

Walleye Stocking Strategies and Resources for Partners

Prepared by Wisconsin Walleye Team (DNR, GLIFWC, WCC) with contributions from Walleyes for Tomorrow



Photo courtesy of Friends Into Spooner Hatchery

Introduction and how to use this document

If you are reading this document, it is likely you developed an interest in stocking walleye into a waterbody. You're not alone! Walleye stocking is a popular management action, and about 275 waterbodies are stocked with walleye in Wisconsin every year by the Wisconsin Department of Natural Resources (DNR), tribes and private partners.

This document was created by a group of biologists and fishery professionals to guide other partners that are considering walleye stocking. Read through the document to learn more about how walleye stocking works, beginning with some important questions to help you determine if walleye stocking is a worthwhile effort for the waterbody in question.

Stocking can be a collaborative effort, but success is only possible when communication and planning are shared among partners and agency staff. This process will include a review of the information available for the waterbody and a discussion of goals and actions that can be taken to improve the fishery with your local DNR biologist. Contact your local biologist early in the process. Be prepared to hear about a wide range of actions that could be taken to improve the fishery. If stocking is chosen as an action that can be taken to improve the fishery, your local biologist will be the one to approve the stocking plan and permits.

We appreciate the passion our partners have for maintaining great walleye fisheries in Wisconsin, and we hope this document is a useful resource. We believe in straight-forward communication about the pros and cons of walleye stocking and setting realistic expectations for stocking outcomes.

- The Wisconsin Walleye Team

Is stocking a good strategy for this waterbody?

Stocking is just one of several tools that can be used to enhance a fishery, along with harvest regulations, habitat protection/rehabilitation and other fish community manipulations. Each of these actions can be beneficial in certain circumstances.

The following questions will help you determine if stocking walleye might be a productive effort for the waterbody in consideration. Your local DNR fisheries biologist will be an important resource in this process and should be consulted early in the conversation.

Are walleye native to the waterbody or have they been present in the past?

- **Yes** – Great! Management of walleye in Wisconsin prioritizes native and current walleye populations.
- **No** – While the range of walleye in Wisconsin and other states has been greatly expanded via stocking, new introductions of walleye are not supported at this time and management should focus on native species.

Are walleye reproducing naturally in the waterbody?

- **Yes** – Stocking on top of natural reproduction can be detrimental and is typically not an effective way to increase adult abundance. If enough natural reproduction is occurring, no stocking should take place. However, plans can be made to monitor the population and make preparations to stock if it is needed in the future. Your local biologist will have data to determine whether walleye reproduction is adequate.
- **No** – This may indicate that stocking could provide a necessary source of walleye recruitment.

Is the waterbody already being stocked with walleye?

- **Yes** – In many cases, DNR or tribal agencies will begin stocking walleye when conditions necessitate. In these cases, private stocking may not be necessary.
- **No** – There are some cases where private stocking can fulfill an unmet need. This may be true when there are budgetary or other resource limitations.

Has walleye stocking occurred in the past but does not occur now?

- **Yes** – Review with the DNR or tribal natural resources department who was stocking walleye to determine why stocking was discontinued. If it was because of poor success in the past, stocking is unlikely to be successful in the future unless conditions in the lake have changed. If it was for budgetary reasons or a change in walleye reproduction status, then there may be an unmet stocking need that a partner could fill.
- **No** – This may represent a new need for walleye stocking.

Is the shoreline around the waterbody highly altered by development?

- **Yes** – With few exceptions, walleye are wilderness fish that survive and complete their life cycle best in lakes that have minimally altered shorelines. Consider a restoring natural shorelines and habitats project prior to considering walleye stocking.
- **No** – Great! Walleye benefit from wild and protected shorelines. Prioritize habitat protection in addition to considering stocking.

Is the waterbody larger or smaller than 500 acres?

- **Larger** – Large lakes typically have greater potential to support walleye populations.
- **Smaller** – Small lakes have more limited potential for walleye populations.

Is the water dark or clear?

