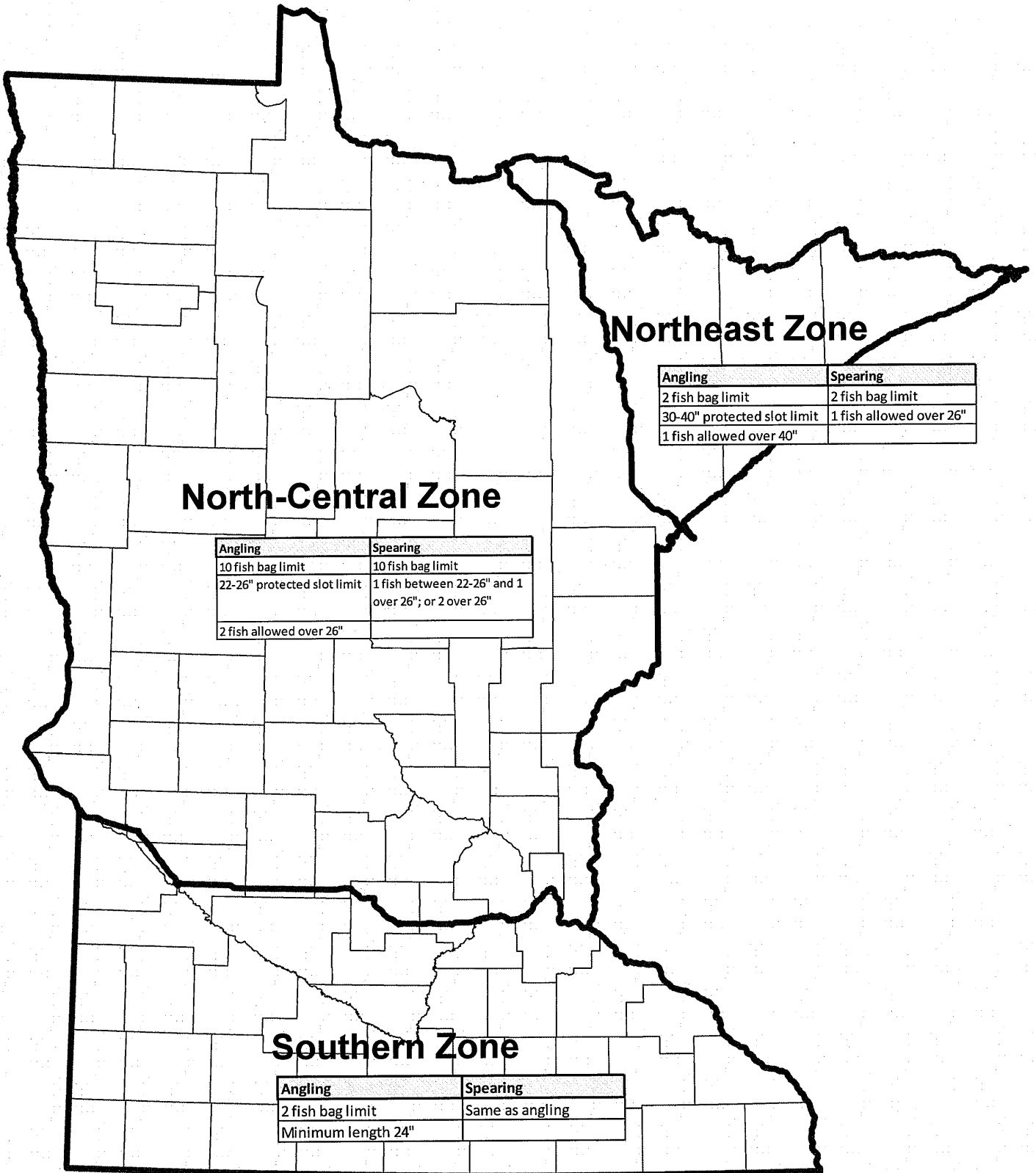
Nate Hodgins gave an update on MN stocking practices. A copy of the new protocol, along with related material, are located at the bottom of the meeting minutes.

Missouri

The Missouri Muskellunge Program coordinator assignment is a three-year term position for MDC fisheries management biologists. Starting in July of 2017, Mike Anderson will assume the role as the muskie program coordinator. Mike manages the muskie fishery in Hazel Creek Lake and his office is located at the Northeast Regional MDC Headquarters in Kirksville.

