

The Wisconsin Walleye Initiative (WWI) will make possible significant increases in stocking of large walleye fingerlings from state, tribal and private sources. The attached guidance “Walleye Stocking Strategy, Wisconsin Walleye Initiative, 2014 and 2015 Production Years” was developed to inform and provide direction for the most effective and efficient use of walleye stocking efforts.

This final guidance was developed by Department staff and describes the strategy for a walleye stocking priority system. It incorporates consideration of public comments received during a 21- day notice period which concluded 1/31/14. It also incorporates changes suggested by staff upon further review internal review of the draft guidance.

Non-editorial changes reflected in this final guidance include

- 1) further definition of adequate natural reproduction
- 2) redirection of the priority consideration for public access/high angling use including removal of it as a specific “point system”
- 3) further definition of genetic stock considerations
- 4) addition of a 20 per acre stocking rate to the evaluation of EG walleye stocking density

Comments related to this final guidance document should be sent to:

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# **Walleye Stocking Strategy Wisconsin Walleye Initiative 2014 and 2015 Production Years**

WI Department of Natural Resources

January 9, 2014

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APPROVED:

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Mike Staggs, Director  
Bureau of Fisheries Management

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Date

**Walleye Stocking Strategy  
Wisconsin Walleye Initiative  
2014 and 2015 Production Years**

**(Public Review Draft 01/07/2014)**

The Wisconsin Walleye Initiative (WWI) will make possible significant increases in stocking of large, extended growth (EG) walleye fingerlings\* from state, tribal, and private sources compared to the past. Efforts under WWI in 2013 allowed the Wisconsin Department of Natural Resources (WDNR) to stock 416,506 EG fingerlings in 83 lakes and an additional 21,965 EG fingerlings purchased from private sources in 16 lakes. This total is four times the previous high number of EG fingerlings produced annually. Production is expected to increase further in 2014 and 2015, but even then demand for EG fingerlings is expected to exceed supply. Walleye fry will continue to be stocked from portable hatcheries in several waters. Small fingerlings, rather than EG fingerlings, will continue to be stocked in waters where good survival currently supports a viable fishery. WDNR should be able to meet all small fingerling walleye stocking requests during the 2014 and 2015 production years.

\*Large (EG) walleye fingerlings are considered at least six inches in length and are generally stocked in the fall. Small fingerlings are smaller than six inches and typically stocked in summer. Walleye fry are stocked shortly after hatching from eggs in the spring.

### **STOCKING STRATEGY**

In order to make the most effective and efficient use of walleye stocking efforts, WDNR Fisheries Management Bureau will apply the following strategy to prioritize stocking of available fish:

- WDNR will create and maintain a list of waters which are reasonable candidates for walleye stocking using fry, small fingerlings, or EG fingerlings. All proposed waters must have public access that meets the requirements defined in [s. 29.701\(2\), Stats.](#), and [s. NR 1.91\(4\)](#), Wis. Admin.Code. Generally these waters will be stocked every other year in order to stock as many lakes as possible. If a lake was already being stocked in previous years it would remain in its odd or even year rotation. If a particular lake was stocked in 2013 with EG fingerlings it will be included in 2015 quotas. Lakes not stocked in 2013 will be worked into one of the two years to balance demand. This comprehensive list of walleye waters statewide will be maintained on the WDNR's website and may be updated as new information becomes available.
- WDNR will incorporate to the extent possible input from appropriate Chippewa tribal government authorities in determining whether waters located in Wisconsin's Ceded Territory should be stocked with walleyes.

### **LAKE PRIORITY**

After a list of candidate waters for stocking is finalized by WDNR, a priority system will be applied to apportion walleye produced by WDNR, tribal, and private hatcheries within

available supply. The priorities will be shaped by biological considerations that are coming out of continuing research efforts into factors affecting survival of walleye fingerlings as well as by economic and social considerations gathered through continuing public and tribal input.

Candidate waters will be assigned to one of the following management priorities. Generally, all waters in a priority category will be stocked before moving to the next priority.

