Regulation Proposal Form

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Proposal Title	
Wisconsin River Walleye/Sauger Slot Regulation	
Author	**Date**
Tom Meronek, Justine Hasz, David Seibel, David Rowe	October 18, 2011

Location Information:

Affected water(s)	
Wisconsin River, Yellow River	
County	**WBIC(s)**
Counties listed in the regulation language	WBICs included under Proposed Justification.
Upstream/downstream boundaries, if applicable—Law Enforcement should be consulted	
See Regulation Language.	
Will this regulation affect Ceded Territory water and are there any anticipated impacts to tribal fisheries? ☐ **Yes** ☒ **No**	

Current Regulation

Upstream from the Prairie du Sac Dam (Sauk, Columbia counties) to the Grandfather dam (Lincoln Co) on the Wisconsin River, downstream from the Hwy 54 dam at Dexterville (Wood Co) on the Yellow River and the Lemonweir River (Juneau Co), the minimum length limit on walleye and sauger is 15", but fish from 20" through 28" may not be kept and only one fish over 28" is allowed. Wording of location varies slightly by County – counties include Columbia, Sauk, Adams, Juneau, Wood, Portage, Marathon, and Lincoln.

Proposed Regulation

The minimum length limit on walleye and sauger is 15", but fish from 20" to 28" may not be kept and only one fish over 28" is allowed. (NOTE- there are additional river segments added in the permanent rule proposal these additions are need to close holes in the current regulation)

Rule Boundarys:
Upstream from the Prairie du Sac Dam (Sauk, Columbia Counties) to the Grandfather dam (Lincoln Co) on the Wisconsin River: the Big Rib River (Marathon County) to Hwy 29; Peplin Creek and Johnson Creek in Marathon County, the Eau Claire River to Schofield Dam, the Little Eau Claire River in Portage and Marathon Counties, the Little Eau Pleine River in Portage and Marathon Counties, the Yellow River to Lake Dexter Dam (Wood Co) on the Yellow River, Buena Vista Creek to Nepco Dam (Wood County), the Lemonweir River (Juneau Co).

This proposal would make permanent a protected slot limit regulation on walleye, sauger, and hybrids where there is a daily bag limit of 5 fish and the minimum length is 15 inches, but fish from 20 to 28 inches may not be kept and only one fish over 28 inches is allowed. This regulation would apply with a *year-round open season* on:

- the Wisconsin River north of the Prairie du Sac Dam in Columbia County up to the Grandfather Dam in Lincoln County, including its sloughs, bayous, and flowages; and
- certain waters connected to the WI River: the Eau Claire River upstream to the Schofield Dam in Marathon County; the Yellow River to Lake Dexter Dam in Wood County; Buena Vista Creek to the Nepco Dam in Wood County; and the Lemonweir River in Juneau and Monroe counties.

The regulation has been in effect since 2002 and is scheduled to expire in 2014.

The walleye protected slot limit regulation would also be applied to additional waters connected to the Wisconsin River under this proposal, but the season would only be *open from the first Saturday in May to the first Sunday in March* for:

- the Big Rib River downstream from Highway 29, Peplin Creek, Johnson Creek, Little Eau Claire River, and Little Eau Pleine River in Marathon County; and
- the Little Eau Claire River and the Little Eau Pleine River in Portage County.

Management Goal

Summary statement that characterizes the desired fishery (e.g. provide a naturally reproducing harvest-oriented walleye fishery; provide a bass fishery dominated by large adults that maximizes predation on smaller fishes)

Produce a walleye and sauger fishery that allows for harvest at the statewide minimum length (15-20) and provides a catch and release fishery for larger fish (>20-28"), but does allow for harvest of a trophy walleye (>28").

Description of the Water(s) and Fishery

Provide a brief description of the water(s), past regulations and other management actions. Summarize all applicable fisheries data, particularly from surveys meeting protocols (Table 1).