After the meeting Dave Woods also sent an update on MO's spring fyke netting and "Show Me Muskie Project". This can be found at the bottom of the meeting minutes.

Northern Pike Zone Regulations



DNR Muskellunge Stocking Program Review (Final)
Adopted June 10, 2015 (Amended 4/5/17)

Minnesota's Muskellunge (hereafter Muskie) program has produced world-class Muskie fishing with Muskie anglers representing one of the few angler groups that continue to grow numerically. Introductory stockings have resulted in a number of new fisheries to meet angler demands and stocking remains an important management tool in approximately 50 waters statewide.

Evaluating Muskie stocking presents unique challenges. Muskie can be difficult to sample and catch rates from spring netting are unreliable measures of abundance; fish are not consistently vulnerable to capture until they are adults (ages 5-7 and older). Valid population estimates repeated for several years are needed to understand these populations. Additionally, only when fingerlings are marked can the contribution of stocking be quantified. These detailed evaluations have only occurred on a handful of MN Muskie waters because of the time, workload and expense involved. As a result, contributions of stocked fish and the efficacies of various stocking rates are poorly understood.

This program review was undertaken to position Fisheries Managers for a better understanding of Muskie populations and the contribution and utility of stocked fish in the future. Failure to make some strategic changes in how we manage and evaluate these populations will ensure that important questions remain unanswered.

The following operating protocols will provide program guidance for the next 10 years, with a formal review scheduled for 2025.

Operating Protocols:

1. New stocking priorities are recommended based on categories developed by the Muskellunge Technical Committee (MTC). Waters will be stocked in this priority order to enhance the learning needs identified in the introduction (above). We recognize that some logistic efficiencies may be sacrificed with the new priority system, but long-term this will help to meet the program goals (spreadsheet attached) and contribute to evaluating program performance to inform future management.

Previous Stocking Priorities (from the Esocid Long-Range Plan):

- a. Brood stock lakes
- b. Research lakes
- c. Restoration of Native waters
- d. Maintenance stocking – A
- e. New waters
- f. Maintenance stocking – B

New Priorities (see the spreadsheet for details):

1. Brood stock lakes
2. Historically consistent stocked lakes
3. Premier Lakes
4. New introduction lakes (introduced post-2008)
5. Metro

6. Program lakes
7. All-age, supplemental, other

The goal is to stock the lake quota exactly, however lakes in priorities “C through G” can be stocked within $\pm 3\%$ of the quota upon approval of the Area Manager. Lakes should receive their full target whenever possible and partial quotas should be avoided.

2. Historically consistent stocked lakes provide a valuable opportunity for long-term learning. For this reason, this subset of lakes will continue to be stocked consistently for the long-term future. Eventually, these will provide good case histories informing the performance of Muskie stocking. These lakes are: Detroit, Bemidji, Elk and Beers. Lakes in this category will require a commitment by area staff for regular sampling and estimating population abundance as outlined in the Muskie sampling protocols in the Fisheries Survey Module.
3. New Introduction Lakes will receive only fall fingerlings and these fish will all be marked with PIT tags. Gull, Fairmont Chain, Roosevelt Lake and the Sauk River Chain of Lakes will be stocked only with PIT-tagged fish (\$ commitment). Lengths on all PIT tagged fall fingerlings are required.
4. Supplemental lakes will generally only receive fall fingerlings which will be marked with PIT tags unless the MTC recommends other life stages for specific reasons, such as to jump start a stocking program.
5. Stocking rates for new lakes stocked post-2014: to experiment with a new, lower stocking rate to provide a Muskie fishery, the MTC recommends a rate of 0.5 fall fingerlings/LA/biennially. Owasso will be considered a new lake for purposes of this experiment.
6. Supplemental lakes: proposals for supplemental Muskie stocking from an Area Fisheries Supervisor will be reviewed on a case-by-case basis by the MTC. Boy Lake in the Walker Area is the only existing proposal. The MTC recommends supplemental Muskie stocking of Boy Lake at a rate of 0.25 all fingerlings/LA/biennially for 6 stocking events (12 years). For 2017 only, MTC approves the use of carry-over fish from a known year class using the rates identified in item 7.
7. All-age lakes: to enhance the potential for long-term evaluation of Muskie stocking, only specified lakes will receive fish larger/older than fall-fingerling size. These lakes are (in priority order): Minnetonka, Bald Eagle, White Bear and the St Croix River, Shamineau and Alexander. Rates used for these will be 1:2 for spring yearlings, 1:3 for fall yearlings, and 1:4 for age 2 and older.
8. For lakes designated as “all-age lakes”, base stocking rates will be as follows:
Minnetonka – 0.5 fgl/littoral acre biennially
Bald Eagle – 1 fgl/surface acre biennially
White Bear – 1 fgl/littoral acre when available
9. In years when we do not meet our Muskie stocking quotas with fall fingerlings, the stocking of spring yearlings into high priority lakes where we are hoping to learn is discouraged. The new stocking priorities list should minimize the occurrence of this situation. The MTC should provide review on where spring fingerlings are stocked.
10. For lakes that are scheduled for annual stocking: if these lakes are missed due to fall fingerling shortages, the MTC will provide annual review and recommendations on any

