Many anglers wonder if fish size restrictions would make fishing better on their favorite water. The most common suggestion is either a water-specific or statewide one-over regulation, allowing anglers to keep one walleye over a certain length in their daily limit.

Game and Fish Department fisheries biologists have made a concerted effort the past few years to review all possible length regulation restrictions, and routinely reassess when conditions change. From the extra effort to conduct these evaluations, biologists have not found any instances where data supports a length restriction to improve existing walleye populations.

And yet, some anglers still suggest that additional conservation measures are needed because too many large walleye are being harvested, particularly on Devils Lake and the Missouri River. Some of these anglers request that larger fish be protected to enhance the opportunity for themselves and others to catch large fish. Although not a biological reason for the well-being of the population, this social aspect is also considered when setting regulations.

**BIOLOGICAL**

From a biological standpoint, maximum length limits (one-over is a derivative of a maximum length limit) are likely to benefit fisheries where fish recruitment is limited by the number of brood fish, and angling mortality of large fish is high. Therefore, a one-over regulation might help in a lake where angling exploitation is reducing the number of spawning-age fish, and inhibiting natural reproduction.

In North Dakota, only Devils Lake and the Missouri River/Lake Oahe could have this concern as they are the only major walleye fisheries that currently rely almost entirely on natural reproduction. All other waters, including Lake Sakakawea, are supplemented or maintained through stocking.

A typical walleye population is considered sustainable with total mortality rates up to 40-55 percent, according to scientific literature from across North America. Rates above 55 percent become problematic.

At Devils Lake, a recent tagging study estimated angler exploitation in 2007-08 at about 25 percent each year, while the average total mortality from 2008-14 was estimated at 38 percent.

On the Missouri River/Lake Oahe, total annual mortality from 2012-14 was 46 percent, which is higher than Devils Lake, but still within the sustainable range. A large portion of the mortality since 2012 was due to natural causes from the lack of forage after the 2011 flood. Angler harvest of larger fish has been relatively low in recent years. From May 15 through June 30, 2015, creel clerks measured roughly 1,800 harvested walleye on the Missouri River and Lake Oahe, with only 1 percent 20 inches or longer.

Since mortality is not excessively high, it’s also not surprising that reproduction is not being affected. Anglers expressed concern over the harvest of large pre-spawn walleye from Devils Lake’s tributary coulees in spring 2009. Later that year, Game and Fish biologists recorded the highest walleye reproduction ever documented on Devils Lake, without stocking any walleyes in the lake that year. Even during years of heavy stocking, subsequent analysis showed that stocked fish only contributed about 25 percent of the total young-of-year catch those years. This strongly indicates that natural reproduction was a far larger contributor than stocking, even with the spring harvest.

Similarly, the Missouri River and Lake Oahe have not been stocked with walleye since 1981, despite traditionally good pre-spawn fishing every spring.

**SOCIAL**

Beyond biological considerations, some anglers feel a one-over length limit will extend the big fish resource, allowing anglers to catch released fish another time. Tagging studies on North Dakota walleye populations have shown that less than one of every five walleye released is caught again.

Biologists have evaluated the potential effectiveness of a possible one walleye over 20 inches regulation on various waters using creel survey data collected since 2009. The 2009 Missouri River and Lake Oahe walleye population had a higher proportion of 20-inch-plus walleye than any fishery in the state has seen for years. From April through August 2009, anglers on the Missouri River and Lake Oahe harvested about 300,000 walleye. Of that total, about 37,000 (12.4 percent) were longer than 20 inches and 8,000 were longer than 22 inches. Based on the proportion of anglers who harvested more than one fish longer than 20 inches during that survey, if a one-over 20 inches regulation had been in place in 2009, anglers would have had to release about 6,600 fish. Of these, anglers could expect to re-catch about 1,200, while 5,400 would die naturally. As a point of reference, during this same time anglers voluntarily released more than 77,000 walleye, many of which were longer than 20 inches.

In more recent surveys:
- During the 2013 Devils Lake open water survey, a one-over 20 inches regulation would have mandated the release of 1,300 walleye out of 382,700 harvested, with 240 expected to be caught again. With an estimated 886,000 angler hours in 2013, it would take anglers 3,700 collective hours to catch one of those released walleye.
- During the 2015 open water survey on the Missouri River, Lake Oahe, Lake Audubon and Lake Sakakawea:
  - None of the surveyed anglers on the Missouri River or Lake Oahe harvested more than one walleye 20 inches or longer.
  - From May 15 through August 15, on Lake Audubon, four walleye out of nearly 1,500 measured would have been released under a one over 20 inches regulation.
  - On Lake Sakakawea during June, only five out of 1,021 measured walleye would have been released under a one over 20 inches regulation.

**CONCLUSION**

Game and Fish is fortunate to have sufficient long-term information to help effectively manage the state’s fisheries. At current fishing effort and exploitation rates, Game and Fish biologists are confident that a one-over regulation would serve no biological or social purpose.