

# Summary of and Initial Response to public comments on MN Department of Natural Resources proposal to manage new waters for Muskellunge



**Summary of and Initial Response to public comments:** This document is a summary of an initial response to the topics most commonly expressed in public comments received by Minnesota Department of Natural Resources (MN DNR) between October 21, 2015 and January 3, 2016, regarding a proposal to manage up to four new waters for Muskellunge (commonly known as Muskie).

**Background:** In 2015, the MN DNR proposed six candidate lakes for Muskie management: Gull Lake in Cass and Crow Wing counties; Big Marine Lake in Washington County; the Fairmont Chain of Lakes in Martin County; and Lizzie, Franklin, and Loon Lakes in Otter Tail County. If approved, stocking could begin as soon as 2016.

A public input process was initiated in August 2015 that included posting lake accesses, statewide and regional news releases, information posted on the DNR website, meetings with lake associations and sportsman's groups, public meetings and an online comment forum. Comments were accepted online and by phone and email through January 3, 2016.

Over 1,850 comments were collected from the following sources:

- Online comments (1506)
- Emails and letters (242)
- Phone calls and personal communications (25)
- Public meetings held between Dec. 2-9, 2015 (83)

DNR staff completed a review of all comments received. The comments received did not identify any new issues nor raise concerns that we were not aware of regarding muskie management in the proposed lakes. Due to the high number of comments, we are unable to provide responses to each individual comment. Comments revealed a number of common themes, and this document provides a summary of those common themes as well as an initial DNR response containing additional information that will be helpful to the ongoing discussion.

**Next Steps:** In the coming months, DNR will schedule meetings with lake associations and local officials to review the proposals and respond to local concerns. Final decisions about Muskie management will be made in mid-summer, 2016, and will incorporate both public input and biological assessments.

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### Need for increased Muskie angling opportunity

#### *Comment summary:*

A majority of comments in favor of the proposal indicated a strong need for additional Muskie lakes to accommodate the fast-growing interest in Muskie angling. Many commenters noted that the addition of new Muskie lakes would reduce fishing pressure on existing Muskie lakes and provide welcome new and diverse fishing opportunities.

Some commenters indicated they did not see a need for additional lakes, noting that Muskie anglers make up a minority of all anglers in Minnesota, and indicating that sufficient Muskie fishing opportunities already exist in the areas where new lakes are being proposed.

***DNR response:*** The sport of Muskie fishing has seen substantial growth in Minnesota over the last few decades. A recent (2014) survey by the University of Minnesota<sup>1</sup> indicates that approximately 16.5% of resident anglers prefer or strongly prefer to target Muskies when fishing in Minnesota. Creel surveys on Cass Lake, Lake Bemidji and Sugar Lake between the late 1980's and early 2000's also demonstrate increased numbers of anglers targeting Muskies. Additionally, a 2007 study by Schroeder et al.<sup>2</sup> indicated 60% of non-Muskie anglers are at least slightly interested in targeting Muskie in the future.

Currently, MN DNR manages 2.3% of its fishing lakes (making up 21.0% of water acres) for pure-strain or hybrid Muskies. In comparison, Wisconsin DNR manages approximately 11% of its lakes (62% of its water acres) for Muskies. A University of Minnesota study in 2012<sup>3</sup> showed that approximately 26% of resident anglers agreed or strongly agreed that MN DNR should increase the number of lakes managed for Muskies in Minnesota.

The [2008 Long Range Plan \(LRP\) for Muskellunge and Large Northern Pike](#), which received broad public input, outlined a compromise between those who wanted more Muskie lakes and those who did not. The plan called for up to 8 new waters to be stocked with Muskies by 2020; 3 have already been stocked, and four more are being considered under the current proposal.

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<sup>1</sup> Schroeder, S. A. (2015). Fishing and Fish Habitat in Minnesota: A Study of Anglers' Opinions and Activities. University of Minnesota, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology.