make-up efforts. Lakes with planned annual stocking missed due to shortages in a given year will remain in the same priority category but will be moved above other similar priority waters for stocking the following year. Likewise, lakes stocked with a partial target shall be stocked before lakes that have received their full target the previous year, within that priority.

11. When any Fisheries Management Area desires to change Muskie stocking on their Muskie waters, the MTC will provide review and make recommendations regarding the proposed change.
12. The MTC recommends collecting scales or fin samples from all privately-raised fish for possible future genetic analysis. A sample of 20 fish per load is recommended.
13. In years when surplus fall fingerlings are produced, surplus fish should be stocked in all-age lakes (if their planned quota has not been filled), Vermilion and Mille Lacs, and the St Croix River. The MTC can provide review and specific recommendations if time allows.
14. Spring yearling stocking will not be used toward meeting Muskie stocking quotas for the coming fall.
15. Generally, standard stocking rates for existing Muskie lakes are:
 - 0.5 fall fgl/LA/yr
 - 1.0 fall fgl/LA biennially
 - 0.25 fall fgl/SA biennially (for lakes that have high littoral acres; this rate would be less than the 1.0 fgl/LA biennially).Littoral acres are GIS-based measurements.
16. Privately-raised fish purchased by the DNR will be stocked in priority 6 or lower waters.
17. In years of low production when it is unlikely stocking quotas will be met, within a “Managed Category,” lakes on a biennial stocking rotation will be stocked first.
18. The MTC is recommending the Fisheries Survey Module be modified to distinguish between first-time captures and recaptures. Additionally, guidance is being developed on sampling and conducting population estimates.
19. These protocols are considered an Addendum to the Long Range Plan for Muskellunge and Large Northern Pike Through 2020.

Stocking Category	Definition
Program	Basins that have either a stocking rate of 0.5 fgls/LA Annually or 1.0 fgls/LA Biennially.
New	Any new waters (post 2014) that will have a stocking rate of 0.5 fgls/LA Biennially or other managed basins currently at this rate
Supplemental	Basins that have a stocking rate of 0.25 fgls/LA Biennially.
Other	Basins with other stocking rates not listed in the Program, New or Supplemental Category
Number	Basins/Rivers with only total number of fish listed for stocking with no relation to surface or littoral acres.
Managed Category	Definition
Historical	A basin that has been stocked consistently in the past that was selected to receive future stockings consistent with past practices for long-term stocking analysis.
Brood	A basin containing adult muskie used in the MNDNR Muskie propagation program.
Premier	Stocked basins ($\geq 2,500$ acres) considered angling destinations because they have/had the potential to produce numbers of fish > 50 ".
New Introduction (Post 2008)	A basin selected for Muskie management since the implementation of the MUE/NOP LRP which has not been managed previously for this species. New is defined in this category as any water stocked post-2008.
Metro	Lakes in the seven county Metro Area (or occasionally a geographically isolated lake) that receive high fishing pressure due to proximity to high population centers and likely higher catch & release mortality. Fox and French Lakes have been included in this category for now because they represent the sole MUE fishing destinations in the southern portion of the state.
Program	Basins consistently stocked with fingerlings at one of two specified rates.
All-Age	Basins identified to receive All-Age fish (when available) to improve our ability to evaluate fingerling stocking in other lakes. Carry-over Muskie stocking rates are based on an equivalent of the individual lake management plans fall fingerling quota.
Native	Basins/Rivers containing Native populations of Muskie and managed as self-sustaining populations.
Supplemental	Basins receiving fingerlings in order to achieve a specific management goal for the Muskie population in that particular body of water.
Other	Basins/Rivers containing Native/Stocked populations of Muskie and managed as self-sustaining/stocked populations.