### **Priority “0”**

Waters with adequate natural reproduction (NR) of walleyes to support a viable angling and tribal fishery (where applicable) do not need stocking. Adequate NR is defined to be:

- Average fall electrofishing catch per effort (CPE) of young-of-year (YOY) walleye >10 -15/mile average over the past 10 years with no more than 4 consecutive year class failures and at least three fall surveys within the period\*

\*Catch per effort is measured during fall electrofishing surveys by WDNR staff who count the number of walleyes caught within a certain lakeshore or stream distance. Young-of-year walleye are those that were hatched within the current year. A year class is a group of fish that were spawned/hatched in the same year. This definition is not meant to be absolute. Waters which are near this threshold may be considered for stocking after thorough evaluation of individual factors.

### **Priority 1 – Research/Evaluation**

Waters with WDNR’s internal Fisheries Management Board approved and funded evaluations of stocking success will be stocked for research purposes, which include identified performance measures, timelines, and lead biologist/scientist involvement. For the production years 2014 and 2015 the WDNR’s Walleye Team will identify the waters in this priority. Waters in this category will include some waters currently being stocked in northern Wisconsin and additional waters selected for evaluation of EG walleye stocking rates.

### **Priority 2 – Restoration**

Waters with a documented history of a prolonged period of NR that supported a viable walleye fishery, but which do not currently have adequate NR for reasons that have been reasonably identified and which are correctable, will be stocked for restoration. Public, business, and tribal input all clearly demonstrate a desire to place a high priority for stocking walleye in waters with the potential to restore NR and eliminate the need to stock. Natural reproduction in these lakes will be at or below the defined level of adequate NR used in Priority “0”.

### **Priority 3 – Maintenance**

Waters in which stocking is necessary to maintain a walleye population long-term will be categorized under Priority 3. This includes waters which have experienced a loss of NR for reasons which are not generally correctable, as well as waters which never had adequate NR but have environmental conditions conducive to survival of stocked walleye at a level sufficient to maintain a viable fishery.

Within Priorities 2 and 3 a “point system” which accounts for biological, economic, and social considerations will be used to rank all waters within each priority based on measurable metrics. Individual factors will be weighted by the level of importance as measured by input from public, business, and tribal interests. Stocking walleye where they will produce a healthy population was the top priority identified through public input, therefore, biological factors are weighted more heavily than other considerations.

- **Recruitment Success Predictor (Biological)**  
Current research efforts into factors affecting reproductive success for walleye have developed a model which predicts with 76% accuracy the year class strength of walleye in NR populations as measured by fall electrofishing surveys of young-of-year abundance. The key factors in the model are lake area, conductivity, latitude and longitude. Data for all of these factors are readily available. This would be especially applicable to waters in the Restoration priority although conditions which favor NR could also reasonably be assumed to favor stocking success in any water stocked.
- **Adult Walleye Population Density (Biological)**  
Waters which are dependent on stocking to maintain a walleye population in either the Restoration or Maintenance priorities exhibit varying levels of stocking success. Current adult walleye densities are a direct measure of stocking success in these waters. Waters where stocking is already successful will be given some additional weight.
- **Public Access (Social)**  
Input from the public and tourism interests indicates that consideration should be given to high use angling waters as a stocking priority. However, standardized measures of angling use are not readily available for most waters. It is very likely that high angling use lakes will receive priority under other factors such as Restoration category, business/economic considerations and co-operative efforts. Additional priority for high angling use may be considered on a case-by-case basis with input from DNR fish biologists and the public.
- **Business Developments (Economic)**  
Many businesses benefit from walleye fishing, directly or indirectly, in all areas of the State. Input from business owners indicates that those with a direct interest in a water-specific walleye fishery should receive the greatest consideration as a stocking priority. A number of measures of lake specific business interest are possible including rental units available, marinas, and restaurants/bars, but we do not have readily available measures of these factors for all candidate waters or a good understanding of how to weight their importance. We plan to prioritize all lakes proposed for stocking using biological and access criteria, and then utilize business focus groups that have been part of the WWI comment process to help develop and guide the process for adding the business interests to stocking prioritization.