<sup>2</sup> Schroeder, S. A., Fulton D. C., & Dodd, R. A. (2007). Managing muskie in Minnesota. U.S. Geological Survey. Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology. University of Minnesota, St. Paul.

<sup>3</sup> Schroeder, S. (2012). Fishing in Minnesota: A Study of Angler Participation and Activities. University of Minnesota, Minnesota Cooperative Fish and Wildlife Research Unit, Department of Fisheries, Wildlife, and Conservation Biology.

## Negative impacts to lake ecosystems

### *Comment summary:*

The most common concerns cited in public comment centered on potential negative impacts to lake ecosystems, specifically impacts to other important sportfish populations, potential for introducing aquatic invasive species, and concerns about Muskies being a non-native species. Many commenters expressed concern that other fish species, particularly Walleye and panfish, may be harmed through predation or competition by Muskies. Many commenters indicated that stocking Muskies would likely increase boat traffic on the proposed lakes, leading to increased risk of introducing aquatic invasive species such as zebra mussels or Eurasian watermilfoil. Commenters also expressed concern about stocking a non-native species in lakes where they previously did not exist. Some commenters expressed concern about Muskies spreading into adjacent bodies of water. A few commenters expressed concern that Muskies may eat or otherwise harm waterfowl, or cause an increase in lake vegetation. Several commenters questioned whether stocking muskies in Big Marine Lake would have negative impacts for threatened Blanding's turtles there. Some of the comments expressing concern about ecological impacts indicated that current research has been insufficient to demonstrate that introduction of muskies will not harm other species in the proposed lakes.

### *DNR response:*

**Impact to important sportfish populations:** Muskies coexist with other sportfish populations in many lakes throughout the upper Midwest and Ontario. In fact, some of the best Muskie fisheries are also excellent Walleye, Northern Pike, and Bass fisheries in these areas. The risk of potential impacts to other species is extremely low because of the low densities at which Muskies exist in Minnesota lakes, whether natural or stocked populations. In an effort to determine whether Muskies negatively affect other species, the MN DNR studied impacts to 7 species (Black Crappie, Bluegill, Cisco, Northern Pike, Walleye, Yellow Perch, and White Sucker) in 41 Minnesota lakes before and after the introduction of Muskies ([Knapp et al. 2012](#)<sup>5</sup>). The study found no evidence Muskies had any effects on these species, regardless of lake type or fish community. A recent review of fisheries research by Steven J. Kerr<sup>6</sup> also found very little evidence of Muskies negatively impacting other sport fish, particularly in larger lakes with diverse forage bases.

**Increased potential for introducing aquatic invasive species (AIS):** Muskie management poses no higher threat of spreading AIS than any other recreational activity on lakes. That said, it is essential that DNR continue to educate recreationists and encourage all lake users to follow best practices to slow the spread of AIS. Recent studies show that the greatest risk for spread of zebra mussels is from transferring water equipment such as docks and boat lifts, not from watercraft itself. For more information about best practices to reduce the spread of AIS, visit the MN DNR's AIS webpage at <http://www.dnr.state.mn.us/invasives/aquatic/index.html>.

**Concerns about Muskies being a non-native species:** Muskies may not be native to Fairmont, Big Marine, Franklin, Lizzie or Loon lakes; however, prior to European settlement, Muskies were found within all of Minnesota's major watersheds. Culverts and dams, habitat degradation, shoreline

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<sup>5</sup> Knapp, M. L., S. W. Mero, D. J. Bohlander, and D. F. Staples & J. A. Younk. 2012. Fish Community Responses to the Introduction of Muskellunge into Minnesota lakes, *North American Journal of Fisheries Management*, 32:2, 191-201.

<sup>6</sup> Kerr, S. J. 2016. Feeding Habits and Diet of the Muskellunge (*Esox masquinongy*): A Review of Potential Impacts on Resident Biota. Report prepared for Muskies Canada Inc. and the Ontario Ministry of Natural Resources and Forestry. Peterborough, Ontario. 24 p. + appendices.