The current regulation has been in effect since 2002 when the regulation replaced the statewide 15 inch minimum size limit, the rule had an original sunset date of 2007. In 2006 the rule was voted on at the Spring Hearings and was extended to a 2014 sunset date. The waters affected are the Wisconsin River and its flowages and tributaries from the Prairie du Sac dam upstream to the Grandfather dam, Lincoln County.

The walleye fishery for the river segment under this regulation is popular, but has a high rate of exploitation. The Wisconsin River currently under the slot regulation has a continuous open season for walleye. A tailwater creel survey was conducted in Spring 1987 on all of the major walleye fisheries of the Wisconsin River from Lake Alexander to Wisconsin Dells. The survey, conducted in March and April, estimated total fishing pressure at 86,794 hours and total harvest was estimated at 15,000 walleye 10" or greater. The estimated fishing pressure and harvest for some important Wisconsin River tailwaters is illustrated (Figure 1; see attached background document). Total annual mortality estimates for Lake Dubay walleye from Hauber (1989) were reported at 37%. Recent total annual mortality estimates were calculated for Lake Wausau (35%), Mosinee Flowage (39%), Lake DuBay (38%), Stevens Point Flowage (30%) and were similar to historical levels.

Management Objective(s)

a) Goals are general, objectives are specific. Objectives are used to evaluate the effectiveness of your action and determine if you have achieved your goal. Provide a management objective that is specific, measurable, able to be achieved, related to the goal, and has a temporal component (e.g. increase walleye harvest rate to 0.1 fish/hour while maintaining recruitment at or above 10 YOY/mile within 5 years; increase largemouth bass RSD14 to 35 and bluegill RSD8 to 15 within 5 years

The objectives developed to meet our overall goal are:

1) Increase the river wide averages of PSD from 27% to between 40-60%; increase RSD20 from 8% to between 15-40%; and to increase RSD28 from 0.3% to between 0.5 and 2.0%.

2) Increase the CPE for walleye 20-28" and those >28"; and maintain CPE levels for walleye in the harvest slot (15-20")

3) Provide a regulation with no negative impact on growth rates of walleye.

b) Describe how the management objective and associated target levels for metrics were developed (e.g. lake management plan, stakeholder meeting, comparison to other water(s)).

The goal for this regulation was determined over a number of years. First a resolution was passed at the 1998 Spring Hearings in 9 counties bordering the Wisconsin River requesting biologists to review walleye management on the Wisconsin River. And secondly, in 2001 Fisheries Biologist Tim Larson determined angler interest using a mail survey sent to anglers, Conservation Congress members, and the Lake Wisconsin Chamber of Commerce members. The results of both of these were positive and the initial rule went to the Spring Hearings in 2001 and the rule was in place for the 2002 fishing season.

Objectives for PSD were set based upon the range (40-60%) often recommended for predators in the literature (Goode and Coble 1981, Novinger 1990). RSD values do not follow the catagorization system of Gabelhouse (1984) but were selected as benchmarks for the regulation (i.e. 20-28" and >28"). These ranges were set to include at least a minimum increase of 50% over pre-regulation values.

Current Problem

Use survey data or provide context for a similar water or group of waters (e.g. lake type, watershed) to demonstrate how the fishery is not meeting the desired management objective. Identify hypothesized problem(s) you hope to address.

When the original regulation proposal was undertaken it was clear that Wisconsin River anglers were requesting a fishery with larger walleye but one that would allow harvest as well. It was hypothesized that the walleye fishery could better meet the proposed standards for PSD, RSD20, and RSD 28 from the literature. Population modeling suggested that the fishery could be improved and larger fish could be added to the fishery both in the catch and release slot (closed slot, 20-28") and above the slot (trophy fish >28"). GIFSIM modeling conducted prior to the establishment of the rule in 2002 indicated that an increase in the number of walleye 28" or greater and Sauger 20" or greater was possible. This modeling was undertaken prior to the initial change and again in 2005 for the extension of the regulation. The modeling is documented in the Regulation Justification section of this proposal.

Proposed Regulation Justification

How is the regulation change expected to meet your objective(s)? Demonstrate expected results of the regulation using tools such as modeling, comparisons to other waters, peer-reviewed literature, etc...

