

**Petition
to the
Minnesota Department of Natural Resources
for
Adoption of Rules
to
Protect Minnesota’s Native “Rough Fish”**

August 12, 2022

Introduction

Minnesota has long divided its native fish into two categories – “game fish” and “rough fish.” “Game fish” have long been prized as desirable to eat and, therefore, to protect. Native “rough fish” have been traditionally considered less desirable to eat – and, consequently are unprotected from over-harvest. That division is no longer sustainable.

Native rough fish are long-lived, putting them at risk of over exploitation. The bigmouth buffalo (*Ictiobus cyprinellus*) is the longest living freshwater boney fish in the world, with validated ages of 112 years. (Lackmann, et al. 2019). Other species are also long lived, with many species (smallmouth buffalo, black buffalo, quillback, freshwater drum, blue sucker) living over 40 years (Snow, et al. 2020; and Parker 1987.)

Native rough fish are critical to a sustainable aquatic ecosystem. Many are forage for game fish, birds and mammals – and they provide many other ecosystem services. For example, native rough fish are host to threatened and endangered mussels (Aadland 2015, Sietman, et al. 2017). Loss of host fish is a leading contributor to mussel extirpations (Bogan 1993). Native rough fish also play a role in nutrient cycling and increase the productivity of streams through spawning migrations and activity (Childress and McIntyre 2015).

Unfortunately, all native rough fish suffer from inadequate legal protection; many have a continuous open season, with no limits.

The “precautionary principle” states, “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” This principle should be kept in mind when adopting regulations to protect Minnesota’s native “rough fish.”

The undersigned Petitioners respectfully request the Minnesota DNR to adopt additional rules to protect Minnesota’s native “rough fish” from overharvest and to allow for a sustainable population growth. The time to begin this task has long passed.

I. Petitioner - Minnesota Division, Izaak Walton League of America

The Minnesota Division, Izaak Walton League of America (the “Ikes”) is a Minnesota non-profit, tax-exempt [“501(c)(3)”] corporation whose mission is “... to conserve, restore, and

promote the sustainable use and enjoyment of our natural resources, including soil, air, woods, waters, and wildlife.”

The Ikes’ mission is entirely consistent with the purpose of the Minnesota Environmental Rights Act (Minnesota Statute 116B.01):

“The legislature finds and declares that each person is entitled by right to the protection, preservation, and enhancement of air, water, land, and other natural resources located within the state and that each person has the responsibility to contribute to the protection, preservation, and enhancement thereof. The legislature further declares its policy to create and maintain within the state conditions under which human beings and nature can exist in productive harmony in order that present and future generations may enjoy clean air and water, productive land, and other natural resources with which this state has been endowed. Accordingly, it is in the public interest to provide an adequate civil remedy to protect air, water, land and other natural resources located within the state from pollution, impairment, or destruction.”

The Ikes also recognize and support the Minnesota Constitution, including Article XIII, Section 12, which states: “Hunting and **fishing** and the taking of game and fish are a valued part of our heritage that **shall be forever preserved** for the people and **shall be managed by law and regulation for the public good.**” [Emphasis added.] Adoption of regulations to protect Minnesota’s “rough fish” is consistent with Minnesota’s Constitution.

II. Requested Rules

A. Amend Minnesota rules to protect “native rough fish” from over-harvesting.

Pursuant to Minnesota Statute 14.09, the Ikes, the undersigned Petitioner, respectfully petitions the Minnesota Department of Natural Resources to:

1. Amend Minnesota Rules, Chapters 6262 and 6266, to regulate the harvest of native rough fish, as defined below, by establishing daily limits, possession limits, closed seasons, gear restrictions, and/or any other method, which are, in aggregate, sufficient to create a safe operating space and ensure an ecologically balanced population of native rough fish.

2. Add the following rule: Fishing, by any means, is closed for any native rough fish, listed as “endangered”, “threatened”, or “special concern” pursuant to Minnesota Rules, chapter 6134.

B. Amend Minnesota rules to define “native rough fish.”

Pursuant to Minnesota Statute 14.09, the Ikes, the undersigned Petitioner, respectfully petitions the Minnesota Department of Natural Resources to amend Minnesota Rules, Chapter 6262, to add the following definition of “native rough fish”:

“Native rough fish” means species of the following families and genera:

1. **Catostomidae:** white sucker (*Catostomus commersoni*), longnose sucker (*Catostomus cotosomus*); blue sucker (*Cycleptus elongatus*); spotted sucker (*Minyterema melanops*); northern hogsucker (*Hypertelium nigricans*); quillback (*Carpionodes cyprinus*); highfin carpsucker (*Carpionodes velifer*); river carpsucker (*Carpionodes carpio*); bigmouth buffalo (*Ictiobus cyprinellus*); smallmouth buffalo (*Ictiobus bubalus*); black buffalo (*Ictiobus niger*); shorthead redhorse (*Moxostoma macrolepidotum*); black redhorse (*Moxostoma duquesnei*); golden redhorse (*Moxostoma erythrurum*); silver redhorse (*Moxostoma anisrum*); river redhorse (*Moxostoma carinatum*); and greater redhorse (*Moxostoma valenciensesi*);
2. **Hiodontidae:** mooneye (*Hiodon tergisus*) and goldeye (*Hiodon alosoides*);
3. **Sciaenidae:** freshwater drum (*Aplodinotus grunniens*);
4. **Amiidae:** bowfin (*Amia calva*);
5. **Lepisosteioidea:** longnose gar (*Lepisosteus osseus*) and shortnose gar (*Lepisteus platostomus*); and
6. **the genus Ameiurus:** black bullhead (*Ameiurus melas*); yellow bullhead (*Ameiurus natalis*) and brown bullhead (*Ameiurus nebulosus*).

III. Statutory Authority to File Petition for Rule

Minnesota Statute 14.09 is the statutory authority to file a petition, which states in full:

“**Any person may petition an agency requesting the adoption**, amendment, or repeal of **any rule**. The petition shall be specific as to what action is requested and the need for the action. Upon receiving a petition an agency shall have 60 days in which to make a **specific and detailed reply in writing** as to its planned disposition of the request and the reasons for its planned disposition of the request. If the agency states its intention to hold a public hearing on the subject of the request, it shall proceed according to sections 14.05 to 14.28. The chief administrative law judge shall prescribe by rule the form for all petitions under this section and may prescribe further procedures for their submission, consideration, and disposition.” [Emphasis added.]

IV. Explanation of Need for Additional Rules to Protect Minnesota’s “Native Rough Fish”

A. “Native rough fish” are not adequately defined – and protected - by law.

“Rough fish” are defined by Minnesota Statute 97A.015:

“Subd. 43. Rough fish. “Rough fish” means carp, buffalo, sucker, sheepshead, bowfin, gar, goldeye, and bullhead, except for any fish species listed as endangered, threatened, or of special concern in Minnesota Rules, chapter 6134.”

This statute’s deficiencies are:

1. It includes **non-native** carp species as “rough fish.”
2. It does not include taxonomic names, thereby creating vagueness in regulatory initiatives. For example, mooneye (*H. tergisus*) is not listed in the statute or the rules. It is unclear whether the common names apply to family, genus, or species.
3. It exempts fish listed by the MN DNR as “endangered”, “threatened”, or “special concern.” Minnesota statute 84.0895 protects only “endangered” species from a “take.” No “rough fish” are listed as “endangered.”

Minn. Stat. 84.0895 does not prevent a “take” of state-listed “threatened” species [including the “rough fish” **black buffalo** (*Ictiobus niger*)] nor does the statute prevent a “take” of state-listed “special concern” species [including the “rough fish”: **blue sucker** (*Cycleptus elongatus*)] and **black redhorse** (*Moxostoma duquesnei*)

Minn. Stat. 97C.805, Subd. 4, allows **unlimited take** of rough fish, while netting lake whitefish and ciscoes.