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development, and overharvest have contributed to the decline of this species in Minnesota. Stocking can provide opportunities for Minnesota anglers to fish for species that were native within a watershed (e.g., Walleye, Bass, Crappies, Muskie, and Northern Pike) and for species that were not native (e.g., Brown and Rainbow Trout).

**Muskie movement to other waters:** Muskies may move to adjacent water bodies if there is not a distinct barrier, such as a dam. Most of these movements would be seasonal migrations and fish generally move back; relatively few individual fish permanently migrate away from a lake that has suitable habitat, as each of the six proposed lakes does. Cases of Muskies establishing self-sustaining or even noticeable populations outside of the waters in which they are managed are rare despite the hundreds of connections that currently exist between managed and unmanaged waters.

**Impacts to waterfowl, vegetation, and Blanding's turtles:** Largemouth Bass, Northern Pike, and Muskies are all documented to have eaten small ducks, but that is the exception rather than the rule when it comes to food habits for those species. There is no evidence that Muskies eat waterfowl eggs. Muskies prefer soft-rayed fish species such as Cisco and Suckers, and will also eat Freshwater Drum, Yellow Perch, or even Northern Pike when preferred prey is not available. There is no evidence that Muskies influence vegetation in a lake. Interactions between Blanding's turtles and Muskies in Big Marine Lake would be highly unlikely. The greatest threats to these turtles are road traffic and loss of habitat.

### Beneficial impacts on fish populations

#### *Comment summary:*

A large number of comments indicated that stocking muskies would have beneficial impacts on other fish populations; most of these comments indicated that the presence of a large predator such as Muskie would help improve the size structure of other fish populations, particularly Northern Pike (in Gull, Big Marine, Franklin, Lizzie and Loon) and Cisco (in Loon). Some comments indicated that Muskies may help reduce rough fish populations (e.g. Carp and other fish less desirable to anglers) in the Fairmont Chain of lakes. Many commenters stated that Muskie can successfully coexist in lakes with Walleye, panfish, and other game species.

#### *DNR response:*

The Knapp et al. (2012) study found no evidence Muskies were affecting the 7 fish species investigated in 41 stocked Muskie lakes in Minnesota. Muskies likely would prey on small Northern Pike in the central Minnesota lakes and undesirable species in the Fairmont Chain, but any major reductions in numbers or improvement in size structure would be unlikely given the low densities at which Muskies would be managed.

### Impacts to fishing and other recreation

#### *Comment summary:*

Many commenters expressed concern about negative impacts to fishing and other forms of recreation if muskies are stocked in the proposed lakes. The most frequent of these was the concern that stocking would increase lake use and boat traffic, leading to issues such as increased fishing pressure conflicts, crowding, pollution, prop erosion, and issues with safety and privacy. A number of comments indicated concerns about traffic and safety issues related to tournaments on Gull and Lizzie. For several lakes (Big Marine, Lizzie and Loon), a few comments indicated that parking areas and public accesses were insufficient to handle increased numbers of lake users. Several commenters expressed concern that the presence of a trophy catch-and-release fishery would detract from the ability of youth, families, the

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elderly and/or the disabled to fish for panfish. Some commenters indicated that muskies would scare or bite swimmers. Several commenters expressed concern that spearing would be banned if Muskies were introduced, while others expressed concern that spearing might not be banned.

Supporters of the proposal indicated that the introduction of Muskies would improve their fishing experience on these lakes by providing additional opportunities to catch trophy fish, and by diversifying the game fish available for angling.

### *DNR response:*

Lake use may increase with the added fishing opportunities, but most Muskie fishing occurs August-November when other forms of lake traffic have typically declined. Issues with parking and public accesses on specific lakes are addressed in the “Lake Suitability” section below. Maintaining fishing opportunities for youth, families, the elderly and/or the disabled is a priority for MN DNR; based on the Knapp et al. (2012) study and previous experience on other Muskie lakes, we do not anticipate that stocking Muskies would cause any reduction in panfishing or other recreational opportunities. Because of their size, Muskies may be intimidating to some lake users, but cases of fish biting swimmers and other recreationists in North America are extremely rare. Current spearing regulations on the proposed lakes would not change with the introduction of Muskies. After determining that darkhouse spearing for northern pike posed no conservation risk for Muskies, all of the remaining spearing bans with the exception of one have been lifted.