An evaluation of metrics suggested are provided here and pre-regulation and post-regulation data are compared. Pre and Post data span a period from 1995 to 2010 and cover Lake Alexander (WBIC, 1494600),, Lake Wausau (1437500), Lake Dubay (1412200), Stevens Point Flowage (1409400), Mosinee Flowage (1434900), Petenwell Flowage (1377100), and Lake Wisconsin (1260600).

Figure and Tables are provided in an attached PDF file.

Abundance

We averaged pre-regulation and post-regulation walleye catch per unit effort (CPE) from comprehensive fyke net surveys conducted from 1995 to 2003 in the pre-reg period and 2005 to 2011 post-reg period. Average CPE was compared for 10-15” (10-14.9”), 15 to 20 (15.0-19.9”), and 20” and greater walleye; these groups were tested for significance using ANOVA (Sigma Stat). For Lake Wisconsin we used fall electrofishing CPE (fish/hour) for the pre-reg (1996-2001) and post-reg (2002-2011, excluding 2009). We compared length groups 10-15”, 15-20”, and 20” and greater and tested for significant differences using a t-test.

For the lakes surveyed with fyke nets, pre-regulation CPE for 10-15” fish was significantly greater than post-reg CPE (p=0.036, Figure 2). No differences were detected for 15 to 20” fish (p=0.76, figure 3). There was a significantly greater number of fish 20” and greater (p=0.001, figure 4). Stock density values improved with PSD increasing from 24 to 46%, RSD20 from 8 to 19%, and RSD28 from 0.2 to 0.8% (figures 5-7). For Lake Wisconsin, pre-reg CPE for 10-15” fish was significantly greater than post-reg CPE (p=0.037, Figure 8), 15-20” CPE was similar pre and post regulation, and post-reg CPE for 20” and larger fish was significantly greater than pre-reg (p=.045, figure 8).

Population Estimates

We were able to calculate pre-reg and post-reg population estimates (PE’s) for 4 water bodies surveyed by fyke netting (figure 9, table1). Post regulation PE values were generally lower than pre-reg values, but 95% confidence intervals overlapped considerably. Given the variability in the estimates we do not consider the differences to be significant to the management of the fishery.

Recruitment

Stock density values can be strongly influenced by recruitment levels, so we evaluated recruitment index data for the Wisconsin River that was collected by fall electrofishing from 1995 to 1998. Recruitment effects were evaluated for Stevens Point and Mosinee by plotting young-of-year/hour (YOY/hr) for year-x, against abundance of adults produced from year-x as determined from fyke net data. We used an age sub-sample and age-length key for each water body and assigned ages to all fish in the surveys. At Stevens Point adult abundance generally increased as recruitment remained stable and then declined (R-squared=0.80, figure 10). And at Mosinee recruitment increased each year while adult abundance increased then declined (R-squared=0.10, figure 11). It appears YOY abundance for a given year-x in the Wisconsin River, when sampled with a single fall electrofishing transect, is a poor predictor of subsequent adult abundance produced from year-x.

Growth

We evaluated pre-reg and post-reg growth using the von Bertalanffy equation and compared the growth coefficients (k) using the von Bertalanffy function of the FAST Model (Slipke and Maceina 2000). Post regulation k values were generally equal to or slightly less than pre-reg k values (figure 12, table1). Growth of age-4 males was also lower (figure 13) and similar to results determined by Fayram and Treska (2010) when they evaluated a 14-18” slot limit for walleye. Confidence limits (95%) overlapped considerably but we did

not test for significant differences. And, overall it does not appear the slower growth has affected the abundance of 15-20" fish or 20" and greater fish.