B. The 2021 Minnesota Legislature did not adequately protect native rough fish.

The 2021 Minnesota Legislature passed a law amending a blanket permit exemption for all rough fishing contests. Now, only rough fishing contests, “... with a hook and line” are exempt from permit requirements. (First Special Session, Chapter 6, Article 2, Section 72.) However, the DNR has not established limits.

The 2021 Minnesota Legislature passed a law requiring the DNR to “... annually establish daily and possession limits for gar under section 84.027, subdivision 13, paragraph (b).” (First Special Session, Chapter 6, Article 2, Section 74.) However, to date, the daily and possession limits have not been established for either long-nosed gar (*Lepisosteus osseus*) or short-nosed gar (*Lepisosteus platostomus*).

C. The 2022 Minnesota Fishing Regulations have a **continuous season, with no possession limit** for the following native “rough fish” in inland and border waters: “buffalo, sucker, freshwater drum (sheepshead), bowfin (dogfish), gar, goldeye, and bullhead.” The only exceptions are for archery, spearing, harpooning, dip netting, and seining, where the limit is 100 in possession for bullheads and 50 in possession for sucker and redhorse.

D. Minnesota has six species of native redhorse, members of the sucker family, Catostomidae. Only one, the **black redhorse** (*Moxostoma dequensi*), is “listed” – and only as “special concern.” As explained above, the black redhorse receives no legal protection. Furthermore, the 2022 Minnesota Fishing Regulations allow a “continuous” season, with no “possession limit” for all species of redhorse, except the possession limit is 50, when taken by “... any combination of archery, spearing, harpooning, dip netting or seining equipment...”

Redhorse, Black	<i>Moxostoma duquesnei</i>
Redhorse, Golden	<i>Moxostoma erythrurum</i>
Redhorse, Greater	<i>Moxostoma valenciensesi</i>
Redhorse, River	<i>Moxostoma carinatum</i>
Redhorse, Shorthead	<i>Moxostoma macrolepidotum</i>
Redhorse, Silver	<i>Moxostoma anisrum</i>

E. **The 2022 Minnesota Legislature failed to adopt legislation to adequately protect rough fish.**

At the close of the regular legislative session, a Conference Committee Report on SF 4062 agreed to the following language: “During fiscal year 2023, the commissioner of natural resources must enhance the Department of Natural Resources' management of the state's rough fish, including instituting bag limits and studying rough fish population dynamics, habits, and habitats in major rivers.” SF 4062 did not pass before the end of the regular legislative session.

F. **“Native rough fish” are not adequately managed and protected, in practice.**

The following findings are applicable to Minnesota’s native rough fish.

“(1) native species deliver critical ecosystem services; (2) **little demonstration that native fish removals deliver intended benefits**; (3) many native fishes are long-lived and **vulnerable to overfishing and decline**; and (4) fisher values and demographics shifting towards native fish conservation. Overall, **existing native fish policies are unacceptable** and run counter to the public trust doctrine where government agencies manage natural resources for public use.” [Emphasis added.] (Rypel et al 2021)

Native rough fish have experienced range contractions across Minnesota due to dam construction. Blue sucker (*C. elongatus*) and mooneye (*H. tergisus*) were extirpated above all dams

assessed by Aadland (2015). Longnose (*L. osseus*) and shortnose gar (*L. platostomus*) were absent above 73% of dams (Aadland 2015). Minnesota has over 1,150 dams (https://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html) suggesting the range of native rough fish has been severely impacted. Lake rehabilitation projects, such as longnose sucker (*Catostomus catostomus*) removals, have further reduced the range and abundance of native rough fish. At one time, the Minnesota DNR fisheries maintained a unit dedicated to removing rough fish from lakes and installing barriers to rough fish migration (Hoffbeck 2001). Management actions, intended to reduce or eliminate suckers, perpetuate the belief these native rough fish are detrimental to other recreational fisheries. (Cooke et al 2005).

Members of the sucker family (Catostomidae) are the most numerous and diverse group of native rough fish in Minnesota. “Several factors have retarded sucker conservation including widespread inabilities of field workers to distinguish some species, lack of basic natural history and ecological knowledge of life history, and the misconception that suckers are tolerant of degraded conditions and are of little social or ecological value.” (Cooke et al 2005) These observations apply to Minnesota as well. Native rough fish collection data is often recorded at the genus or family level, which makes species specific population assessments impossible.

Furthermore, the Minnesota DNR has not published any population trend assessments of native rough fish. In Minnesota, local extinctions or extirpations are the first evidence of declining native rough fish populations. A 2007/2008 fish survey of the Upper Mississippi River collected four bigmouth buffalo (*Ictiobus cyprinellus*), three greater redhorse (*M. valenciennesi*) and seven bowfin (*Amia Calva*). The report notes that all three species were absent from sample stations where they had been collected previously. Since 2009, Mississippi River fish sampling conducted by the Little Falls Fisheries office have only recorded collections of game fish, making detection of additional extirpations impossible.

The Minnesota DNR permits commercial harvest of native rough fish. The inland commercial fishing industry is often cited as a stakeholder in rough fish populations. Clearly, commercial fishing is reliant on sustainable fisheries. However, the Minnesota DNR does not collect sufficient data to determine if commercial rough fish harvest is sustainable. Harvest is reported by a mix of categories and species. All species of buffalo are reported as “buffalofish”. The reported data is presented as “pounds of fish harvested”. Because the fishing effort and total number of fish captured are not reported, it is impossible to calculate basic fisheries statistics. The most recent inland commercial fishing data is from fiscal year 2016 because the 2017 to 2021 data has not been entered yet (Sean Sisler, personal communication). In FY 2016, inland commercial fishing removed 1,018,258 pounds of native rough fish valued at \$285,427. The harvest was dominated by “buffalofish”, which accounted for 889,085 lbs. Only 3,785 lbs. of bowfin and 5,752 lbs. of sucker were commercially harvested. No gar, redhorse, mooneye or goldeye were taken during the FY2016 inland commercial season.

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Other states and provinces have documented declines and extirpations of native rough fish. Michigan estimates that black redhorse (*M. duquesnei*) occurrences have declined 50% compared to historic records. Ontario and Quebec report river redhorse (*M. carinatum*) are extirpated from at least 3 rivers. Spotted suckers are declining due to increased turbidity. (COSEWIC 2014). Saskatchewan documented local extinctions and declining abundance of bigmouth buffalo (*I. cyprinellus*) associated with dam construction. Bigmouth buffalo (*I. cyprinellus*) declines have been documented in North Dakota (Lackmann et al 2021) and the Mississippi and Illinois Rivers (Solomon et al. 2016). Longnose gar (*L. osseus*) and shortnose gar (*L. platostomus*) occur in only 1% and 2% of Minnesota lakes surveyed (Bacigalupi et al. 2021).

	Wisconsin	Illinois	Iowa	South Dakota	North Dakota	Michigan	Canada
Longnose Sucker		Threatened		Threatened			
Goldeye	Endangered						
Mooneye						Threatened	
River Redhorse	Threatened	Threatened				Threatened	Special Concern
Greater Redhorse		Endangered					
Black Redhorse	Endangered		Threatened			Special Concern	Threatened
Blue Sucker	Threatened				CP1		
Burbot			Threatened		CP2		
Black Buffalo	Threatened						

Table 1 Conservation status of selected Minnesota Fish with no possession limits.

Native rough fish are known to be intolerant of pollution. Many sources cite habitat impairment, water quality impairment and habitat fragmentation as reasons for declines in native rough fish populations. (Aadland 2015; Derosier, et al. 2015; Reid 2006; Cooke et al 2005; and Carlson, et al. 2021.)