- **Co-operative Efforts (Socioeconomic)**  
Lake associations and other outside groups that have raised funds for purchase of large walleye fingerlings for stocking in waters that have had unfilled WDNR stocking quotas believe that some preference should be given to stocking those waters. These waters were not fully stocked by DNR to this point due to lack of state funding in the past. Continuing cost-share efforts will receive “credit” in the form of a higher overall priority for stocking walleye in those waters.
- **Tribal Fishery Importance (Ceded Territory Waters Only)**  
Waters with both a high level of tribal interest and a defined need for stocking (insufficient NR) will be given an elevated level of stocking priority. A number of these waters are likely to be in the Restoration priority already. This priority should only be applied to waters within the Ceded Territory following application of statewide priorities so as not to introduce a “northern bias.”

Table 1. Weighted point system for ordering walleye stocking candidate lakes within the stocking priorities of Restoration and Maintenance for 2014 and 2015 production years. Tiered prioritization; yellow – first, white – second, grey - third

| Recruitment Success Predictor (index value) | Business Development (ON WATER/ immediate vicinity) | Cooperative Financial Efforts (Approved Quotas Only) | Tribal Fishery Importance (Ceded Terr Waters Only - applied after statewide prioritization) | Adult Walleye Abundance (last 10 years) |
|---|---|--|---|---|
| 6 Points Maximum                            | 3 Points Maximum                                    | 3 Points Maximum                                     | 3 Points Maximum  | 3 Points Maximum                        |
| >0.5<br>6 pts                               | High<br>3 pts                                       | >50% of quota<br>3 pts                               | High – 3 pts  | >3/acre<br>3pts                         |
| 0.3 to 0.5<br>4 pts                         | Med<br>2 pts  | 25 to 50% of quota<br>2 pts                          | Med – 2 pts   | 1.5 to 3/acre<br>2 pts                  |
| 0.1 to 0.3<br>2 pts                         | Low<br>1 pt   | <25% of quota<br>1 pt                                | Low – 1 pts   | 0.5 to 1.5/acre<br>1 pt                 |
| < 0.1<br>0 pts                              | None<br>0 pts                                       | None<br>0 pts  | None – 0 pts  | <0.5 acre<br>0 pts                      |
|   |   |  |   |   |

### GENETIC CONSIDERATIONS

WDNR utilizes three different regional “stocks” of walleye for stocking purposes based on genetic characterization of natural walleye populations and logistical considerations for broodstock (the group of fish used for breeding) corresponding to major drainages:

- Lake Michigan (including the Upper Fox River),
- Rock River, and
- Upper Mississippi (St Croix, Chippewa and Wisconsin River Drainages).

In order to conserve genetic diversity and prevent introgression (hybridizing), the following guidelines for appropriate stock will be used to stock fish from WDNR, Tribal, and private hatchery sources:

- a. Stocking with the objective of restoring natural reproduction (Restoration Priority) should use the applicable regional stock for the location of the stocked water at all times
- b. Drainage lakes or streams should use the applicable regional stock for the location of the stocked water at all times
- c. Seepage lakes (no inlet or outlet) in the Maintenance Priority should use the applicable regional stock for the location of the stocked water where possible. Other stocks may be considered on a case-by-case basis.

### **STRATEGY EVALUATION**

There is currently very little scientific information available to suggest the most cost-effective stocking rate for EG walleye. A structured evaluation will be conducted to evaluate the optimum EG walleye fingerling stocking rate. Four different stocking rates of 5, 10, 15, or 20 per acre will be applied to all lakes stocked with EG fingerlings. A subset of these lakes (sentinel lakes) will be selected for specific evaluation. Efforts in this regard will be developed by the WDNR's Walleye Team which has both tribal and public (Wisconsin Conservation Congress) representation, as well as WDNR biologists.