Statewide Muskellunge Management			
Lake	Area	Stocked Category	Managed Category
Lake of the Woods	Baudette	NS	Native
Cedar	Aitkin	Other	Program
Mille Lacs	Aitkin	Number	Premier
Mississippi R. - Aitkin County from Crow Wing County line	Aitkin	Number	Other
Cass	Bemidji	NS	Native
Big	Bemidji	Program	Program
Big Wolf	Bemidji	NS	Native
Elk	Bemidji	Other	Brood
Little Wolf	Bemidji	Program	Brood
Andrusia	Bemidji	Not Stocked	Native
Bemidji (main lake)	Bemidji	Program	Historical
Buck	Bemidji	Not Stocked	Native
Carr	Bemidji	Not Stocked	Native
Kitchi	Bemidji	Not Stocked	Native
Plantagenet (Plantaganette)	Bemidji	Other	Brood
Pike Bay	Bemidji	Not Stocked	Native
Mississippi R. - Crow Wing County above Brainerd Dam	Brainerd	Number	Other
Roosevelt	Brainerd	Program	New Introduction
Many Point	Detroit Lakes	Program	Program
Detroit	Detroit Lakes	Number	Historical
St. Louis River Estuary	Duluth	Not Stocked	Other
Island Lake Reservoir (Orchard Res. (Island))	Duluth	Program	Program
West Battle	Fergus Falls	Program	Premier
Beers	Fergus Falls	Other	Historical
Pelican	Fergus Falls	Program	Premier
Crooked	Finland	Not Stocked	Other
Dumbbell (Dumbell)	Finland	Not Stocked	Other
Harris	Finland	Not Stocked	Other
Homestead (Square)	Finland	Not Stocked	Other
Miltona	Glenwood	Other	Premier
Lobster	Glenwood	Program	Program
Oscar	Glenwood	Other	Program
Bouder (Boulder)	Grand Marais	Not Stocked	Other
Crescent (Pine)	Grand Marais	Not Stocked	Other
Pokegama	Grand Rapids	Program	New Introduction
North Star	Grand Rapids	Other	Other
Moose	Grand Rapids	Not Stocked	Native

Little Moose	Grand Rapids	Not Stocked	Native
Orange	Grand Rapids	Not Stocked	Other
Spider	Grand Rapids	Not Stocked	Other
Deer	Grand Rapids	Not Stocked	Native
Blandin	Grand Rapids	Other	All-Age
Winnibigoshish	Grand Rapids	Not Stocked	Native
Fawn (167 acres) Resort Access only	Grand Rapids	Not Stocked	Native
Cross	Hinckley	Other	Program
Island	Hinckley	Program	Program
Spectacle	Hinckley	Not Stocked	Other
West Rush	Hinckley	Program	Program
East Rush	Hinckley	Program	Program
Shoepac	International Falls	Not Stocked	Native-Shoepac
Big Fork River	International Falls	Not Stocked	Native
Little Fork River	International Falls	Not Stocked	Native
Zumbro	Lake City	Other	Other
Alexander	Little Falls	Program	Program
Shamineau	Little Falls	Other	Program
Mississippi R	Little Falls	Not Stocked	Native
St. Croix River-Stlwtr/Prescott	Metro East	Number	Other
Owasso	Metro East	Other	Other
Forest	Metro East	Program	Program
St. Croix River	Metro East	Number	All-Age
Bald Eagle	Metro East	Other	All-Age
White Bear	Metro East	Other	All-Age
Waconia	Metro West	Program	Program
Cedar	Metro West	Program	Metro
Harriet	Metro West	Program	Metro
Lake of the Isles	Metro West	Not Stocked	Metro
Independence	Metro West	Program	Metro
Eagle	Metro West	Program	Metro
Calhoun	Metro West	Program	Metro
Rebecca	Metro West	Number	Brood
Minnetonka	Metro West	Other	All-Age
Sauk River Chain (Cedar Island/Horseshoe)	Montrose	Program	New Introduction
Sugar	Montrose	Program	Program
Mantrap (Big Mantrap)	Park Rapids	Program	Program
Belle Taine	Park Rapids	Not Stocked	Native
Lower Bottle	Park Rapids	Not Stocked	Native
Upper Bottle	Park Rapids	Not Stocked	Native
Big Sand	Park Rapids	Not Stocked	Native
Spider	Park Rapids	Not Stocked	Native