Minnesota co-manages border waters with surrounding states. However, Minnesota border waters regulations currently allow the harvest of three species of native rough fish that are protected by Wisconsin. Minnesota allows unlimited harvest of goldeye (*H. alosoides*) from border waters where they are considered endangered and vulnerable to fishing pressure by

Wisconsin. (<https://dnr.wisconsin.gov/sites/default/files/topic/NHI/NHIWorkingList.pdf>). Wisconsin lists blue sucker (*C. elongatus*) and river herring (*M. carinatum*) as threatened and prohibits their take or possession anywhere, including the St. Croix and Mississippi Rivers. (<https://widnr.widen.net/s/xvldvfnblh/fishregselectronic2122>) As mentioned previously, Minnesota has a continuous season with no limit for either species, except for archery, spearing, harpooning, dip netting, and seining, where the limit 50 in possession for sucker and herring.

Species of native rough fish are long lived, putting them at risk of over exploitation. The bigmouth buffalo (*I. cyprinellus*) is the longest living freshwater bony fish in the world, with validated ages of 112 years. (Lackmann, et al. 2019). Other species are also long lived with many species (smallmouth buffalo, black buffalo, quillback, freshwater drum, blue sucker) living over 40 years (Snow, et al. 2020; Parker 1987; Radford, et al. 2021; Davis-Foust, et al. 2009; and Lackmann, et al. 2019). Patrick et al (2010) identified life history attributes of fish which cause vulnerability to overfishing. Maximum age over 30 years, low natural mortality and infrequent recruitment raise the risk of overfishing. The bigmouth buffalo is an extreme example of these attributes (Lackmann, et al 2019) but other native rough fish also meet these criteria.

Native rough fish must be provided a safe operating space, which allows native species to fulfill their ecological roles. Carpenter, et al. (2017) define the Safe Operating Space (SOS) of a recreational fishery as, “The multidimensional region defined by levels of harvest, angler effort, habitat, predation and other factors in which the fishery is sustainable into the future.”

Radomski (2003) noted that, “Recreational angling was assumed to be self-regulating, in that fish populations would not be driven to collapse because anglers would stop fishing depressed populations or shift their effort to populations with higher catch rates.”

Minnesota recreational harvest is controlled with closed seasons, gear type restrictions, and creel limits. In 2001 a review of Minnesota fishing regulations noted, “creel limits are ubiquitous across North America and they have been **generally set arbitrarily with little biological justification**.” (Radomski, et al. 2001). The rationale for Minnesota’s possession limits was not documented when they were created (Cooke, et al. 2001).

Cook, et al. (2001) found that existing creel limits in Minnesota are ineffective in regulating harvest and create unrealistic expectations for anglers. The angling limit for native rough fish, currently set as “unlimited”, create the expectation that native fish are inexhaustible. The daily bowfishing creel limit is set at 50 each for “sucker and herring”, 100 for bullhead, and unlimited for all other rough fish. A Safe Operating Space, as described by Carpenter et al, will require low creel limits as well as seasonal and gear restrictions. Reserves or sanctuaries are another way managers can limit harvest and maintain an SOS (Carpenter et al 2017).

Research shows that recreational fisheries are **not self-regulating** (Post 2002; Post, et al. 2012; Hansen, et al. 2005; Hunt, et al. 2011; and Embke, et al. 2019). Anglers and archers are able to locate and target aggregations of fish to maintain catch rates even as populations decline.

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This effect, known as hyperstability, causes increasing per capita mortality as the species declines in abundance. Hyperstability has been demonstrated experimentally (Dassow, et al. 2020) and empirically (Hansen, et al. 2005) in recreational fisheries. Active harvest methods which target concentrated spawning fish at night are 200 times more effective than angling (Hansen, et al. 2005). Although the study evaluated catchability of walleyes (*Sander vitreous*), the conclusions are applicable to night bowfishing as well. The authors concluded that management was necessary for such an efficient and not self-regulating fishery. Hunt, et al. (2011) calculated that hyperstable catch rates resulted in regional depletion of fish stocks. However, catch rates observed by the MN DNR and catch hyperstability for active fishing gears (Hansen, et al. 2005) were ten times higher than those considered by Hunt, et al. (2011). Very high and very stable catch rates are very likely to result in collapsed populations (Hunt 2011). Scarnecchia and Schooley (2020) suggested that some long-lived species, such as (*I. cyprinellus*) may be unable to support bowfishing harvest at all.

Furthermore, Minnesota’s possession limits are vague to the point of being unenforceable. Page 67 of the Minnesota Fishing Regulations (2021) gives the bowfishing limit of “sucker and redhorse” as “50 each”. Suckers and redhorse could be regulated as two categories, with a combined limit of 100. Or, as 11 individual species with a combined limit of 550. Repeated inquiry has been unable to determine which, if any, of these interpretations are correct. Neither state statute nor rules identifies rough fish with taxonomic names.

In 2009 Minnesota legalized the use of artificial lights for night bowfishing - a practice which greatly increases the harvest rate of bowfishing. In 2011, an early bowfishing season was established. The early bowfishing season now starts at the beginning of March. This allows bowfishing to target highly concentrated fish, at night, before and during the spawning season (Exhibit 1, 2 and 7).

Recreational fishing can benefit aquatic conservation because participants have a vested interest in preserving or enhancing the resources they depend on (Cowx 2010). The growing popularity of bowfishing has led to advances in equipment, tournaments, and organizations (Scarnecchia and Schooley 2020). The popularity of bowfishing is justification to reclassify underappreciated native fish as sport fish (Scarnecchia et al 2021). Furthermore, classifying native species as sport fish could provide funding for management and research from the Sport Fish Restoration Program (Scarnecchia et al 2021). However, until such management and research are undertaken the conservation benefits from increased recreational fishing will remain negligible.

The MN DNR made no changes to the possession limits of any native fish affected by the expanded seasons or legalized gear. Since then, concerns have been raised about the effects of liberalized bowfishing on long lived native fish species (Scarnecchia and Schooley 2020; and Scarnecchia. et al. 2021, Rypel et al 2021).

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In 2019, the Minnesota DNR’s Lake City office surveyed two bowfishing tournaments conducted on the Mississippi River (exhibit 5). The first tournament harvested at least 35,000 lbs. of fish in one night. Minnesota DNR staff determined that 5,001 (76%) of the fish harvested were native species. The smaller tournament harvested 952 native fish and 110 invasive common carp. In both tournaments, teams were able to harvest 30 or more fish per hour. All fish from both tournaments were disposed of in agricultural fields. Land of Lakes Bowfishing and other tournament organizers advertise “Free Disposal”. (Exhibit 4 and 5)

Finally, the following species are listed by the DNR in the Minnesota Wildlife Action Plan (2015-2025), Appendix C, as a “Species in Greatest Conservation Need”, a designation for which provides **no legal protection**:

1. Longnose Sucker (*Catostomus catostomus*) – not listed as endangered, threatened, or special concern;
2. Blue Sucker (*Cycleptus elongatus*) – also listed as “special concern” under Minnesota endangered species rule;
3. Black Buffalo (*Ictiobus niger*) - also listed as “threatened” under the Minnesota endangered species rule; and
4. Black Redhorse (*Moxostoma duquesnei*) – also listed as “special concern” under Minnesota endangered species rule.