Modeling

Population model simulations under slot conditions were conducted with the FAST model (Slipke and Maceina 2000). We used conditional natural mortality rates (cm) from 0.20 to 0.35, and a conditional fishing mortality rate (cf) of 0.30 both below (15-20inches), and within (20-28inches) the slot, we used cf=0.05 above the slot. The model results are compared here as yield for a 15 inch minimum size versus the slot regulation. Model output predicts total yield to the fishery, number/100 age-0 recruits. The total yield to the fishery was greatest for the 15 inch minimum, 32 to 13 fish/100 recruits. (Figure14). This is greater than the yield under slot conditions, 26 to 12 fish/100 recruits. For fish from 15 to 20 inches yield was similar for the 15 inch minimum and the slot condition (Figure 15). For fish 20 to 28 inches the model gives a yield of 7 to 2 fish/100 recruits, but allows for zero yield within the closed slot, thus no yield to the fishery (Figure 16). The yield above the slot of 28 inches indicates a significant improvement in yield for the slot increasing to 0.33 to 0.02 fish/100 recruits versus 0.03 to 0.0 for the 15 inch minimum (Figure 17).

Summary

We predicted through modeling that the objectives of the slot limit could be met, and have determined through data analysis that the objectives of the slot are being met. Stock densities have improved and are within the ranges stated in the objectives and are likely not influenced by recruitment or effects cannot be detected. Although CPE has declined for fish 10-15" the slot as not caused any decline in harvestable size fish (15-20"), but a greater abundance of fish are now available for catch and release (20-28"). The slot has also enhanced the opportunity for anglers to catch trophy walleye (>=28") (RSD28 improved from 0.2 to 0.8%). Growth rates have been slightly lowered but do not appear to have negatively affected recruitment into the harvest slot. And overall anglers are happy with the regulation as determined by the positive vote for the regulation at two Spring Hearings in the last ten years. The data presented here suggest the slot has no negative impact on the Wisconsin River walleye fishery and we propose the slot as a permanent rule.

Evaluation Plan

Provide a suggested plan and timeline for evaluating whether the objectives are met in response to the regulation change. Indicate potential courses of action if objectives are not being met. If proposed regulation is not part of the "toolbox" (Table 2) the evaluation plan needs to be additionally detailed with an explanation of how the costs of evaluation will be covered.

The plan for evaluation of this regulation has been completed. The evaluations included comprehensive surveys in all of the major impoundments for which pre-regulation data existed. The post-regulation surveys were Lake Wausau 2005, Lake Dubay 2008, Stevens Point Flowage 2009, Mosinee Flowage 2010, Petenwell Flowage 2011, and Lake Alexander 2011. In addition, annual fall recruitment surveys were established at Mosinee and Below Dubay Dam in 2007. These two river stations were historic sites where comparable data existed.

Lake Wisconsin has a long history of fall electrofishing data and those data were the most valuable for this evaluation, thus were used instead of a comprehensive survey.

Previous Action

Include details on previous regulation proposals that were intended to address the current problem, if applicable.

The orginal 20" to 28" no harvest slot rule was established in 2002 and a sunset date of 2007 was put in place.

The current rule was voted on at the Spring Hearing in 2006 in order to replace the sunset rule of 2002. This vote extended the rule and placed a sunset date of 2014.

Public Participation in Developing Proposed Regulation

Was input solicited from stakeholders when developing the proposed regulation change? Include documented comments from affected user groups (positive and negative), contacts made with local Conservation Congress Representatives, lake associations, angler groups, etc…

Prior to the rule enactment, a resolution regarding the no harvest slot rule at the 1998 Congress Hearing in 11 counties along the river passed by a high margin in 9 counties and had a split vote in the other 2.

In 2001 Larson circulated 300 fact sheet/opinion surveys among anglers, ConservationCongress delegates and the Lake Wisconsin Chamber of Commerce members. Of 59 returned – 39 favored the slot, 5 favored no size limit, 7 the 15" minimum only and 8 listed other miscellaneous rules. No businesses returned the survey.

The proposal passed the 2001 Spring Hearing vote and the 2006 Spring Hearing vote. After the 2006 extension passed hearing a 7 year sunset date was set for the rules expiration (2014). In addition, through the

ten years of the current rule, biologists have talked with numerous angler groups and fishing clubs and the response has been overwhelmingly positive to continue the rule. Biologists would now like to make this rule permenant as anglers have voted in favor of this rule at two Spring Hearings in the past 10 years.