Bad Axe	Park Rapids	Not Stocked	Native
Stocking	Park Rapids	Not Stocked	Native
Vermilion	Tower	Number	Premier
Wabedo	Walker	Not Stocked	Native
Baby	Walker	Not Stocked	Native
Boy	Walker	Other	Supplemental
Man (Mann (PWI))	Walker	Not Stocked	Native
Leech	Walker	Not Stocked	Native
Woman	Walker	Not Stocked	Native
Little Boy	Walker	Not Stocked	Native
Child	Walker	Not Stocked	Native
Inguadona	Walker	Not Stocked	Native
Steamboat	Walker	Not Stocked	Native
McKeown	Walker	Not Stocked	Native
Mule	Walker	Not Stocked	Native
May	Walker	Not Stocked	Native
Kid	Walker	Not Stocked	Native
Long	Walker	Not Stocked	Native
Swift	Walker	Not Stocked	Native
Girl (Woman Lake chain)	Walker	Not Stocked	Native
French	Waterville	Other	Metro
Fox	Windom	Other	Metro

Lake	Area	Surface Acres	Littoral Acres	Stocked Category	1st Managed Category	Stocking Priority	Rate (fgl)	LA or SA	Frequency	Year	Quota	Other	Comments
Elk	Bemidji	303	73	Other	Brood	1	0.5	SA	Annual	All	152	0.5 fgl/SA annually	
Little Wolf	Bemidji	528	244	Program	Brood	1	1.0	LA	Biennial	Odd years	244		
Plantagenet (Plantaganette)	Bemidji	2,531	986	Other	Brood	1	1.5	LA	Biennial	Odd years	1,479	1.5 fgl/LA biennially	
Rebecca	Metro West	263	138	Number	Brood	1	N/A	N/A	Biennial	Odd-See Other Column	Odd-See Other Column	Rebecca-254 LLB fgl-Every 4th year-Odd years; 508 LLP fgl - Every 4th year-Even years	LLB-2015, 2019, 2023; LLP-2017, 2021, 2025
Detroit	Detroit Lakes	3,067	1,895	Number	Historical	2	N/A	N/A	Biennial	Odd years	3,000	3,000 fgl biennially	
Pelican	Fergus Falls	3,962	1,625	Program	Premier	3	0.5	LA	Annual	All	813		
Miliona	Glenwood	5,724	2,759	Other	Premier	3	0.5	LA	Biennial	Odd years	1,400		
Vermilion	Tower	39,273	15,006	Number	Premier	3	N/A	N/A	Biennial	Odd years	4,000	4,000 fgl biennially	(can get up to 2,000 surplus fingerlings)
Sauk River Chain (Cedar Island/Horseshoe)	Montrose	2,539	1,030	Program	New introduction	4	1.0	LA	Biennial	Odd years	1,030		