Species in greatest conservation need are susceptible to harvest. (Exhibit 5,6 and 7)

G. “Native rough fish” are an essential part of Minnesota’s aquatic ecosystem.

The Minnesota DNR fish-based indices of biological integrity support the value of native rough fish in Minnesota. In developing a fish-based index of biological integrity, the Minnesota DNR developed standardized metrics that correlated with environmental stressors. Native species richness was correlated with high quality lakes. The presence of species like brown bullhead (*A. nebulosus*) and bowfin (*A. calva*) was indicative of high-quality lake habitat. (Bacigalupi, et al. 2021). The Minnesota Pollution Control Agency considers nine species of rough fish as sensitive or intolerant to disturbance (MPCA 2014).

Native rough fish play a critical role in Minnesota’s environment. They are host to threatened and endangered mussels (Aadland 2015; and Sietman, et al. 2017). Furthermore, loss of host fish is a leading contributor to mussel extirpations (Bogan 1993). Mooneye and goldeye are the only known hosts of the federally endangered spectaclecase mussel (*Cumberlandia monodonta*) (Sietman, et al. 2017).

Native rough fish play a role in nutrient cycling and increase the productivity of streams through spawning migrations and activity (Childress and McIntyre 2015).

Perceived negative effects of native rough fish are unsubstantiated (Holey, et al. 1979; and Rypel, et al. 2021). For example, a study of walleye (*Sander vitreum*) egg predation found

individual yellow perch (*Perca flavescens*) consumed nine times more eggs than white suckers (*C. commersonii*). (Roseman, et al. 2006) Studies in Minnesota have failed to demonstrate any detrimental effects from any native rough fish. (Olson 1963; DNR Investigational Report 69; and Holey 1979).

Native rough fish compete with, or prey on, aquatic invasive species. Bartsch et al (2005) showed native fish were able to reduce zebra mussel (*Dreissena polymorpha*) densities up to 86%. Redhorse species (*Moxostoma sp.*), quillback carpsucker (*Carpionodes cyprinus*) and freshwater drum (*Aplodinotus grunniens*) were among the native rough fish documented consuming zebra mussels.

H. Conclusion.

Native rough fish must be provided a safe operating space which allows species to fulfill their ecological roles. Carpenter, et al. (2017) define the Safe Operating Space (SOS) of a recreational fishery as, “The multidimensional region defined by levels of harvest, angler effort, habitat, predation and other factors in which the fishery is sustainable into the future.” The Minnesota DNR must amend its rules, Chapters 6266 and 6266, pertaining to possession limits, closed season and allowable gear types, such that populations of native rough fish are sustainable in perpetuity.

When managing Minnesota’s native rough fish, the Minnesota DNR should be guided by the precautionary principle. The 1992 Rio Declaration on Environment and Development included a widely accepted statement incorporating the fundamental idea of precaution (RioDEC, 1992):

“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

See Appendix A for references cited.

V. Documents Incorporated by Reference

A. This Petition **incorporates by reference all documents in Minnesota DNR’s possession or control** evidencing that inadequate protection of Minnesota’s native “rough fish”, including but not limited to:

1. The DNR fish record database, which either shows: (a) there are more declines/extirpations; or (b) there is insufficient data to determine population trends. Either way, it is the largest database of fish collections.

<https://www.dnr.state.mn.us/maps/fom/datasource.html>

2. DNR lake management plans. For example, Wilson Lake that was previously used to study white sucker removals as a method to enhance sport fishing. The current plan states,

"Fish removal was also completed in the past in an attempt to manipulate to fish community. These efforts were part of a study researching ways to increase yield of gamefish by removing “undesirable” species. Operations removed about 15,500 pounds of White Sucker in 1966. Results of the study helped inform the current understanding that fish communities are regulated by the carrying capacity of the available habitat of the lake. Intensive efforts to manipulate the community structure did not have a long-term impact on predator and prey dynamics. In addition, species once considered “undesirable” are now known to be an important part of the forage base in many lakes.” (Exhibit 1.)

B. This Petition incorporates by reference all documents in Minnesota Pollution Control Agency’s (MPCA) possession or control evidencing that rough fish are especially susceptible to pollutants, including, but not limited to the document entitled:

MPCA (2014) Development of a fish-based Index of Biological Integrity for assessment of Minnesota’s rivers and streams. Document number wq-bsm2-03. Minnesota Pollution Control Agency, Environmental Analysis and Outcomes Division, St. Paul, MN.

<https://www.pca.state.mn.us/sites/default/files/wq-bsm2-03.pdf>

C. This Petition incorporates by reference all documents in the U.S. Fish and Wildlife Service’s possession or control evidencing that rough fish are inadequately protected.

VI. Statutory Authority to Adopt Rules Protecting Native “Rough Fish”

A. Minn. Stat. 97C.045 states:

“97C.045 REMOVING ROUGH FISH FROM BOUNDARY WATERS.

The commissioner may enter into agreements with North Dakota, South Dakota, Wisconsin, and Iowa, relating to the removal of rough fish in boundary waters. The agreements may include:

- (1) contracting to remove rough fish;
- (2) inspection of the work;
- (3) the division of proceeds; and
- (4) regulating the taking of rough fish.” [Emphasis added.]

B. Minn. Stat. 97C.376 states:

“Subd. 5. Returning rough fish to waters. Rough fish taken by bow fishing shall not be returned to the water and rough fish may not be left on the banks of any water of the state.”

C. Minn. Stat. 97C.395 states:

“Subd. 2. **Continuous season for certain species.** For sunfish, white crappie, black crappie, yellow perch, catfish, rock bass, white bass, yellow bass, burbot, cisco (tullibee), lake whitefish, and **rough fish, the open season is continuous.**”

[Please note: this subdivision does not prevent limits during the “continuous” “open season” – per Minn. Stat. 97C.401 stated below.]

D. Minnesota Statute 97C.401 states:

“97C.401 LIMITS.

Subdivision 1. **Duty to prescribe limits.** Unless otherwise provided in this chapter, the commissioner **shall, by rule**, prescribe the limits on the number of each species of fish that may be taken in one day and the number that may be possessed.” [Emphasis added.]

E. Minnesota Statute 97C.325 grants the DNR the authority to adopt a rule protecting native “rough fish.” This statute is quoted in full:

“RESTRICTIONS ON TAKING FISH.

- (a) Except as specifically authorized, a person may not take fish with:
- (1) explosives, chemicals, drugs, poisons, lime, medicated bait, fish berries, or other similar substances;
 - (2) substances or devices that kill, stun, or affect the nervous system of fish;
 - (3) nets, traps, trot lines, or snares; or
 - (4) spring devices that impale, hook, or capture fish.
- (b) If a person possesses a substance or device listed in paragraph (a) on waters, shores, or islands, it is presumptive evidence that the person is in violation of this section.
- (c) The commissioner may, by rule, allow the use of a nonmotorized device with a recoil mechanism to take fish through the ice.
- (d) **To protect water quality or improve habitat for fish or wildlife**, the commissioner may **prescribe restrictions** on fishing seasons, limits, or methods on specific bodies of water.” [Emphasis added.]

F. Minn. Stat. 97C.811 states in part:

“Subd. 3. Regulation. The commissioner shall, by rule, regulate the taking, possession, transportation, and sale of commercial fish, and the licensing of commercial fishing operators in inland waters.”

Subd. 2 states: “For purposes of this section and section 97A.475, subdivision 30, "commercial fish" are carp; bowfin; burbot; cisco; goldeye; rainbow smelt; black bullhead, brown bullhead, and yellow bullhead; lake whitefish; members of the sucker family, Catostomidae, including white sucker, redhorse, bigmouth buffalo, and smallmouth buffalo; members of the drum family, Sciaenidae, including sheepshead; and members of the gar family, Lepisosteidae. “

G. Minnesota Statute 97A.045 grants the Minnesota DNR the authority – and imposes a **legal duty** – to protect native “rough fish.” Minnesota Statute 97A.045 states:

“COMMISSIONER; GENERAL POWERS AND DUTIES. Subdivision 1. Duties; generally. (a) **The commissioner shall do all things the commissioner determines are necessary to preserve, protect, and propagate desirable species of wild animals.** The commissioner shall make special provisions for the management of fish and wildlife to ensure recreational opportunities for anglers and hunters ...” [Emphasis added.]

