

# **Minnesota's Managed Muskellunge Waters**

## **March 2016**

### **How many bodies of water does DNR manage for Muskellunge?**

The MNDNR manages about 4,285 lakes and rivers, or “waters”, (excluding Lake Superior) for fishing totaling 2,285,978 surface acres. Muskellunge are actively managed, as identified in individual Lake Management Plans, in 99 waters covering a total of 480,153 surface acres. Muskellunge waters comprise 2.3% of the total number of waters and 21.0% of the total surface acres managed for fishing. Of the 99 waters, 88 are managed with pure-strain Muskellunge, and 11 in the Twin Cities Metropolitan Area are managed with hybrid Muskellunge. The 88 pure-strain waters include 34 lakes or lake systems and 8 rivers that are considered natural waters, meaning Muskellunge existed there historically, and 46 waters where Muskellunge were introduced and are maintained through stocking.

In addition, Muskellunge have been found in small numbers in another 50 waters, but these are not actively managed for Muskellunge, and the likelihood of catching a Muskellunge in these waters is very low. Many of these waters are small, connected waters that do not support fishable populations, and some are waters that were discontinued in the Muskellunge program due to a lack of success in achieving the management goals.

This document represents the most current list of Minnesota waters actively managed for Muskellunge.

### **How has this list changed over time?**

A previous list of Muskellunge waters was presented in the 2008 “Long Range Plan for Muskellunge and Large Northern Pike Management Through 2020.” A review of the 2008 list was necessary for several reasons: new waters have been added, some waters have seen changes in management from hybrid Muskellunge to pure-strain Muskellunge, and management has been discontinued in some lakes. The previous list also contained historical waters where Muskellunge no longer exist. Additionally, the previous list did not serve anglers well as it included waters without public access and many waters containing Muskellunge populations so low (because there was no directed management) there was little reasonable expectation of encountering one.

DNR's Muskellunge Technical Committee has therefore developed this new list of Muskellunge waters that reflects legitimate angling opportunities. Waters were included if Muskellunge meet at least one of three criteria in that water: 1) they are stocked, 2) a viable population currently exists, or 3) they represent an important component of the lake's fishery (biologically, or in terms of angler experience). The eight rivers identified in the 2008 list of waters were included in this update because in five of the rivers, at least one of the above criteria was met; in the other three rivers, there is not a Stream Management Plan, the abundance of muskie is unknown, and we do not have data to suggest removing them.

Table 1. Number, size and type of actively managed Muskellunge waters, 2016.

	Surface Acres		Number	
	Number	Percent	Number	Percent
Waters managed for fishing <sup>1</sup>	2,285,978	-	4,285	-
Non-stocked lakes	<b>211,214</b>	<b>9.2</b>	<b>34</b>	<b>0.8</b>
Stocked lakes	265,809	11.6	46	1.1
Stocked hybrid Muskellunge lakes	3,130	0.1	11	0.3
All stocked lakes	<b>268,939</b>	<b>11.8</b>	<b>57</b>	<b>1.3</b>
All lakes excluding hybrids	477,023	20.9	80	1.9
All Lakes	<b>480,153</b>	<b>21.0</b>	<b>91</b>	<b>2.1</b>
Rivers	-	-	<b>8</b>	<b>0.2</b>
<b>Total waters managed for Muskellunge<sup>2</sup></b>	<b>480,153</b>	<b>21.0</b>	<b>99</b>	<b>2.3</b>

<sup>1</sup> Waters managed for recreational fishing is limited only to those lakes that are surveyed by DNR Fisheries; these include border waters that are available to Minnesota anglers without a separate angling license. Lake Superior is not included.

<sup>2</sup> Includes hybrid Muskellunge

Table 2. Summary of the number and size of waters in the (old) 2008 and (new) 2016 lists of managed Muskellunge waters.