### **Suitability of proposed lakes**

#### *Comment summary:*

Many commenters expressed either confidence or concern about whether the proposed lakes are suitable for Muskie stocking:

**Big Marine:** Supporters of the proposal indicated that Big Marine Lake is a good choice because of its geographic location and structure (both shallow and deep areas in the lake). Opponents indicated that Big Marine Lake does not have the appropriate habitat or forage base to support Muskies, and does not have sufficient parking areas or public accesses to support increased boat traffic.

**Gull Chain Lake:** Supporters of the proposal indicated that Gull Chain Lake is a good choice because of its geographic location, large size, diverse shoreline structure, forage base, and likely ability to produce trophy-size muskies. Opponents indicated that traffic on the lake is already a concern.

**Fairmont Chain of Lakes:** Supporters of the proposal indicated that they would like to have more opportunities to fish for Muskie in this part of the state. Opponents indicated that Fairmont is a poor choice due to its forage base, size, depth, and poor water quality.

**Franklin Lake:** Supporters of the proposal indicated that Franklin Lake is a good choice for stocking Muskies because of its geographic location, size, and forage base. Opponents indicated that Franklin Lake’s size and forage base are not appropriate to support Muskies.

**Lizzie Lake:** Supporters of the proposal indicated that Lizzie Lake is a good choice because of its geographic location, size, forage base and habitat. Opponents indicated that Lizzie Lake does not have the forage base to support Muskies, nor sufficient public accesses to support increased boat traffic.

**Loon Lake:** Supporters of the proposal indicated that Loon Lake is a good choice for stocking Muskies because of its geographic location, forage base (especially Cisco), shoreline structure, and public

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accesses. Opponents indicated that Loon Lake is too small, lacks the appropriate forage base, and lacks nearby hotels and other infrastructure to support increased tourism.

### ***DNR response:***

During development of the 2008 LRP for Muskellunge and Large Northern Pike, DNR conducted an inventory of lake attributes for all Muskie lakes in Minnesota. The evaluation revealed that Muskie fisheries were found in a diverse set of lakes around the state, whether established and maintained through stocking or natural reproduction. Another observation was that stocked Muskies grew to trophy lengths regardless of the available prey, but grew large, in terms of length and weight, in the lakes with better prey bases. The physical and biological attributes for new introductions were based on existing Muskie waters. Because Muskie management was successful in such a diversity of lake types, the attributes were then categorized as acceptable, better, and best. These categories were established to help assess where Muskie management would be the most successful to meet our objectives and for comparisons among potential candidate lakes. Responses to concerns about specific lakes are below, and additional details can be found in the individual lake proposals on the [MN DNR Muskellunge management website](#):

**Big Marine Lake:** Big Marine Lake was selected because of its geographic location and large size. Although this lake has higher densities of northern pike and is lacking an abundance of high quality prey like Ciscos, Lake Whitefish, and suckers, it does contain sufficient secondary prey species like perch. In terms of infrastructure, Big Marine has three public access points, two of which are maintained by MN DNR and one of which is maintained by Washington County.

**Gull Chain Lake:** Gull Chain was selected because of its geographic location, large size and diverse habitat, prey base, and ability to produce trophy-sized Muskies. These attributes make Gull one of the best candidate lakes as described by the 2008 LRP for Muskellunge and Large Northern Pike. Gull's Northern Pike population is low, consistent with desired criteria for Muskies. In the Brainerd Area, consisting of over 250 lakes, Gull possesses the best infrastructure to host a popular diverse fishery when considering public and private access, lodging, restaurants, guide availability and other hospitalities. Forty one percent of anglers interviewed during a 2013 creel survey on Gull Chain indicated support for stocking Muskie in this lake, compared to 30% who did not support stocking, and 29% who were neutral.