[Note: Minn. Stat. 97A.015, Subd. 55 defines “wild animals”: "Wild animals" means all creatures, whether dead or alive, not human, wild by nature, endowed with sensation and power of voluntary motion, and includes mammals, birds, **fish**, amphibians, reptiles, crustaceans, and mollusks.”] [Emphasis added.]

H. Minn. Stat. 84.0895, Subd. 5 empowers the DNR to adopt rules to protect native rough fish that are “threatened” or “endangered.”

“Subd. 5. Management. (a) Notwithstanding any other law, the commissioner may undertake management programs, issue orders, and **adopt rules necessary to bring a resident species of wild animal or plant that has been designated as threatened or endangered** to a point at which it is no longer threatened or endangered. (b) Subject to the provisions of subdivision 6, management programs for endangered or threatened species include research, census, law enforcement, habitat acquisition, habitat maintenance, propagation, live trapping, transplantation, and **regulated taking.**” [Emphasis added.]

Although the DNR has listed the black buffalo (*Ictiobus niger*) as “threatened”, and the blue sucker (*Cycleptus elongatus*) and black redhorse (*Moxostoma duquesnei*) as “special concern”, this law offers no effective protection from overexploitation.

I. Minn. Stat. 97A.045, Subd. 2 states:

“Subd. 2. **Power to protect wild animals.** (a) The commissioner may protect a species of wild animal in addition to the protection provided by the game and fish laws, by further **limiting or closing seasons or areas of the state**, or by reducing limits in areas of the state, if the commissioner determines the action is necessary **to prevent unnecessary depletion** or extinction, or to promote the propagation and reproduction of the animal.

“(b) The commissioner may protect a species of wild animal in the state **by emergency rule adopted under section 84.027**, subdivision 13, by prohibiting or allowing taking of the animal **whether or not the animal is protected under the game and fish laws**. The commissioner must make findings of the necessity of a rule authorized under this paragraph and may authorize taking by special permit with or without fee under conditions prescribed in the rule by the commissioner.”

J. Protecting native “rough fish” would bring Minnesota into compliance with the policy and requirements of the **Minnesota Environmental Policy Act (“MEPA”)**, enacted in 1973 as Chapter 116D. Specifically, Minn. Stat. 116D.02, states:

“116D.02 DECLARATION OF STATE ENVIRONMENTAL POLICY.

“Subdivision 1. Policy.

The legislature, recognizing the profound impact of human activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high density urbanization, industrial expansion, resources exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of human beings, declares that **it is the continuing policy of the state government, in cooperation** with federal and local governments, and other **concerned public and private organizations, to use all practicable means and measures**, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which human beings and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of the state's people.

“Subd. 2. State responsibilities. In order to carry out the policy set forth in Laws 1973, chapter 412, **it is the continuing responsibility of the state government to use all practicable means**, consistent with other essential considerations of state policy, to improve and coordinate state plans, functions, programs and resources to the end that the state may:

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all people of the state safe, healthful, productive, and aesthetically and culturally pleasing surroundings; ...
- (7) define, designate, and protect environmentally sensitive areas; ...
- (10) preserve important existing natural habitats of rare and endangered species of plants, wildlife, and fish, and provide for the wise use of our remaining areas of natural habitation, including **necessary protective measures** where appropriate; ...
- (16) reduce the deleterious impact on air and water quality from all sources ... “

Furthermore, the following MEPA section **requires** the protection of native rough fish. Minn. Stat. 116D.04, Subdivision 6, states:

“No state action significantly affecting the quality of the environment shall be allowed, nor shall any permit for natural resource management and development be granted, where such action or permit **has caused or is likely to cause** pollution, impairment, or **destruction** of the air, water, land, or other natural resources located within the state, **so long as there is a feasible and prudent alternative** consistent with the reasonable requirements of the public health, safety and welfare and the state’s **paramount concern** for the **protection** of air, water, land, and other **natural resources** from pollution, impairment, or destruction. Economic considerations alone shall not justify such conduct.” [Emphasis added.]

As previously stated, “feasible and prudent alternatives” already exist: reasonable fishing limits. It is the state’s “paramount concern” to protect Minnesota’s natural resources from further degradation.

K. The DNR previously acknowledged its power to adopt rules publishing a summary of the rules in the “Minnesota Fishing Regulations” (2022).

L. Minnesota Statute 97C.065 prohibits deposition of dead fish in state waters:

“POLLUTANTS IN WATERS. A person may not dispose of **any substance** in state waters, or allow any substance to enter state waters, **in quantities that injure or are detrimental to the propagation of wild animals or taint the flesh of wild animals**. Each day of violation is a separate offense. An occurring or continuous violation is a public nuisance. An action may be brought by the attorney general to enjoin and abate nuisance upon request of the commissioner. This section does not apply to chemicals used for pest control for the general welfare of the public.” [Emphasis added.]

VII. The State of Minnesota Constitution Requires the Protection of Native “Rough Fish”

As stated above in Section “I – Mission”, the Ikes recognize and supports the Minnesota Constitution, Article XIII, Section 12, which states: “Hunting and fishing and the taking of game and fish are a valued part of our heritage that shall be forever preserved for the people and **shall be managed by law and regulation for the public good.**” [Emphasis added.] The public’s right to hunt and fish will be continuously impaired by the unregulated fishing of native rough fish.

This constitutional right and responsibility are emphasized in *State v. Colosimo* 669 N.W. 2nd 1 (Minn. 2003). Although the case pertains to the validity of a search during a game

law enforcement activity, the Minnesota Supreme Court emphasized the importance of effective regulations:

“The important role fishing plays in the lives of many Minnesotans and the corresponding **need for effective regulation to protect the viability of our state’s fish and game resources** recently inspired an amendment to the Minnesota Constitution. The legislature proposed the amendment in the Spring of 1998. Act of April 20, 1998, ch. 392, § 1, 1998 Minn. Laws 1228. The proposed amendment was then submitted to the citizens of Minnesota, who adopted it in the 1998 general election. The amendment provides, ‘Hunting and fishing and the taking of game and fish are a valued part of our heritage that shall be forever preserved for the people and shall be managed by law and regulation for the public good.’ Minn. Const. art. XIII, sec. 12.” (Colosimo, page 6.) [Emphasis added.]

This constitutional law is also cited in Save Mille Lacs Sportsfishing, Inc. v. Minnesota Department of Natural Resources 859 N.W.2d 845 (Minn. App. 2015), a lawsuit challenging the DNR rule-making process. The Court of Appeals stated, “Hunting and fishing and the taking of game and fish are a valued part of our heritage that shall be forever preserved for the people and shall be managed by law and regulation for the public good.” Minn. Const. art. XIII, § 12. The Preservation Provision recognizes the “**need for effective regulation to protect the viability of our state’s fish and game resources.**” *State v. Colosimo*, 669 N.W.2d 1, 6 (Minn. 2003).” (Save Mille Lacs, page 6.)

In summary, the Minnesota Constitution, Article XIII, Section 12, supports the necessity of rules to protect the viability of our native “rough fish” resources.

VIII. Public Trust Doctrine

Minnesota Statute 97A.025 states, “OWNERSHIP OF WILD ANIMALS. The ownership of wild animals of the state is in the state, in its sovereign capacity for the benefit of all the people of the state. A person may not acquire a property right in wild animals, or destroy them, unless authorized under the game and fish laws or sections 17.47 to 17.498.”

