Adjust Harvest REGULATIONS

Given the growing intensity of fishing pressure, the only way to "produce" more midsize and big walleyes is for anglers to release—either voluntarily or through regulations—these fish so they can be caught again.

No pain, no gain. That sums up why experimental fishing regulations are needed and how they work.

Fishing regulations are like a diet. If they don't require giving up something, they won't help improve fishing. And yet, like pudgy dieters hoping to shed pounds while eating glazed doughnuts, most anglers want to catch bigger fish but have traditionally opposed regulations that would restrict their catch.

That's changing. Anglers increasingly understand that releasing certain sizes of fish (called *selective harvest*) can help increase the number and size of fish they catch in the future. There's pain, sure. But the gains are worth it.

Yet even if people increasingly agree that selective harvest is worthwhile, exactly what sizes of fish need to be released? How many? Which species benefit from this management approach? And on what lakes will it work best?

We are trying to find out. On 90 lakes and 25 streams and rivers, we have established experimental fishing regulations to protect certain sizes of various fish species. Anglers generally support the new regulations, and many are calling for experimental regulations to be placed on additional lakes, streams, and rivers.

The regulations are called *experimental* because research scientists are studying their effects on fish populations and angler harvest. In time, the researchers will be able to tell us which regulations will work best on certain lakes to improve fishing for certain species.

The need for customized fishing regulations grew from the observation by anglers and fisheries managers in the 1980s that fish size was declining. Anglers had become so effective at catching fish, and fishing pressure had grown so intense, that fish were being caught as soon as they reached "keeper" size.

Because a lake can produce only so many pounds of fish—whether as many small ones or a few big ones—the intense pressure tipped the balance toward many small ones, as anglers took home most of the keepers.

The solution? Protect the keepers, so they could grow into the big fish that anglers enjoy hooking.

This flew in the face of traditional wisdom, which was to throw back the small fish so they'll grow up to be keepers. But on many lakes, releasing small fish doesn't help. These lakes usually have more than enough small fish.

Because relatively few small fish ever survive predation and disease to reach catchable size, what's most needed are more midsize fish. And the only way to "produce" more of these is to harvest fewer.

On many walleye lakes, the best way to increase the number of big walleyes (over 20 inches) that anglers can catch is to limit the number of midsize fish (such as 16- to 20-inchers) they can kill. Back in the water, those midsize walleyes can then grow for a few more years before being caught again.

Another common misconception is that a released fish is a stocked fish. Actually, a released fish is much more than that.

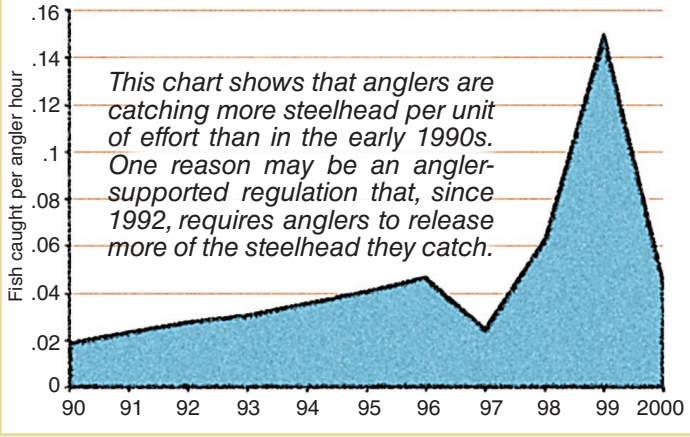
Success Story

Rainy Lake

In 1994 we established a slot limit on this sprawling Canadian border lake. Anglers had to release all walleyes 17 to 25 inches long and could keep only one longer than 25 inches. The regulations were designed to protect the walleye population, which was recovering from years of overharvest by commercial and sport anglers.

The slot limit appears to be helping protect several strong year classes of walleyes that are now prime harvest size. Rainy's catch rate has tripled from an average of one walleye caught per 4.5 hours of fishing in the 1980s to one per 1.5 hours today. Bookings at resorts have skyrocketed, and on some weeks guides actually have to turn away customers.