Pokegama	Grand Rapids	6,710	1,978	Program	New introduction	4	1.0	LA	Biennial	Odd years	1,978	Done stocking in 2017	
French	Waterville	876	398	Other	Metro	5	1.0	LA	Annual	All	398		
Minnetonka	Metro West	14,730	5,849	Other	Metro	5	0.5	LA	Biennial	Odd years	2,925		
Cedar	Aitkin	1,745	405	Other	Program	6	1.0	LA	Annual	All	405		
Big	Bemidji	3,592	2,106	Program	Program	6	0.5	LA	Annual	All	1,050		
Island Lake Reservoir (Orchard Res. (Island))	Duluth	8,001	3,260	Program	Program	6	0.5	LA	Annual	All	1,630		
Lobster	Glenwood	1,329	693	Program	Program	6	0.5	LA	Annual	All	347		
Cross	Hinckley	925	507	Program	Program	6	N/A	N/A	Annual	All	500		
Island	Hinckley	536	267	Program	Program	6	0.5	LA	Annual	All	134		
West Rush	Hinckley	1,579	862	Program	Program	6	0.5	LA	Annual	All	431		
East Rush	Hinckley	1,481	1,033	Program	Program	6	0.5	LA	Annual	All	517		
Alexander	Little Falls	2,709	842	Other	Program	6	0.5	LA	Annual	All	421		
Forest	Metro East	2,271	1,531	Program	Program	6	0.5	LA	Annual	All	766		
Waconia	Metro West	3,080	1,660	Program	Program	6	0.5	LA	Annual	All	830		
Sugar	Montrose	1,020	357	Program	Program	6	0.5	LA	Annual	All	179		
Oscar	Glenwood	1,191	827	Other	Program	6	N/A	N/A	Biennial	Odd years	160		
North Star	Grand Rapids	832	314	Other	Other	7	N/A	N/A	Annual	All	100	100 fgl annually (Genetics)	Done stocking in 2020
White Bear	Metro East	2,428	1,314	Other	All-Age	7	1.0	LA	Annual	All	1,314	1.0 fgl/LA/annually as surplus	Annual when available as surplus-All Age fish
Blandin	Grand Rapids	490	366	Other	All-Age	7	1.0	LA	Annual	All	366	1.0 fgl/LA/annually as surplus	Annual when available as surplus-All Age fish
St. Croix River-Stlwtr/Prescott	Metro East	N/A	N/A	Number	Other	7	N/A	N/A	Biennial	Odd years	4,000	4,000 fgl	(can get up to 3,000 surplus fingerlings)
St. Croix River	Metro East	N/A	N/A	Number	All-Age	7	N/A	N/A	Biennial	Odd years	1,000	1,000 fgl	
Total											31,569		