In other words, the state of Minnesota owns wild animals **in trust** for the benefit of **all** Minnesotans.” An article in Science magazine argues for applying the public trust doctrine to wildlife, including wolves. (Bruskotter, Jeremy T., Sherry A. Enzler, and Adrian Treves. 2011. “Rescuing Wolves from Politics; Wildlife as Public Trust Resource.” Science, Vol. 333, pp. 1828-1839.)

Minnesota case law has applied the public-trust doctrine to confirm that the state is responsible for managing navigable public waters as a trustee for public good. Save Mille Lacs Sportsfishing, Inc. v. Minnesota Department of Natural Resources 859 N.W.2d 845 (Minn. App. 2015).

Most recently, the Minnesota Supreme Court, in White Bear Lake Restoration Association v. Minnesota Department of Natural Resources 947 N.W. 2d 373 (Minn. 2020), the court stated:

“Homeowners does not allege that the DNR has violated its duty as trustee DNR has violated its duty as trustee to protect public use from ‘**private interruption and encroachment**,’ which is the core rationale of the doctrine. *See Ill. Cent.*, 146 U.S. at 436. Nor does it allege that water has been diverted outside the state. Instead, Homeowners alleges that the DNR issued groundwater permits, primarily to municipalities, and thereby violated its duty as trustee. We have found no precedent— and, at oral argument, counsel for Homeowners could cite none— extending the public trust doctrine in this way.

‘We are generally reluctant to extend the common law unless there is a compelling reason to do so. *See Cent. Hous. Assocs., LP v. Olson*, 929 N.W.2d 398, 408 (Minn. 2019). And we tend to proceed cautiously when a subject is **extensively regulated** by statutes and rules. Here, the field of public water use is heavily regulated by the State. The Legislature has decided that “[t]o conserve and use water resources of the state in the best interests of its people, and to promote the public health, safety, and welfare, it is the policy of the state that: (1) subject to existing rights, public waters are subject to the control of the state; [and] (2) the state, to the extent provided by law, shall control the appropriation and use of waters of the state.” Minn. Stat. § 103A.201, subd. 1 (2018).” [Emphasis added.]

The facts in this Petition are different than the reasons why the Supreme Court ruled against extension of the public trust doctrine in the White Bear Lake case:

1. As an example, fisher people, by their “private” exploitation of native rough fish, encroach on the public use and enjoyment of public waters by diminishing the likelihood of seeing, catching, photographing, and releasing the native fish.
2. Fishing for “rough fish” is NOT “extensively regulated” in Minnesota; most rough fish have an open, continuous season with no limits.

In short, adopting ecologically sustainable rough fish regulations will comply with the Minnesota DNR’s public trust responsibilities to protect Minnesotan’s public use and enjoyment of wildlife and public waters from the private interruption and encroachment by exploitation and wanton waste.

IX. Applicability of Minn. Stat. 14.127 Request to Governor Walz for Waiver [per Minnesota Statute 14.127, Subd. 4(e)]

Minnesota Statute 14.127 states, “An agency must determine if the cost of complying with a proposed rule in the first year after the rule takes effect will exceed \$25,000 for: (1) any one business that

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has less than 50 full-time employees; ...”

The proposed rules in this Petition are very limited in scope, affecting only angling for “rough fish”, a relatively small portion of the total fishing economy. Therefore, requirements of Minn. Stat. 14.127 are very unlikely to apply.

In the unlikely event that a business (with less than 50 employees) would incur over \$25,000 in expenses within the first year after the rule was adopted, the business can file a statement claiming a temporary exemption from the rule until the legislature approves the rule. (Minn. Stat. 14.127, Subd. 3.)

Furthermore, Governor Walz has the option of exempting the rule from the requirements of Minn. Stat. 14.127. [Minn. Stat. 12.127, Subd. 4(e).] The Ikes request that this proposed rule be exempt from Minn. Stat. 14.127.

Summary

Now is the time to act. The science is indisputable; the overfishing of Minnesota’s native rough fish has significant adverse effects on the environment and human health.

Efforts to achieve voluntary compliance have fallen short. The State of Minnesota, via Minnesota Department of Natural Resources, has the legal authority – **and duty** - to enact regulations to protect Minnesota’s native rough fish from exploitation and extinction.

Regulations requiring harvest limits are the only feasible and prudent options. In this way, the fishing community can be positive role-models for present and future generations.

On behalf of the Minnesota Division, Izaak Walton League of Minnesota, I **thank** the Minnesota DNR in advance in anticipation of the adoption rules that will be a great step forward to protecting our native rough fish species.

/s/ John Rust

Dated: August 12, 2022

John Rust, President
Minnesota Division, Izaak Walton League of America

Please send reply to:

Thomas E. Casey
Attorney at Law
2854 Cambridge Lane
Mound, MN 55364
(952) 472-1099 (office)
tcasey@frontiernet.net

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Exhibits 1-10 below:

Exhibits

Exhibit 1



Image shared to Instagram, which shows and describes shooting spawning bigmouth buffalo in the head.

Exhibit 2



This photo shows at least 37 native fish, primarily redhorse species (*moxostoma*) taken from a pre-spawn aggregation.

Exhibit 3

NA-01570-01

Minnesota Department of Natural Resources
 LAKE MANAGEMENT PLAN

Region	Area (F215)	DOW Number	County	Lake Name	Acreage
2	Finland	38-0047-00	Lake	Wilson	650
Ecological Class: 5 Alternate Class: Littoral Acres: 240 Maximum Depth: 53 feet					
Long Range Goal:					
<ul style="list-style-type: none"> • Walleye: Gill net catch rate greater than 10 per net with at least 35% of the catch greater than 15 inches long. • Northern Pike: Gill net catch rate greater than 1.7 per net with fish over 30 inches long sampled. 					
Operational Plan:					
<ul style="list-style-type: none"> • Stocking: None • Surveys: Complete standard surveys in August on a six-year rotation with surveys in 2025 and 2031 using a minimum of nine gill nets. • Evaluation: Gill net data collected from regularly scheduled fisheries surveys will be used to measure the success of this plan and this plan will be revised no later than 2032. • Habitat: Minimize impacts to aquatic resources by providing recommendations during permit review. Prevent the introduction of invasive species by following <i>Fish & Wildlife Discipline Guidelines for Invasive Species Operational Order 113</i>. • Climate Change: Follow policies outlined in <i>Operational Order 131</i>. Use results from standard surveys to monitor climate influences on water temperature, dissolved oxygen, and potential species community shift. 					
Mid-Range Objective:					
<ul style="list-style-type: none"> • Educate private property owners of the importance of lake friendly development to ensure the ecological services provided by healthy riparian habitat are maintained. 					
Potential Plan:					
<ul style="list-style-type: none"> • Collect creel survey data, summer and/or winter, in conjunction with other popular lakes in the area. • Conduct a remote creel survey with trail cameras and/or comment boxes to monitor angling pressure from public access. Also collect data on angling pressure from private property with traditional mail, or mobile surveys. • Study growth potential of Walleye in this lake compared to other area lakes. 					
Primary Species Management		Secondary Species Management		Check the appropriate boxes below:	
Walleye		Northern Pike			
Area Supervisor's Signature		Date			
Regional Supervisor's Signature		Date		<input type="checkbox"/> BWCAW <input checked="" type="checkbox"/> Superior National Forest <input type="checkbox"/> 1837 Ceded Territory <input checked="" type="checkbox"/> 1854 Ceded Territory <input type="checkbox"/> Fond du Lac Indian Reservation <input type="checkbox"/> Chippewa National Forest <input type="checkbox"/> Leech Lake Indian Reservation USFS District: Tofte Date sent from DNR Area Fisheries to USFS District Ranger: Date sent from DNR Regional Fisheries to USFS Forest Supervisor:	
Prepared by: Kevin Mott Date of initial lake management plan: 5/5/1988 Dates of management plan revisions: 4/11/2003, 4/26/2012 See following pages for information on various surveys, past management, social considerations, present limiting factors, survey needs, land acquisition needed, habitat development and protection, commercial fisheries, stocking plans, other management tools, and evaluation plans.					