In fact, so good is the fishing at Rainy that Minnesota's side is in danger of being overharvested—even with the slot limit. Kevin

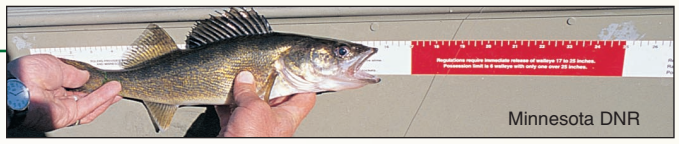


Because so many stocked fish don't survive, a released 20-inch walleye is more like 1,000 stocked fingerlings.

Which regulations work best? It depends on the lake or stream and the fish species. That's why we have so many different experimental regulations. Minimum size limits work well for slow-maturing species such as muskies. Protected slot limits work well for bass and walleyes. And what works on a relatively sterile northern Minnesota lake likely won't do the same on a fertile southwestern Minnesota lake.

We are learning more about harvest regulations with an experiment that began in 1994. We started with 25 lakes and have continued to expand—now to 90 lakes—while learning more about the effects of various regulations on different species and water along the way.

The long-term plan is not to have a different regulation for every single Minnesota fishing lake. That would be too complicated, like having a different speed limit on every single road. But we eventually will come up with a range of regulations that local fisheries managers could offer to local anglers looking for ways to improve fishing on their lakes and streams.



Peterson, DNR area fisheries manager at International Falls, says that record harvests in recent years have exceeded what biologists believe is the maximum sustainable level on the U.S. side.

In response, we recently tightened regulations further to protect the walleye population. Beginning March 1, 2001, anglers must immediately release any walleyes from 17 to 28 inches long and may keep only one longer than 28 inches. In 2002 the bag limit is scheduled to go from six to four.

The rule change has the support of the Rainy Lake Sportfishing Club, a local angling group and advocate of walleye conservation.

"We want to make sure this fish population stays as healthy as it is," Peterson says. "These new regulations should help do that."

Terminology of limits

Bag, or possession limit: This is the total number of a certain species that an angler may possess, in one day or over several days, both on the water or off. For example, you may not have in your possession more than six walleyes, and that includes what's in the livewell *and* in the cabin freezer.

Use: This general, statewide limit prevents the commercialization of sportfishing and distributes the catch among anglers. But because so few anglers ever catch a limit (roughly 1 percent of anglers on any give day harvests a walleye limit), current bag limits generally do little to protect fish populations from overharvest.

Protected slot limit: This is a size range, or slot, in which fish must be released. For example, a 12- to 16-inch slot limit for bass means that all bass from 12 to 16 inches long must be released.

Use: Protected slot limits protect medium-sized fish so they can grow to be the large fish anglers most enjoy catching. They also preserve fish that are at their most prolific spawning age.

Harvest slot limit: This is a size range in which fish may be kept. For example, a 14- to 18-inch harvest slot means that only fish between 14 and 18 inches may be kept. All others must be released.

Use: Harvest slot limits protect larger, spawning-aged fish while limiting the overall harvest.

Minimum size limit: This limit requires that all fish below a set length must be released. For example, the statewide minimum size limit for muskellunge is 40 inches, meaning that you may not keep a muskie less than 40 inches long.

Use: This protects slow-maturing fish such as muskies, steelhead, and lake sturgeon until they can spawn at least once.

Maximum size limit: This means that all fish above a set length must be released. A 24-inch maximum size limit for northern pike means you may not keep a northern that's longer than 24 inches.

Use: This works much like a protected slot limit to increase the number of medium and large-sized fish.

One-over limit: This means you may only keep one fish over a set length. For example, in 2001 on Lake Mille Lacs you may only keep one walleye that is more than 28 inches long.

Use: This limit allows the harvest of a true trophy fish that an angler might catch once in a lifetime.