- **Dark** – Darker water often has greater potential to support walleye. That can include stained or productive (green) waterbodies.
- **Clear** – Waterbodies with clear water often have less potential for walleye, particularly if they are also small, shallow and have dense aquatic plant growth. Deeper lakes can be an exception.
- **Not sure** – Consult your local biologist.

What does the rest of the fish community look like?

- **Predator heavy** – If the lake is already managed for a number of other predator/gamefish species there may be less available space and prey for more walleye.
- **Prey heavy** – If the lake has lower densities of other predator/gamefish species there may be better opportunities for walleye. Talk with your local biologist to better understand these dynamic.

There may be additional, lake-specific factors that might make it difficult for walleye stocking to succeed. Your local DNR fisheries biologist should be able to help you review and consider these factors.

Choosing a stocking product

There are three general sizes of walleye that are stocked in Wisconsin: fry, small fingerlings and large fingerlings. Each stocking size comes with tradeoffs in cost, survival and rearing difficulty. Learn more about each stocking product below:

1. **Fry:** Walleye stocked within a few days to a week after hatching are considered “fry.” It is very inexpensive to rear fry since little space is needed, and there is no feeding involved. Fry need to be stocked at a fairly high rate to have a chance to be successful since a low percentage of fry survive (true for naturally hatched fry also). Fry stocking may be productive if fertilization or hatching of eggs is determined to be too low for natural recruitment. Lake-side portable hatcheries, or “walleye wagons,” are the only way to stock walleye fry at this time since this method does not require the same degree of health testing. Fry stocking happens in late spring and timing of fry release is important to their survival.

What is a “Walleye Wagon”?

Walleye wagons are egg incubation and hatching facilities that are operated in proximity to a waterbody, like a small hatchery. Eggs are collected from the waterbody and hatched in the facility. The resulting fry are then stocked back into the lake. There are numerous considerations associated with operating a walleye wagon, including permitting, time and costs and whether such a facility will meet an unmet need. Your local biologist can help you determine whether a walleye wagon could help the walleye population.

2. **Small fingerlings:** Fish reared past the fry stage become “small fingerlings” which are typically 1.5-2.5 inches in length at the time they are stocked into the lake (June or July). Small fingerlings are more expensive to rear than fry but can be stocked at a lower rate and may have better survival in some circumstances. Getting small fingerlings from a private grower may require considerable advance notice.
3. **Large fingerlings:** Walleye reared into early fall are considered “large” or “extended growth” fingerlings. They are often stocked in September through November at 6-8 inches in length. Large fingerlings are the most expensive to raise on a per-fish basis, but may offer the best survival in certain circumstances, particularly when predation at earlier life stages is believed to be preventing natural recruitment or success of other stocking products.

Finding a private grower and genetic considerations

If conditions in the lake are appropriate, and you and your local biologist agree that stocking is a desirable action, you will need to find a source of walleye to stock. Several private hatcheries in Wisconsin raise walleye that can be bought to stock a lake. Determining which private grower can produce the size and type of walleye needed for the waterbody is an important step. The [Wisconsin Aquaculture Association website](#) will be a useful resource for this step.

Fish health and preventing disease transmission are major considerations when stocking. All walleye (and other species) stocked into waterbodies in Wisconsin must undergo an inspection from a veterinarian and receive a **Fish Health Certificate**. Private growers are responsible for having their fish inspected and obtaining a Fish Health Certificate for any batch of fish they plan to sell.

Genetics are another important consideration for any fish stocking event. Using appropriate native genetics will result in healthier populations that will have the best chance of success. The DNR uses six genetic management units for walleye (Map 1). It is important to determine which watershed the waterbody is in so you can acquire fish from the appropriate genetic strain.



Fry stocking via walleye wagons eliminates most genetic concerns since the stocked fry will be produced from fish already in that waterbody. However, gathering gametes (eggs and milt) from an appropriate number of adults is still important to preserve genetic diversity within the waterbody, and these considerations will need to be built into a walleye wagon plan.