Wilson Lake Management plan, which concludes that formerly undesirable species are now known to be an important part of forage base in many lakes.

Exhibit 4 - Advertisement for bowfishing tournament.

Land of Lakes Tournament Series

Cleveland Shoot

5/7/22



- When:
- Registration 6:30pm-7:30pm
 - Launch at 8pm and Weigh-in at 6:30am
- Where:
- Registration at West Jefferson Landing
- Entry:
- 2-4 man teams, \$50 per shooter must have at least 1 LLBA member
- Format:
- Biggest two of all legal Species and total numbers of all legal species
 - Open to all lakes entirely within Le Sueur and Rice Counties
- Rules:
- Open to rivers inside county boundaries and Lakes entirely inside county boundaries
 - Must be in a boat when shooting fish (no shore shooting)
 - Must be on water accessed from a public boat ramp
 - Must follow all fishing and boating regulations
 - Fish disposal is provided
 - Lake Washington will be red zoned for the tournament

Bowfishing tournaments routinely advertise free disposal for harvested fish indicating organizers and participants do not value or use the harvested fish.

Exhibit 5 - DNR Power Point presentation

Emerging Issue: Bowfishing Tournaments in Minnesota

Neil Rude
Lake City Area Fisheries



2-4 Man Teams **2019** Free Fish Disposal
BOWFISHING ASSOCIATION OF AMERICA
WORLD CHAMPIONSHIP
MISSISSIPPI RIVER POOLS 3-9 - WINDOM, MN
SATURDAY, JUNE 29TH
TEAM ENTRY: \$250-\$50 ALL 4 BOWE PITS
10% EACH DIVISION OF \$400 WINDOM/250 20
CARP TROPHIES FOR DIVISIONS
Registration: 4:00pm-6:00pm
Orientation: 6:15pm
Launch: 6:45pm
Weigh-in: 8:00am
Tournament Director:
John Latta, Justin Wilke,
Matt Harris, Josh Ring

Bowfishing History

- Harvest of fish using bow and arrow
 - Ancient technique - daytime
 - Wading in shallows
 - Spawning fish



Bowfishing Technology

- Bowfishing from boats
 - Small boats with lanterns
 - Early 1900s
 - Jon boats into late 1900s
- New Technology
 - Shallow Drive boats
 - Airboats, Pusher Fans, Mud Motors
 - LED lighting
 - Precision Bows



Bowfishing Species Targeted

- ‘Rough fish’ is the target
 - Native and Non-Native

Subd. 43. **Rough fish.** "Rough fish" means **carp**, buffalo, sucker, sheepshead, bowfin, gar, goldeye, and bullhead except for any fish species listed as endangered, threatened, or of special concern in Minnesota Rules, chapter 6134.



Not a Sportfish

Bowfishing Groups and Associations

- Numerous associations and groups around the state
 - Increasing # of bowfishers
- Organized push for legalization of nighttime bowfishing and tournament exemptions (2009)
 - DNR roundtable and legislators



Bowfishing Tournaments

Fishing tournament regulations

Permit Requirements

Permits are issued to Minnesota residents only. Permit requirements and permit fees are shown, below:

- A person may conduct a contest without a permit provided any one of the following five criteria apply:
 1. There are a) 25 boats or less (or 150 participants or less for ice fishing contests or 100 participants for shore-based contests, b) entry fee is \$25 or less, **and** c) the contest is not limited to trout; OR
 2. The contest is not limited to specifically named waters, and the contest is not limited to trout; OR
 3. All the participants are 18 or younger; OR
 4. The contest is limited to rough fish; OR,
 5. The total prize value is \$500 or less

No Permit Required!



Bowfishing Tournaments

- NO DATA!
 - # of tournaments
 - Participants
 - Payouts
 - HARVEST
- Lake City Area Fisheries sought to gather data from bowfishing tournaments
 - Mississippi River



The photograph shows a group of people on a boat, handling a large quantity of harvested fish, likely carp, in a bucket. The scene is outdoors, with a body of water and trees in the background.

Bowfishing Tournament Monitoring



2-4 Man Teams **2019** Free Fish Disposal
BOWFISHING ASSOCIATION OF AMERICA
WORLD CHAMPIONSHIP
MISSISSIPPI RIVER POOLS 3-9 • WINONA, MN
SATURDAY, JUNE 29TH

TEAM ENTRY: \$175 EACH DIVISION OR BOTH NUMBERS/BIG 20 **\$250 \$50** ALL 4 SIDE POTS
LUNCHBOX CAR - SHORTHOSE CAR
BIG DOGFISH - BIG COMMON

CARP TROPHIES FOR DIVISIONS

Registration 4:00pm-6:00pm
Orientation 6:15pm
Launch 6:45pm
Weigh-in 8:00am

Tournament Directors:
John Laska, Justin Wilke,
Matt Harris, Josh Ring

National



2019 MINNESOTA BOWFISHING TOURNAMENT SERIES
2-3 MAN TEAMS
PAUL BUNYAN CLASSIC
August 10th 2019

SMALL 10 NUMBERS

3 Species Draw at Check in
Common - Bull - Sucker
Drum - Mooneye - Quillback
Dogfish - Gar

\$175/BURY
SIDEPOTS INCLUDED

SMALL COMMON
SMALL BUFF
BIG SHEEPSHEAD
SMALL MOONEYE

8:00 PM LAUNCH
8:30 AM WEIGH IN

CALL OR TEXT TO PRE-REGISTER 507-313-1804
LOCATION - WINONA, MN - PRAIRIE ISLAND SPILLWAY

Local

BAA World Championship



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BAA World Championship



- Two divisions (contests):
 - Big 20
 - Total numbers
 - \$175 or \$250/boat
- Side pots (biggest fish by weight)
 - Shortnose Gar
 - Longnose Gar
 - Bowfin/dogfish
 - Overall biggest fish



BAA World Championship: Weigh-In

- First Station - Big 20 and Side Pots
 - Each team’s 20 largest fish (+ side pot species)
 - Bulk weight of Big 20 – not sorted
 - DNR staff tallied species for 42 of 104 teams in Big 20
 - Extrapolated to full field to get overall number by species
 - Side pot fish individually weighed
 - BAA provided final spreadsheet to DNR



BAA World Championship: Weigh-In

- Second Station – Count only
 - Teams moved to the “count” station – if entered
 - Total count per boat + number at first station
 - DNR staff tallied species for 24 of 38 teams that had fish counted
 - Extrapolated to full field to get overall number by species
 - At least 15 boats just dumped fish without counting



BAA World Championship: Results

- “Big 20” (heaviest 20 fish)
 - 1st = 336 lbs (\$8,025)
 - 2nd = 312 lbs (\$3,210)
 - 3rd = 305 lbs (\$2,407)
 - 4th = 294 lbs (\$1,605)
 - 5th = 291 lbs (\$802)

Top 5 teams: avg weight/fish = 15.4 lbs



BAA World Championship: Results

- Heaviest fish (Bigmouth Buffalo) = 33.8 lbs
- Heaviest Shortnose Gar = 4.3 lbs
- Heaviest Longnose Gar = 15.1 lbs
- Heaviest Bowfin = 10.6 lbs
- Smallest Bowfin = 1.8 lbs