Lake	Area	Surface Acres	Littoral Acres	Stocked Category	1st Managed Category	Stocking Priority	Rate (fgl)	LA or SA	Frequency	Year	Quota	Other
Elk	Bemidji	303	73	Other	Brood	1	0.5	SA	Annual	All	152	0.5 fgl/SA annually
Bemidji (main lake)	Bemidji	6,596	1,862	Program	Historical	2	1.0	LA	Biennial	Even years	1,862	
Beers	Fergus Falls	200	96	Other	Historical	2	1.0	SA	Biennial	Even years	200	200 fgl biennially
Pelican	Fergus Falls	3,962	1,625	Program	Premier	3	0.5	LA	Annual	All	813	
Mille Lacs	Aitkin	128,226	33,129	Number	Premier	3	N/A	N/A	Biennial	Even years	3,000	3,000 fgl biennially
West Battle	Fergus Falls	5,565	2,496	Program	Premier	3	1.0	LA	Biennial	Even years	2,496	
Gull Chain	Brainerd	11,597	3,152	Other	New Introduction	4	0.6	LA	Biennial	Even years	2,000	Acreeage based on only Gull and Round, entire Chain 13,0
Fairmont chain (Amber, Hall, Budd, Sisseton, George)	Windom	1,179	678	Program	New Introductio	4	0.5	LA	Biennial	Even years	339	
Roosevelt	Brainerd	1,511	390	Program	New Introductio	4	1.0	LA	Biennial	Even years	390	
Owasso	Metro East	375	293	Other	Other	4	0.5	LA	Biennial	Even years	147	
French	Waterville	876	398	Other	Metro	5	1.0	LA	Annual	All	398	
Bald Eagle	Metro East	1,047	751	Other	Metro	5	1.0	SA	Biennial	Even years	1,047	1.0 fgl/SA biennially
Cedar	Metro West	164	63	Program	Metro	5	1.0	LA	Biennial	Even years	63	
Harriet	Metro West	341	85	Program	Metro	5	1.0	LA	Biennial	Even years	85	
Independence	Metro West	832	425	Program	Metro	5	1.0	LA	Biennial	Even years	425	
Eagle	Metro West	287	199	Program	Metro	5	1.0	LA	Biennial	Even years	199	
Calhoun	Metro West	419	123	Program	Metro	5	1.0	LA	Biennial	Even years	123	
Fox	Windom	951	780	Other	Metro	5	0.5	SA	Biennial	Even years	476	0.5 fgl/SA biennially
Cedar	Aitkin	1,745	405	Other	Program	6	1.0	LA	Annual	All	405	
Big	Bemidji	3,592	2,106	Program	Program	6	0.5	LA	Annual	All	1,050	
Island Lake Reservoir (Orchard Res. (Island))	Duluth	8,001	3,260	Program	Program	6	0.5	LA	Annual	All	1,630	
Lobster	Glenwood	1,329	693	Program	Program	6	0.5	LA	Annual	All	347	
Cross	Hinckley	925	507	Program	Program	6	N/A	N/A	Annual	All	500	
Island	Hinckley	536	267	Program	Program	6	0.5	LA	Annual	All	134	
West Rush	Hinckley	1,579	862	Program	Program	6	0.5	LA	Annual	All	431	
East Rush	Hinckley	1,481	1,033	Program	Program	6	0.5	LA	Annual	All	517	
Alexander	Little Falls	2,709	842	Other	Program	6	0.5	LA	Annual	All	421	
Forest	Metro East	2,271	1,531	Program	Program	6	0.5	LA	Annual	All	766	
Waconia	Metro West	3,080	1,660	Program	Program	6	0.5	LA	Annual	All	830	
Sugar	Montrose	1,020	357	Program	Program	6	0.5	LA	Annual	All	179	
Many Point	Detroit Lakes	1,701	565	Program	Program	6	1.0	LA	Biennial	Even years	565	
Shamaineau	Little Falls	1,434	746	Other	Program	6	0.25	SA	Biennial	Even years	359	
Mantrap (Big Mantrap)	Park Rapids	1,618	750	Program	Program	6	1.0	LA	Biennial	Even years	750	
North Star	Grand Rapids	832	314	Other	Other	7	N/A	N/A	Annual	All	100	100 fgl annually (Genetics)
Zumbro	Lake City	715	263	Other	Other	7	N/A	N/A	3-5 years	3-5 years	300	300 fgl every 3-5 years (2015 schedule)
White Bear	Metro East	2,428	1,314	Other	All-Age	7	1.0	LA	Annual	All	1,314	1.0 fgl/LA/annually as surplus
Blandin	Grand Rapids	490	366	Other	All-Age	7	1	LA	Annual	All	366	1.0 fgl/LA/annually as surplus
Mississippi R. - Aitkin County from Crow Wing County line to Itasca County Line	Aitkin	N/A	N/A	Number	Other	7	N/A	N/A	Biennial	Even years	1,000	1,000 fgl biennially
Mississippi R. - Crow Wing County above Brainerd Dam	Brainerd	N/A	N/A	Number	Other	7	N/A	N/A	Biennial	Even years	2,000	2,000 fgl biennially
Boy	Walker	3,452	2,007	Other	Supplemental	7	0.25	LA	Biennial	Even years	500	
Total											28,679	

