

Regulation Proposal Form

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Proposal Title Eliminate 10 panfish bag limit on Thompson Lake, Pepin County	
Author Marty Engel	Date June 24, 2011
Location Information:	
Affected water(s) Thompson Lake	
County Pepin County	WBIC(s) 2055200
Upstream/downstream boundaries, if applicable—Law Enforcement should be consulted N/A	
Will this regulation affect Ceded Territory water and are there any anticipated impacts to tribal fisheries? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Current Regulation The daily bag limit on panfish is 10 in total.

Proposed Regulation General Inland Waters - panfish daily bag limit, 25 in total.

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) Simplify regulations when special regulations are found to be ineffective and no other alternatives are applicable.
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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). Thompson Lake is a 42-acre, eutrophic, drainage lake located in the floodplain of the Chippewa River near Durand in Pepin County. Pepin County has very few natural lakes and fishing pressure is extremely high on those few that provide a fishery. Bluegill and black crappie are the most abundant species present and appear to be heavily harvested. Based on a 2001 comprehensive survey, total annual mortality rates for bluegill and black crappie were 88% and 85% respectively. Thompson Lake has a history of slow growth rates early in life. Recruitment of any number of older, quality bluegill and crappie is poor. It is uncertain whether high mortality rates are a product of fishing and/or natural mortality.
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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) Simplify regulations when special regulations are found to be ineffective and no other alternatives are applicable. 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)). Using the 2001 lake survey data, the original 10 bag limit proposal was supported by the Fast 2.0 yield per recruit model. It projected a reduction in bag from 25 to 10 would increase bluegill in the 6 inch class by 20%, 7 inch class by 200% and 8 inch and larger by 5%. This proposal was submitted by a previous Pepin County Biologist who I believed worked with local sporting groups and the conservation congress to develop the original proposal.
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Current Problem

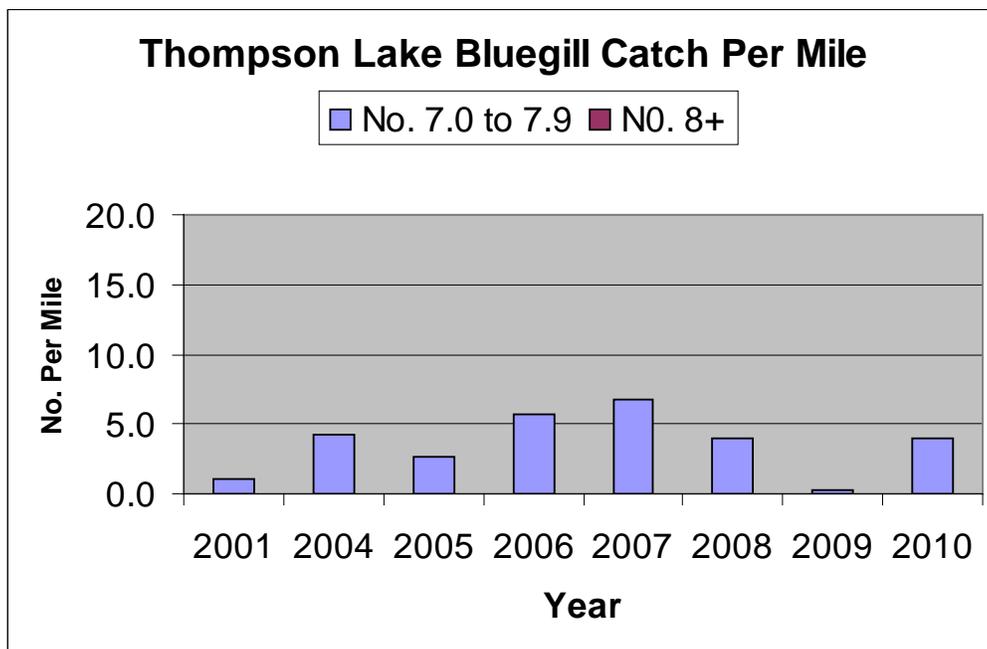
Use survey data or provide context for a similar water or group of waters (e.g. lake type, watershed) to demonstrate how the fishery is not meeting the desired management objective. Identify hypothesized problem(s) you hope to address.

Following the implementation of a panfish bag limit reduction of 25 to 10 (spring of 2004), Thompson Lake has not shown any significant positive trends in size structure during the past seven years (Table 1 and Figure 1). No positive changes were detected when looking at average pre and post data CPE for bluegill 6 inches and greater (64.7 vs. 66.2), 8 inches and greater and RSD 8 values. However, slight positive but insignificant increases were detected when comparing pre and post averages for bluegill 7 inches and greater (2.7 vs. 3.9), PSD (15.8 vs. 31.8) and RSD 7 (0.6 vs. 2.1). Such limited changes fall short of improving overall bluegill size structure.

Table 1. Thompson Lake, Pepin County, spring electrofishing bluegill catch per unit effort (no. per mile), proportional stock density and relative stock density values for pre and post bag limit surveys.