Map 1. Walleye Genetic Management Units (GMUs) in Wisconsin. Note that the St. Croix and Chippewa GMUs are combined for the purposes of stocking at this point in time.

How many walleye should be stocked and how often?

The number of walleye to stock and the frequency of stocking depends on the goals for the fishery that have been developed in conjunction with your local fisheries biologist. DNR biologists have developed general guidance on these questions based on scientific studies and past experience. Available funding and waterbody size may also affect how many fish can be stocked.

A major consideration for stocking rate is the size of walleye being stocked, with fry being stocked at a high rate and lower rates being used for larger products. The following rates are used by the DNR for each of the three stocking products discussed in this document:

Size	Stocking # per acre	Stocking timing
Fry	1,000 or more	Spring
Small fingerlings	35	June
Large fingerlings	10*	September-November

*Stocking rates for large fingerlings can be as low as 5/acre in some instances (large lakes) and as high as 15/acre. Further evaluation of large fingerling stocking rates is ongoing.

Note that lower stocking rates can sometimes achieve similar results to higher rates, but at less cost. Increasing stocking rates can be productive if rates have previously been low, but continuing to increase rates may quickly reach a point of diminishing returns while costs typically increase.

Stocking frequency may vary based on stocking rate, logistics, and financial considerations. The DNR often uses an “every other year” stocking frequency for large fingerlings. Stocking may happen in an “every year” frequency, especially for smaller stocking sizes or rates.

Stocking timing

Stocking timing will largely depend on the stocking product and when they become available. Fry are stocked shortly after hatching in spring. Small fingerlings are typically stocked in June or July. Large fingerlings are typically stocked between September-November.

Water temperature at the stocking site should be within 5 degrees F of the truck/holding temperature to avoid temperature shock to the fish.

There are no specific recommendations on time of day for stocking, but avoiding the hottest portion of the day may be beneficial for some stocking products if stocking is to occur during the warmer months (June – September). Fry stocking is commonly done in late-afternoon or evening when small prey items may be more available.

Distribution of stocked fish

There is surprisingly little research on whether distributing walleye around the waterbody, or “scatter planting,” is a worthwhile strategy. Some involved with stocking fry and small fingerlings attest that distributing fish at those sizes is beneficial to help them reach areas that might have greater food availability. Fry are often released from boats while drifting over deep-water areas. However, more

involved distribution methods, which also increase handling/holding time for fish in some circumstances may add stress and reduce stocking survival.

An evaluation of scatter planting large fingerlings is being planned and may inform future stocking efforts, especially for larger stocking products. In the meantime, decisions about distributing fish will need to be made on a case-by-case basis. Using multiple boat ramps to distribute fish is recommended, when possible, especially for lake chains and larger systems. Stocking further away from dams may also be beneficial, since walleye are known to escape over or through dams at high rates.

Evaluating success of stocked fish

The ultimate measure of stocking success is not how many fish were put into the lake, but rather how many of those fish survive and contribute to the fishery. An evaluation plan will ideally be developed for stocking with that objective in mind. In most cases, your local biologist and their team will be responsible for fisheries surveys and will have the ability to provide data on stocking success. As such, any evaluation plan needs to be developed jointly and should include realistic goals/objectives, a timeline, and criteria for whether stocking will continue or be discontinued after the evaluation is complete.

Example language for an evaluation plan is included below:

“Walleye stocking will be conducted by the Lake X Lake Association in 2024, 2026, and 2028. Large fingerling walleye will be stocked at a rate of 10 per acre.

A fisheries survey is planned for 2032 that will include an estimate of the total number of adult walleye in the population and age determination for fish captured.

Walleye stocking will be considered successful if the following criteria are met:

1. Increased adult population size from 0.8 per acre (current) to 2-4 per acre (objective)
2. Stocked fish from 2024, 2026, and 2028 contributing at least 40% of the total population size, based on estimated ages.

If these criteria are not met, stocking may be discontinued, and other management strategies should be explored.”