48 SA, 4,116 LA

Missouri ETC State Update

Dave Woods

Spring Fyke Netting

Standardized fyke net surveys were conducted at Pomme de Terre Lake, Fellows Lake, Henry Sever Lake, Busch CA Lake 35 and Hazel Creek Lake.

Pomme de Terre Lake – Water temperature was 52°F and lake elevation was 841.7 msl (normal pool = 839.0) which are optimal temperature and lake level sampling conditions, but water was also extremely clear. The water visibility this year was measured at 16 feet. The typical water visibility during muskie netting is usually only 2 to 3 feet. The clear water also allowed for an abundance of filamentous algae. By the end of day three, the nets looked like green shag carpet. The clear water and algae coated nets likely depressed catch rates. A total of 79 muskies (43 males and 36 females) were captured in 23 net-days, resulting in a catch rate of 3.4 fish per net-day. Of the muskies captured, 47% were 36 inches or longer and 15% were 40 inches or longer. The largest fish captured was a female that measured 45.0 inches long and weighed 26 lbs., 12 oz. The long-term average catch rate for muskies on Pomme is 5.5 fish per net day.

Fellows Lake – Water temperature was 53°F and the lake was 4 feet below normal pool. A total of 110 muskies (63 males, 45 females and 2 unknown) were captured in 25 net-days, resulting in a catch rate of 4.4 fish per net-day. Of the muskies captured, 44% were 36 inches or longer and 19% were 40 inches or longer. The largest fish captured was 46.0 inches long and weighed 30 lbs. This year produced the best catch rates on Fellows Lake since sampling began in 1999.

Henry Sever Lake – Water temperature was 52°F. A total of 32 muskies (22 males, 6 females and 4 unknown) were captured in 15 net-days, resulting in a catch rate of 2.1 fish per net-day. Of the muskies captured, 22% were 36 inches or longer and 4% were 40 inches or longer. The largest fish captured was 44.1 inches.

Hazel Creek Lake - Water temperatures were consistent ranging from 55° to 56°F. A total of 94 muskies (70 males, 21 females and 3 unknown) were captured in 10 net-days, resulting in a catch rate of 9.4 fish per net-day. This is the third highest catch rate of muskies since 1996. Of the muskies captured, 31 percent were 36 inches or longer, and four percent were 40 inches or longer including two fish measuring 42 inches.

Busch CA Lake 35 – Water temperature was 55°F with lake level and water temperature rising rapidly after rainfall during the second night's set. Six muskies (5 males, 1 female) were captured during 11 net-days, resulting in 0.5 fish per net-day. Half the fish were 36" or longer, but no fish over 40" were captured. All but one fish was caught prior to second night's rise. Most males were still flowing, but the female appeared to be spawned out.

Show Me Muskie Project

Collectively, 61 anglers made 398 trips and fished a total of 2,427 hours on the five muskie program lakes. Statewide, there were 342 muskie encounters (7.1 hrs/encounter) and 174 caught (13.9 hrs/catch). Of the 174 muskies caught, 60 fish were 36 inches or longer (40.4 hrs/catch >36"), which is just at the lower end of the catch rate goal of 20 to 40 hours to catch a 36" or longer muskie, as identified in the current muskie plan. The following are individual lake results for 2016:

Pomme de Terre Lake – A total of 169 trips were reported by only nine anglers fishing a total of 934 hours. This is the lowest number of reporting anglers on Pomme since 1998. There were 164 muskie encounters (5.7 hrs/encounter) and 39 caught (24.0 hrs/catch); of which 23 fish were 36 inches or longer (40.6 hrs/catch >36").

Hazel Creek Lake – A total of 90 trips were reported by 24 anglers fishing a total of 603 hours. This is once again a record number of anglers reporting since the project began in 1996. There were 105 muskie encounters (5.7 hrs/encounter) and 53 caught (11.4 hrs/catch); of which 24 fish were 36 inches or longer (25.2 hrs/catch >36"), producing the best total catch rates and catch rates of fish over 36 inches on Hazel Creek since 2001.

Fellows Lake – A total of 7 trips were reported by two anglers fishing a total of 41 hours. There were 5 muskie encounters (8.2 hrs/encounter) and 7 caught (5.9 hrs/catch); of which 3 were 36 inches or longer (13.8 hrs/catch >36"). This was the lowest number of anglers reporting on Fellows since reporting began in 2001.

Henry Sever Lake – A total of 120 trips were reported by 24 anglers fishing a total of 797 hours. There were 66 muskie encounters (12.1 hrs/encounter) and 73 caught (10.9 hrs/catch); of which ten were 36 inches or longer (79.7 hrs/catch >36"). In 2016, the highest number of anglers, trips and fishing hours were reported on Henry Sever Lake since reporting began. In addition, Sever Lake produced its second best catch rates reported since inclusion in the Show-Me Muskie Project in 2000.

Busch CA Lake 35 – A total of 12 trips were reported by 2 anglers fishing a total of 52 hours. There were two muskie encounters (26.0 hrs /encounter) and 2 caught (26.0 hrs/catch); of which none were 36 inches or longer.

New Missouri Muskie Coordinator

The Missouri Muskellunge Program coordinator assignment is a three-year term position for MDC fisheries management biologists. Starting in July of 2017, Mike Anderson will assume the role as the muskie program coordinator. Mike manages the muskie fishery in Hazel Creek Lake and his office is located at the Northeast Regional MDC Headquarters in Kirksville.