Small Business and Fiscal Effect

Explain who is likely to be economically impacted and in what way. If possible, provide estimates.

Draft Question: for inclusion in Spring Hearing questionnaire

This proposal would (insert proposed regulation): Establish a slot limit on walleye, sauger, and their hybrids where the minimum size is 15 inches, but fish from 20” to 28” may not be kept and only one fish over 28” is allowed. The bag limit would be maintained at 5 fish.

Rule Boundarys:

Upstream from the Prairie du Sac Dam (Sauk, Columbia Counties) to the Grandfather dam (Lincoln Co) on the Wisconsin River: the Big Rib River (Marathon County) to Hwy 29; Peplin Creek and Johnson Creek in Marathon County; the Little Eau Claire River in Portage and Marathon Counties; the Little Eau Pleine River in Portage and Marathon Counties; downstream from the Hwy 54 dam at Dexterville (Wood Co) on the Yellow River; the Lemonweir River (Juneau Co).

The Management Goal is: Produce a walleye and sauger fishery that allows for harvest at the statewide minimum length (15-20) and provides a catch and release fishery for larger fish (>20-28"), but does allow for harvest of a trophy walleye (>28").

This regulation proposal is one tool to help meet the management goal because: The rule has been thoroughly evaluated and the results prove the slot limit currently in place is satisfying the needs of anglers and they have been in favor of the current rule.

Do you favor : Do you favor a slot limit for walleye, sauger and their hybrids. Where the minimum size is 15 inches, but fish from 20” to 28” may not be kept and only one fish over 28” is allowed. The bag limit would be maintained at 5 fish.

The rule would apply upstream from the Prairie du Sac Dam (Sauk, Columbia Counties) to the Grandfather dam (Lincoln Co) on the Wisconsin River: the Big Rib River (Marathon County) to Hwy 29; Peplin Creek and Johnson Creek in Marathon County; the Little Eau Claire River in Portage and Marathon Counties; the Little Eau Pleine River in Portage and Marathon Counties; downstream from the Hwy 54 dam at Dexterville (Wood Co) on the Yellow River; the Lemonweir River (Juneau Co).[make sure this matches above new reg section before using in questionnaire]

Fish Team Supervisor Regulation Proposal Review Checklist

Instructions: Please use this checklist as a guide for your review of the regulation proposal. A completed checklist is only necessary after you have made your decision to reject or recommend. After completion, save a copy and use the email button at the top of the proposal form to send the proposal package to the Regional Fish Supervisor, Kate Strom Hiorns (automated), and CC the proposal's author.

Proposal Title		
Wisconsin River Walleye Reg. Make it permanent		
Author	**Reviewer** Hujik	**Date**

Fish Team Supervisor Reviewer Notes:
Reviewing as a Fish Team and Regional Fish Sup. This regulation has been in effect for 12 years. The proposal is to make it a permanent rule. No new changes are suggested to the current regulation.

Recommended Action by Fish Team Supervisor Approve ☒ Reject ☐

Regional Fish Supervisor Regulation Proposal Review Checklist

Proposal Title		
Author	**Reviewer** B. Hujik and S. Stewart	**Date**

Regional Fish Supervisor Reviewer Notes:
This rule has been in effect for 12 yrs and is now being proposed to become permanent rule. -Hujik

Approved. - Stewart

Recommended Action by Regional Fish Supervisor Approve ☒ Reject ☐

Species Team Regulation Proposal Review Checklist

Proposal Title		
Author	**Reviewer** Walleye Team	**Date** 12/14/11

Species Team Reviewer Notes:
Wisconsin River- make permanent 20-28" protected slot. Team recommends advancement.

Data support the effectiveness of this rule in increasing the density of walleye within the protected slot while still providing a healthy consumptive fishery. Recruitment has decreased but is still robust, and the regulation is incomparably popular among anglers in this high-profile, year-round fishery.

Recommended Action by Species Team Approve ☒ Reject ☐