**Fairmont Chain of Lakes:** The Fairmont Chain is one of a very few lakes south of the Minnesota River that would ever be considered for Muskie management. The diverse prey base that consists of Common Carp, Freshwater Drum, suckers, Yellow Bass, and Yellow Perch can support a low-density Muskie population. In the few lakes in Southern Minnesota where Muskies fisheries have been established, the water quality and other lake attributes have not been a barrier to providing a unique trophy fishing experience to anglers.

**Franklin Lake:** Franklin Lake's littoral area (less than 15' deep) and shoreline configuration, as well as its size, depth and clarity, make it a strong candidate for successful Muskie management. Franklin also supports a diverse forage base including perch, Cisco and White Sucker. Franklin Lake has two public accesses: a well maintained concrete ramp located on the north side and a secondary access located on the north east side.

**Lizzie Lake:** Based on biological attributes, Lizzie Lake is a strong candidate for Muskie management in Otter Tail County. Its littoral acres (less than 15' deep) and forage base (consisting of perch, Cisco and White Sucker) are excellent for Muskies, and its depth, clarity, shoreline configuration and Northern Pike

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abundance are all appropriate as well. DNR Parks and Trails Division currently has a proposal to create a larger, more accessible access on the South West side of the lake in the near future, which will address concerns related to increased traffic. The south basin is posted as a designated migratory waterfowl feeding and resting area and would be off limits to fishing after Sept. 1st.

**Loon Lake:** Loon Lake has excellent depth, shoreline configuration, water clarity, and forage base (consisting of perch, Cisco, and White Sucker) to support Muskies. Its overall size and abundance of Northern Pike are acceptable as well. There is a well-maintained public access located on the East shoreline.

### Decision process

#### *Comment summary:*

While some comments expressed trust in DNR and appreciation for the opportunity to submit comment on this proposal, many comments indicated concerns about the decision process. Some commenters indicated that local communities, especially lakeshore property owners, should have a greater voice in the decision-making process. Others expressed concern that input from lakeshore property owners would be given more weight than input from other members of the public, noting that the proposed lakes are public resources. Some commenters expressed concern that the proposal is being driven by political pressure from organized groups such as Muskies Inc. Several of the comments submitted for Big Marine Lake indicated that the decision process was too rushed and did not provide sufficient time for the public to weight the facts and submit informed comment. A few of the comments submitted for the Otter Tail County lakes indicated that the public meetings were held at a time of year when many seasonal residents would be unable to attend. Some commenters indicated that there is a lack of sufficient current, accurate data to guide muskie stocking in new waters. Several comments indicated mistrust of DNR and its ability to successfully manage the proposed lakes.

#### *DNR response:*

DNR wants to be responsive to those local government units, lake associations and others that feel we did not provide them with sufficient information regarding these proposals. We will schedule meetings in the coming months with local officials and organizations to review the proposals and respond to local concerns. Final decisions regarding Muskellunge management will be made in mid-summer, 2016, and will incorporate both biological assessments and public input. The proposed lakes are managed as public resources for all Minnesotans, and therefore it is important that DNR incorporate input from a diversity of user-groups, including lakeshore property owners, anglers of multiple species, local business owners, and other recreationists.

### Other

#### *Comment summary:*

A variety of additional benefits and concerns were cited in public comment. These included economic benefits to local communities; angler recruitment and retention; concerns that stocking densities will be too low to support sustainable Muskie populations; opposition to managing for trophy fish as opposed to managing for subsistence; preference that DNR monies be spent on stocking other species (e.g. Walleye, panfish, Northern Pike or Cisco) or controlling aquatic invasive species; preference that DNR discontinue all fish stocking in the state; concerns about how DNR will monitor stocked Muskies and assess their impact on lake ecosystems and other game fish; and more.

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***DNR response:***

Due to the number and diversity of comments received, DNR will not be providing responses to each individual comment. All comments have been reviewed by Fisheries staff, and will be further considered as final decisions are made.