

Fish Mythbusters

Three Common Walleye Myths Your Lake Group Should Know About

By Max Wolter, Wisconsin DNR Senior Fisheries Biologist and Walleye Team Co-lead

Walleye aren't just a premiere sportfish in Wisconsin, they are the premiere sportfish. The Wisconsin Department of Natural Resources (DNR) estimates 1.8 million angler hours are spent pursuing walleye in the state annually, more than any other individual species. Some value walleye for catch-and-release, trophy, or tournament fishing, but most are going for that famed walleye fish fry. With strong appeal and lots of interest, everyone wants a great walleye population in their lake. But how realistic is that?

We at the DNR are in the process of updating the state's walleye management plan, which dates back to 1998. An extensive public input process was conducted as a part of that plan. Through this process, we gained valuable insight into current attitudes about walleye and preferences for walleye management. We also found a lot of interesting myths and misconceptions about this species and how we manage them. Let's look at some of those myths with the hopes of creating a more informed public that can help us manage for great walleye populations in Wisconsin.

Myth: Any lake can become a good walleye lake.

BUSTED

This myth is pervasive because it's born out of the hope that anyone can have great walleye fishing right off their own dock. In reality, it takes a fairly specific combination of habitat factors to create a great walleye population. The best walleye lakes (those that support natural reproduction and higher densities of adults) tend to be larger, deeper, and cooler. This is unsurprising when you consider that walleye are a coolwater species, and Wisconsin is actually on the southern edge of its range. The size of a waterbody is important not just because

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Wisconsin DNR, Illustration by Virgil Beck

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those lakes tend to be deeper, but large lakes also provide habitat diversity. Walleye need suitable habitat at all life stages, including windswept rock to spawn on, open water areas with abundant food for fry, and nursery areas for juveniles.

Deeper, and oftentimes dark-stained, water supports walleye in another key way. Walleye are low-light hunters. In fact, that's how they got their name! Walleye excel in lakes, or parts of lakes, with low light penetration. Fish biologists have termed this important area "optical habitat," and we're finding it to be an important determinant of where walleye succeed. When paired with the temperature needs of the species, we developed the term "thermal-optical habitat." Many small, shallow, clear lakes simply have insufficient thermal-optical habitat to support walleye.

Examples of successful efforts to manipulate lakes to become walleye lakes are relatively rare. One of the most popular ideas is to add rock spawning reefs. When we consulted with DNR biologists around the state, we found many examples of this being attempted, but few instances where it was deemed a success. That may be because many of the other key habitat characteristics for walleye, such as

depth and water clarity, are relatively fixed characteristics of a lake.

Myth: Stocking is just as good (or better) than natural reproduction.

BUSTED

Stocking is one of the most popular fish management activities. The appeal is simple and powerful: add more walleye and we'll have great fishing! Oftentimes there is interest in stocking even when walleye are naturally reproducing. Some casual anglers believe that all walleye they catch are stocked fish.

The reality is that stocking is just one of many tools to manage a fishery. Like all tools, it is useful in certain circumstances, but not others. The DNR stocks walleye in three kinds of scenarios: research, rehabilitation, and maintenance. Research stocking is done as part of a larger study, often where we are trying to learn more about how to stock effectively or efficiently. Rehabilitation stocking is done in lakes that used to support natural reproduction. In this case, the stocking is intended to be temporary until natural reproduction resumes. Maintenance stocking is done in lakes that don't support natural reproduction, but habitat

conditions are suitable for stocked walleye to survive and provide a fishery.

It is lakes with natural reproduction of walleye that generally support the highest densities of adults. There are exceptions, of course, but on average a stocked walleye population has about one third as many adults as a naturally reproducing population. If

The walleye is named for its opaque, cloudy-looking eye, which is caused by a layer of pigment, which helps it see in low light.

~National Wildlife Federation

"We held three meetings specific to tribal communities as a part of our input gathering process and we have GLIFWC representation on our planning team."

~ Max Wolter

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This is a screenshot taken from Eric Engbretson's Underwater Photography YouTube Channel showing walleye in their natural habitat. You can view a full playlist of walleye and other underwater fish videos on his channel at <https://www.youtube.com/c/Underwaterfishphotosandvideo> as well as check out some amazing underwater photography from our freshwater lakes at underwaterfishphotos.com.

you take a moment to think about some of the great walleye fisheries in Wisconsin (Winnebago, Wisconsin River, Green Bay/Fox River, Turtle Flambeau Flowage, etc.) and across North America, virtually all are supported by natural reproduction and stocking does not occur or is minor.

In summary, we stock when we need to, and it can work to provide good fisheries. But where it is feasible, preserving or restoring natural reproduction by protecting and restoring habitat can be much more fruitful.

Myth: The [insert species] are eating all the walleye.

BUSTED

If we're not catching (and eating) walleye, then something else must be. At least, that's where our minds go as anglers when we're having a bad day of fishing. Competition between walleye and other species or predation on walleye by other species are frequent concerns. Certainly, these kinds of fish community interactions are important to the management of a lake. But people's beliefs about who's eating who often venture into the "myth" level of misunderstanding.

Let's start with the big bad muskellunge. As North America's largest predatory freshwater fish, it's easy to picture a "musky" gobbling up all the little walleye in a lake. But research has shown something very different. While walleye do show up in musky diets on occasion, great musky lakes in Wisconsin are often some of the best walleye lakes as well. This doesn't mean that the two species are best buddies or that they have a symbiotic relationship. More likely, it is evidence that both species do well in the same general habitats. In most big, deep, cool lakes you'll find both species doing pretty well. It is certainly not a "one or the other" scenario.

There is a somewhat different story with largemouth bass, but even this interaction is more complicated than it may seem on the surface. Largemouth bass abundance has been increasing in many Wisconsin lakes, while at



Photo by Max Moller

DNR Fisheries Technician Evan Sniadajewski and Conservation Warden Aaron Koshatka hold two large female walleye from a fyke netting survey on the Chippewa Flowage. DNR crews survey lakes across the state to determine the health of walleye populations.

the same time walleye have decreased. There are a number of likely factors driving this relationship. Climate change is making lakes warmer, sometimes weedier, and often clearer. If you read closely above, you know that's the opposite set of conditions for walleye to succeed. Largemouth bass, on the other hand, thrive in warm, weedy lakes. While the two species may have some direct interactions, we are really seeing entire lakes shifting towards more of a home field advantage for largemouth bass. This is especially true on lakes that were already on the smaller/clearer/shallower end of the spectrum for walleye lakes.

If you are a little disheartened after reading these myths, I wouldn't blame you. But, managing expectations and setting a baseline level of understanding about the species is an important first step before the real work can begin. We'll be working hard this year to update Wisconsin's Walleye Management Plan to provide the best strategies to meet these and other challenges walleye face today. We'll also be identifying key areas where partner groups, like lake associations, can help us in our mission of making and maintaining great walleye fishing opportunities across the state. Stay tuned for more! 💧

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