	<i>2008 Long Range Plan</i>				<i>2016 Update</i>			
	Surface Acres		Number		Surface Acres		Number	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Waters managed for fishing <sup>1</sup>	2,285,978	-	4,285	-	2,285,978	-	4,285	-
Waters managed for Muskellunge								
All Lakes	808,729	35.4	108	2.5	480,153	21.0	91	2.1
Non-stocked Lakes	540,976	23.7	44	1.0	211,214	9.2	34	0.8
Stocked Lakes <sup>2</sup>	267,753	11.7	64	1.5	268,939	11.8	57	1.3
Rivers	-	-	8	0.2	-	-	8	0.2
<b>Total waters managed for Muskellunge<sup>3</sup></b>	<b>808,729<sup>3</sup></b>	<b>35.4</b>	<b>116</b>	<b>2.7</b>	<b>480,153<sup>3</sup></b>	<b>21.0</b>	<b>99</b>	<b>2.3</b>

<sup>1</sup> Waters managed for recreational fishing is limited only to those lakes that are surveyed by DNR Fisheries; these include border waters that are available to Minnesota anglers without a separate angling license. Lake Superior is not included.

<sup>2</sup> Includes hybrid Muskellunge

<sup>3</sup> The largest difference between lake acreage figures from 2008 to 2016 results from the exclusion of Lake of the Woods in the 2016 update of managed Muskellunge waters. The Minnesota portion of Lake of the Woods is not managed for Muskellunge as lake habitats supporting Muskellunge are nearly entirely located within Ontario, Canada.

Table 3. Minnesota's actively managed Muskellunge waters, 2016. Current listing of: (A) Stocked Muskellunge waters; (B) Non-stocked Muskellunge waters; (C) Stocked hybrid Muskellunge waters; (D) Muskellunge rivers.

<b>(A) Stocked Muskellunge Waters</b>				<b>(B) Non-stocked Muskellunge Waters</b>			
<b>Water body</b>	<b>County</b>	<b>Acres<sup>1</sup></b>	<b>Status<sup>2</sup></b>	<b>Water body</b>	<b>County</b>	<b>Acres<sup>1</sup></b>	<b>Status<sup>2</sup></b>
Alexander	Morrison	2,709	I	Andrusia	Beltrami	1,590	N
Bald Eagle	Ramsey	1,047	I	Baby	Cass	737	N
Beers	Otter Tail	200	I	Bad Axe	Hubbard	303	N
Bemidji	Beltrami	6,596	NS	Big Wolf	Beltrami	1,073	N
Big	Beltrami	3,592	NS	Boulder	Cook	129	SP
Blandin	Itasca	490	NS	Boy	Cass	3,452	N
Calhoun	Hennepin	419	H/I	Cass	Cass	15,958	N
Cedar	Aitkin	1,745	I	Child	Cass	285	N
Cedar	Hennepin	164	H/I	Crescent	Cook	755	SP
Cross	Pine	925	I	Deer	Itasca	4,094	N
Detroit	Becker	3,067	I	Dumbbell	Lake	406	SP
Eagle	Hennepin	287	I	Girl	Cass	428	N
East Rush	Chisago	1,481	I	Harris	Lake	122	SP
Elk	Clearwater	303	I	Homestead	Lake	44	SP
Forest	Washington	2,271	I	Inguadona	Cass	1,125	N
Fox	Martin	951	I	Kid	Cass	168	N
French	Rice	876	I	Kitchi	Beltrami	1,858	N
Harriet	Hennepin	341	I	Leech	Cass	102,948	N
Independence	Hennepin	832	I	Little Boy	Cass	1,452	N
Island	Pine	536	I	Little Moose	Itasca	285	N
Island Lake Res.	St. Louis	8,001	I	Little Shoepack	Lake	51	N
Lake of the Isles	Hennepin	112	H/I	Man	Cass	491	N
Little Wolf	Cass	528	I	May	Cass	143	N
Lobster	Douglas	1,329	I	Mckeown	Cass	168	N
Mantrap	Hubbard	1,618	NS	Moose	Itasca	1,274	N
Many Point	Becker	1,701	I	Orange	Itasca	104	SP
Mille Lacs	Aitkin	128,226	I	Pike Bay	Cass	4,751	N
Miltona	Douglas	5,724	I	Shoepack	Lake	299	N
Minnetonka	Hennepin	14,730	I	Spider	Itasca	1,392	SP
North Star	Itasca	832	I	Steamboat	Cass	1,756	N
Oscar	Douglas	1,191	I	Swift	Cass	357	N
Owasso	Ramsey	375	I	Wabedo	Cass	1,226	N
Pelican	Otter Tail	3,962	I	Winnibigoshish	Cass	56,470	N
Plantagenet	Hubbard	2,531	I	Woman	Cass	5,520	N
Pokegama	Itasca	6,710	NS		<b>Total</b>	<b>211,214</b>	
Rebecca	Hennepin	263	I				

