

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
AMENDING AND CREATING RULES**

The Wisconsin Natural Resources Board proposes an order to amend NR 20.20(64)(h)4. and to create NR 20.20 (64)(h)12. relating to hook and line walleye, sauger and hybrids fishing in Sherman Lake, Vilas Co.

SS-37-05

Analysis Prepared by the Department of Natural Resources

- 1. Statutes interpreted:** In promulgating this rule, s. 29.014(1), Stats., has been interpreted as authorizing the department to modify and create rules relating size limits and bags limits and open and closed seasons for fishing
- 2. Statutory authority:** Sections 29.014(1) and 227.11 (2)(a), Stats.
- 3. Explanation of agency authority to promulgate the proposed rules under the statutory authority:** Section 29.014(1), Stats., requires the department to establish rules that set conditions governing the taking of fish and game that will conserve the fish and game supply and ensure the citizens of this state continued opportunities for good fishing hunting and trapping
- 4. Related rule or statute:** None
- 5. Plain language analysis of the proposed rule:** The order modifies fishing regulations on Sherman Lake (Vilas County) by eliminating daily bag limits and size limits for walleye, sauger and hybrids on this lake. In addition, there will be no closed season for walleye, sauger and hybrids on Sherman Lake resulting in greater harvest opportunity for anglers. This proposed rule is part of a walleye research project being conducted by WDNR Fisheries Research to investigate the long-term effects of high harvest on walleye populations in northern Wisconsin.
- 6. Summary of and preliminary comparison with any existing or proposed federal regulation:** Provided state rules and statutes do not relieve individuals from the restrictions, requirements and conditions of Federal statutes and regulations, regulation of fishing for native species has been delegated to state fish and wildlife agencies. No federal regulations regarding daily walleye, sauger and hybrids harvest are in effect.
- 7. Comparison of similar rules in adjacent states (Minnesota, Iowa, Illinois and Michigan):** Fisheries management is generally quite similar in the states surrounding Wisconsin. All the bordering states regulate fishing by the use of seasons, bag limits and size limits. Specific seasons, bag and size limits may differ for species across the surrounding states; however, the general principles are similar. Michigan, Minnesota, Iowa and Illinois all have statewide seasons, bag and size limits for fish species, along with special or experimental regulations on individual waters.
- 8. Summary of the factual data and analytical methodologies that the agency used in support of the proposed rule and how any related findings support the regulatory approach chosen for the proposed rule:**
Management issue: Long-term effects of angling and spearing exploitation on walleye populations can be modeled using existing data on these fisheries in northern Wisconsin lakes in concert with stock-recruit and age-structured population models. Of principal concern are the long-term effects of exploitation on walleye reproduction, when the scopes for compensation in growth rate, age at maturity, and fecundity have been pushed to their limits. A fish population that experiences exploitation in excess of its ability to compensate, known as recruitment over-fishing will undergo long-term decline or collapse in the absence of restrictions on its fisheries. Such a pattern of over-fishing has led to the collapse of many of the world's most valuable fisheries.

Safe harvest limits for shared walleye fishery in Northern Wisconsin is based on assumption that maximum sustainable annual exploitation rate is 35% of adult population. This figure was based on the long-term data set from Escanaba but never subjected to verification from a study with replication and controls. Basing a large important program on the best possible information was viewed as good management.

Objective: Design a study evaluating walleye population levels subject to different levels of exploitation with several lakes at each target level, originally 0, ~20, 35, 50 percent. Currently, research has focused on lakes with 0, 10, 20, and 35% exploitation. The regulation change that is proposed will expand the study to include two 50 % exploitation lakes. The lake identified for 50 % exploitation is Sherman Lake (Vilas Co.). Sherman Lake is relatively small (around 200 acres) with good naturally reproducing populations of walleye. Sherman Lake is also part of the Great Lakes Indian Fish and Wildlife Commission's long-term lake monitoring program and has at least 10 years of long-term population data available. In addition, Sherman Lake is wholly contained within the Northern Highland American Legion State Forest and has no private riparian landowners.

Project administration: Cooperative project with DNR Fish Research and the Great Lakes Indian Fish and Wildlife Commission

Current Exploitation Study (1998 to Present): USDA-Forest Service and WDNR Fish Research Section is currently conducting an exploitation project on four lakes to describe the effects of light (0-5%), moderate (10-25%), and heavy (=35%) rates of exploitation on walleye populations. One component of that study is to develop and calibrate walleye population models for the purpose of predicting the maximum sustainable exploitation rate. We propose to incorporate biological and fishery data on walleye populations from various lakes in northern Wisconsin into stock-recruitment and age-structured population models, from which to model long-term effects of various exploitation rates on population age-structure, size-structure, and sustainability. In order to develop a complete model to test the 35% exploitation questions, lakes with a higher exploitation rate need to be incorporated in the study.

Specific Objectives of Exploitation Study Include:

1. Develop density-dependent models of walleye maturity and fecundity for Wisconsin Ceded Territory Lakes from the ongoing studies in Big Crooked Lake, Wolf, Plum and Escanaba Lake, Vilas County, Wisconsin.
2. Using the above data in combination with data from the current proposal, estimate maximum level of spearing and angling exploitation that can be sustained by walleye in northern Wisconsin lakes.
3. Simulate long-term effects of a range of spearing and angling exploitation rates on walleye population age structure, size structure, and age at maturity, and fecundity.

9. Any analysis and supporting documentation that the agency used in support of the agency's determination of the rule's effect on small businesses under s. 227.114, Stats., or that was used when the agency prepared an economic impact report: Small businesses will be impacted by this Order.

10. Effects on small business, including how the rule will be enforced. Small businesses around the lake proposed for this rule change will most likely benefit economically from the extended fishing season. Sherman Lake will provide fishing opportunity for anglers when other waters are closed to fishing thus attracting anglers to the area to take advantage of this unique fishing opportunity.

11. Agency Contact Person: Ed Emmons, Wisconsin Dept. of Natural Resources, 2801 Progress Drive, Madison, WI 53716 (608) 221-6334, edward.emmons@dnr.state.wi.us

SECTION 1. NR 20.20(64)(h)4. is amended to read:

(h) Walleye, sauger and hybrids	4. Alder, Averill, Big (T42N R6E S4), Big Arbor Vitae, Big Muskellunge, Birch, Boulder, Buckskin, Clear, Crab, Dead Pike, Emily, Fawn (T42N R5E S11), Fishtrap, Harris, High, Ike Walton, Island, Laura, Little Arbor Vitae, Little Star, Manitowish, North Crab, North Turtle, Oxbow, Presque Isle, Rest, Rock, Rush, South Turtle, Sherman , Spider, Squaw, Star, Stone, Van Vliet and Wild Rice lakes, Vilas county;	a. Hook and line.	First Saturday in May to the first Sunday in March	5 in total but only 1 may be longer than 14"	None
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SECTION 2. NR 20.20(64)(h)12. is created to read:

(h) Walleye, sauger and hybrids	12. Sherman lake	a. Hook and line.	Continuous	None	None
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SECTION 3. EFFECTIVE DATE. This rule shall take effect on the first day of the month following publication in the Wisconsin administrative register, as provided in s. 227.22(2)(intro.), Stats.

SECTION 4. BOARD ADOPTION. The foregoing rule was approved and adopted by the State of Wisconsin Natural Resources Board on March 22, 2006.

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

By _____
Scott Hassett, Secretary

(SEAL)