BAA World Championship: Results

- Total Numbers
 - 1st = 440 (\$3,712)
 - 2nd = 390 (\$1,856)
 - 3rd = 333 (\$1,113)
 - 4th = 328 (\$742)
- If they fished 10 hours
 - 33 to 44 fish/hour
 - One fish every 1.4 to 1.8 minutes



BAA World Championship: Results

- ~6,500 fish harvested
- Total weight between 35,000 - 40,000 lbs
 - ~4 lb average based on eye-test
 - Weight calculations from local tournament
- Common Carp, Longnose Gar, and Redhorse spp. most common
- > 75% Native Fish

Total Number of Fish Harvested		
Common Carp	1,549	23.6%
Longnose Gar	1,355	20.7%
Redhorse Spp.	956	14.6%
Carpiodes Spp.	655	10.0%
Freshwater Drum	594	9.1%
Bowfin	565	8.6%
Smallmouth Buffalo	370	5.6%
Bigmouth Buffalo	280	4.3%
Shortnose Gar	176	2.7%
Mooneye	48	0.7%
Grass Carp	1	0.0%
Black Buffalo	2	0.0%
Total	6,550	

Paul Bunyan Classic

2019 MINNESOTA BOWFISHING TOURNAMENT SERIES

2-5 MAN TEAMS

PAUL BUNYAN CLASSIC

August 10th 2019

Line CUTTER

SMALL 10 NUMBERS

3 Species Draw at Check in

Common - Buff - Sucker
 Drum - Mooneye - Quillback
 Dogfish - Gar

8:00 PM LAUNCH
 6:30 AM WEIGH IN

\$175/BURT
 SIDEPOTS INCLUDED

SMALL COMMON
 SMALL BUFF
 BIG SHEEPSHEAD
 SMALL MOONEYE

CALL OR TEXT TO PRE-REGISTER 507-313-1801
 LOCATION - WINDOR, MN - PRAIRIE ISLAND SPILLWAY

Paul Bunyan Classic: Weigh-In

- Only 9 teams registered – two did not weigh any fish
- DNR process similar to BAA World Championship
 - Species ID on 541 fish
 - Length measurements on 136 fish
 - Standard Weight for estimates of poundage
 - Total Harvest (hard count) = 1,062 fish

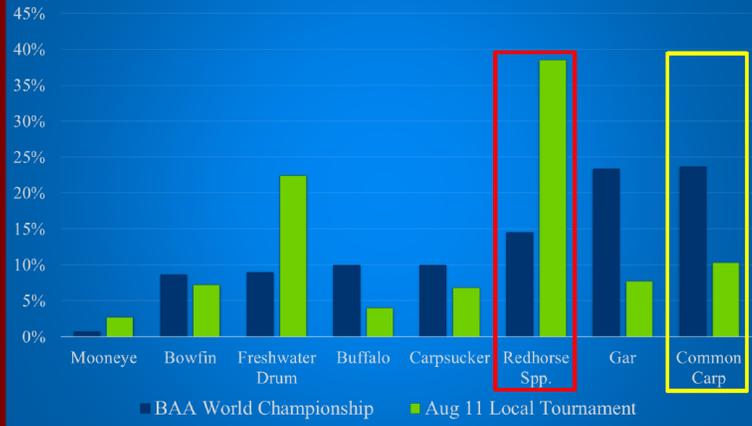


Paul Bunyan Classic: Results



Combined Tournament Harvest

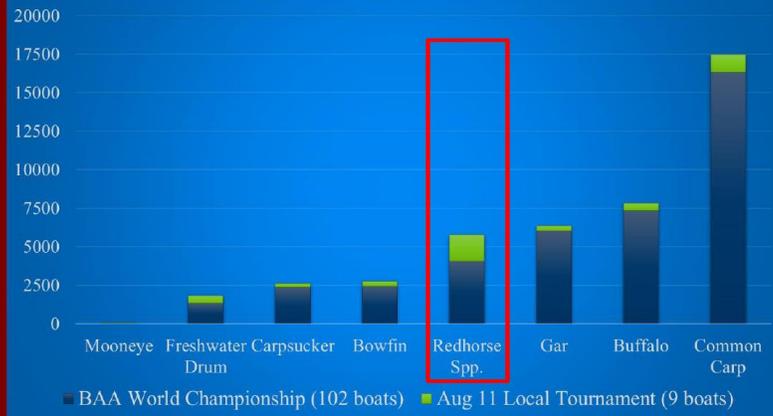
Species composition (% by number)



- Tournament Specific Harvest
 - Redhorse spp.
 - Common Carp
- Rule Differences
 - Big 20 vs. Small 10
 - Different tactics
- River Conditions
 - High water for BAA
 - June vs. August
- Location
 - Pool 3-9
 - Pool 5, 5A, 6

Combined Tournament Harvest

Estimated Harvest (lbs)



- Tournament Specific Harvest
- 9 boats (August) harvested 1,700 lbs of Redhorse compared to 4,000 lbs for 104 boats (June)
- Reduced overall poundage?
 - Small fish pot

Tournament Harvest vs. Commercial Harvest*

Species	2000-2016 Average Annual Commercial Harvest (lbs)	MNDNR Estimates	
		Harvest (lbs) from BAA World and 1 local tournament.	% of Avg Annual Harvest
Bowfin	435	2,772	637%
Gar (combined)	1,396	6,367	456%
Redhorse	2,555	5,768	226%
Common Carp	299,931	17,474	5.8%
Buffalo (all spp.)	229,797	7,818	3.4%
FW Drum	154,677	1,836	1.2%
All Species	652,913	44,711	6.8%

*MN side only

Discussion

- Tournament harvest is variable
 - Specific rules may shift harvest
 - Seasonality, location, tournament size
- Tournament harvest may exceed commercial harvest for some species
 - Total harvest of Mississippi River tournament series?
- Substantial amount of \$\$\$ generated by tournaments
 - May rival sportfish tournaments?
- Tournaments are completely unregulated
 - No Reporting – Do Not have to even contact office
- Tournament permitting may be warranted
 - Future monitoring and discussion



Discussion

- Daily bowfishing vs. tournament harvest?
 - Black box – UNKNOWN
 - Social media indicates daily harvest mostly large fish (Common Carp and Buffalo)
 - Guided Trips
- Species of Greatest Conservation Need (SGCN)
 - Fish ID at night?
 - Black Buffalo (State Threatened - 2 harvested)
 - Black Redhorse
- No data on ‘rough’ fish population status!
 - Can populations support harvest?
 - Important fishes for ecology of the system
 - If populations decline, DNR is the manager of populations
 - Bigmouth Buffalo – 100yr old fish
- Future Research!!



Coming Soon to a River or Lake You Manage???



email: neil.rude@state.mn.us

Exhibit 6 - Black buffalo



This threatened black buffalo was taken by archery. (Image posted to social media.)

Exhibit 7 - Blue Sucker



This blue sucker is displaying tubercles indicating it was shot while spawning.

Exhibit 8A - Trailer full of fish



The native Bigmouth Buffalo constitute the majority of fish in this trailer.

Exhibit 8B - trailer dumped on edge of field



Photos published to social media show the trailer of fish was dumped at the edge of an agricultural field.

Exhibit 9 - Dumpster used for fish disposal.



Dumpsters are provided at some bowfishing events to dispose of harvested fish.

Exhibit 10 - Wantonly wasted bigmouth buffalo



These bigmouth buffalo had a median age of 89 years. They were shot and disposed of without being used in any way.

Exhibit 11 - Location frequently used for wantonly wasting native fish



This location was used repeatedly for dumping bigmouth buffalo. In addition to the multiple piles of whole fish, fish bones are visible from previously discarded fish.