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**(A) Stocked Muskellunge Waters**

<b>Water body</b>	<b>County</b>	<b>Acres<sup>1</sup></b>	<b>Status<sup>2</sup></b>
Roosevelt	Cass	1,511	I
Sauk River Chain	Stearns	2,539	I
Shamineau	Morrison	1,434	I
Sugar	Wright	1,020	I
Vermilion	St. Louis	39,273	I
Waconia	Carver	3,080	I
West Battle	Otter Tail	5,565	I
West Rush	Chisago	1,579	I
White Bear	Washington	2,428	I
Zumbro	Olmsted	715	I
<b>Total</b>		<b>265,809</b>	

**(C) Stocked Hybrid Muskellunge Waters**

<b>Water body</b>	<b>County</b>	<b>Acres<sup>1</sup></b>	<b>Status<sup>2</sup></b>
Bryant	Hennepin	178	H
Cedar	Scott	793	H
Clear	Washington	429	H
Crystal	Dakota	289	H
Crystal	Hennepin	79	H
Elmo	Washington	281	H
Gervais	Ramsey	235	H
Johanna	Ramsey	212	H
Nokomis	Hennepin	201	H
Orchard	Dakota	235	H
Phalen	Ramsey	198	H
<b>Total</b>		<b>3,130</b>	

**(D) Muskellunge Rivers**

<b>Rivers</b>	<b>County</b>	<b>Acres</b>	<b>Status<sup>2</sup></b>
Mississippi R.	Various	na	NS
St. Croix R.	Washington	na	NS
St. Louis R.	St. Louis	na	NS
Big Fork R.	Itasca	na	N
Kettle R.	Pine	na	N
Little Fork R.	Koochiching	na	N
Prairie R.	Itasca	na	N
Snake R.	Pine	na	N

<sup>1</sup> GIS acres were used unless specified by the Fisheries Management Area.

<sup>2</sup> I = Introduced: currently stocked

N = Natural: historic occurrence

NS = Natural stocked: historic occurrence, now stocked

SP = Introduced Shoepack: historically stocked Shoepack strain

H = Introduced hybrid: stocked hybrid Muskellunge

H/I = Introduced hybrid lakes switched to pure strain (2010)

Table 4. Previously categorized Muskellunge (MUE) and hybrid Muskellunge (TME) waters not included in the actively managed Muskellunge waters, 2016. Waters were not included because they were no longer being stocked, discontinued active management or they did not provide a fishery for anglers.

<b>Water body</b>	<b>County</b>	<b>Acres</b>	<b>Type</b>
Belle Taine <sup>1</sup>	Hubbard	1,442	MUE
Big Sand <sup>1</sup>	Hubbard	1,635	MUE
Buck	Beltrami	360	MUE
Carr	Beltrami	42	MUE
Emma <sup>1</sup>	Hubbard	78	MUE
Ida <sup>1</sup>	Hubbard	74	MUE
Lake of the Woods <sup>2</sup>	Lake of the Woods	305,535	MUE
Little Sand <sup>1</sup>	Hubbard	410	MUE
Little Winnibigoshish	Itasca	932	MUE
Lower Bottle <sup>1</sup>	Hubbard	641	MUE
Mule	Cass	525	MUE
Pleasant	Ramsey	607	MUE
Spider <sup>1</sup>	Hubbard	570	MUE
Stocking <sup>1</sup>	Hubbard	100	MUE
Upper Bottle <sup>1</sup>	Hubbard	459	MUE
Bush	Hennepin	186	TME
Eagle	Carver	183	TME
Island	Ramsey	59	TME
Pierson	Carver	297	TME
Silver	Ramsey	75	TME
Wasserman	Carver	165	TME
Weaver	Hennepin	152	TME
<b>Total</b>		<b>314,527</b>	

<sup>1</sup> These waters contained historic natural populations and in some cases were vital to the state's Muskellunge program during the early 20<sup>th</sup> century. Some of these waters may represent viable opportunities for Muskellunge restoration.

<sup>2</sup> The Minnesota portion of Lake of the Woods is not managed for Muskellunge as lake habitats supporting Muskellunge are nearly entirely located within Ontario, Canada.