	Pre-data	Pre-data	Post-data	Post-data	Post-data	Post-data	Post-data	Post-data
Year	2001	2004	2005	2006	2007	2008	2009	2010
Total	260.3	605.7	291.3	199.0	184.3	117.3	264.3	240.0
≥3"	258.0	581.0	281.3	196.3	178.3	117.0	260.7	239.0
≥6"	43.0	86.3	67.0	73.3	65.0	32.7	45.3	114.0
≥7"	1.0	4.3	2.7	5.7	6.7	4.0	0.3	4.0
≥8"	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PSD	16.7	14.9	23.8	37.4	36.4	27.9	17.4	47.7
RSD 7	0.4	0.7	0.9	2.9	3.7	3.4	0.1	1.7
RSD 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Figure 1. Thompson Lake, Pepin County, spring electrofishing bluegill catch per unit effort (no. per mile) for 7 to 7.9 inch and 8 inch and greater size groups.



Growth and high mortality rates continue to be a problem in Thompson Lake. Growth rates remain poor early in life (Table 2) and recruitment of older, larger fish are extremely limited to absent.

Age	Statewide			Thompson Lake									
	Mean	Std.	Length	2006		2007		2008		2009		2010	
				Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.	Mean	Std.
	Length	Dev.	Length	Dev.	Length	Dev.	Length	Dev.	Length	Dev.	Length	Dev.	
1	3.3	1.1	2.2	0.0	2.4	0.1	2.9	0.3	2.6	0.2	2.7	0.7	
2	4	1.1	3	0.3	3.3	0.5	3.8	0.5	3.2	0.4	3.6	0.4	
3	4.8	1.1	4.4	0.5	4.7	0.4	4.9	0.4	4.4	0.5	4.6	0.3	
4	5.8	1.3	5.6	0.4	5.6	0.5	6	0.4	5.5	0.4	5.6	0.4	
5	6.4	1.2	6.4	0.5	6.7	0.5	6.7	0.3	6.2	0.3	6.6	0.4	
6	7	1.1	6.9	0.3	7	0.4	7.1	0.2	6.6	0.2	7.4	0.2	
7	7.6	1.1	6.8	0.5	7.3		7.2		7.2				
8	8	1	6.9	0.6									

Parsons and Bradford, 1998 in the Minnesota Dept. of Nat. Res. Investigational Report 468 titled “Angler Exploitation of Bluegill and Black Crappie in Four West-Central Minnesota Lakes” **concluded; lakes with good growth, reducing bluegill exploitation will improve the potential for large bluegill. Managing for large bluegill with reduced exploitation should only be attempted in lakes where growth rates exceed lake class medians and bluegill reach 8 inches prior to age 8.**

In other words bluegill lakes with fast growth and high exploitation may be the best candidates to improve bluegill size structure through the use of a reduced bag limit. Such conditions of growth explain successful results from Squaw and unsuccessful results from Thompson Lake. Squaw Lake bluegill growth exceeds statewide averages and bluegill reach 8 inches before age 8, while Thompson Lake bluegill do not.

Based on the Fast 2.0 yield per recruit model for Thompson Lake, a reduction in bag from 25 to 10 would increase bluegill in the 6 inch class by 20%, 7 inch class by 200% and 8 inch and larger by 5%. Based on the last six years of post bag limit data, the regulation did not meet expectations and therefore modeling the change has been unsuccessful.

Some indication of improvement may be apparent; however 1) the limited magnitude of change and inability to sustain may not be worth the complexity of special regulations and 2) any change may simply be natural variation within the population. The chance for any future successful results on Thompson Lake at this time, appear nonexistent. The special regulation should be eliminated.

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...

Elimination of the 10 panfish bag limit regulation for Thompson Lake will result in the removal of the special regulation listing in the Fishing Regulation Guide under Pepin County, therefore creating less complexity in the Guide. Thompson Lake panfish regulations would then fall under the statewide guidance of a 25 panfish bag limit.

We have seen our PSD levels at around 40 the last few surveys, with slight increases in CPE. We hope to continue to see increases in CPE to upwards of 300-350/hour, with PSD's in the range of 50-60 and RSD7 near 20.

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.

N/A

Previous Action

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

N/A

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...

During winter of 2009 a power point presentation was given to the Durand Sportsmans Club showing preliminary results of the 10 panfish bag limit evaluation. Preliminary results indicated the 10 panfish bag limit on Thompson Lake failed to produce any significant change in bluegill quality, growth rates were slow and Thompson Lake most likely was not a good candidate for the regulation. They were informed the regulation probably would be removed upon completion of the study. There was general support for the change.

Small Business and Fiscal Effect

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

No economic impact is anticipated.

Draft Question: for inclusion in Spring Hearing questionnaire

This proposal would (insert proposed regulation): A ten year investigation was conducted to evaluate the success or failure of a 10 panfish bag limit to improve quality panfish populations in Thompson Lake, Pepin County. That investigation found Thompson Lake to suffer from slow growth and was unable to document any significant improvements in the quality of the panfish population. Therefore, the Department recommends the 10 panfish bag limit be eliminated and replaced by the standard statewide panfish bag limit of 25. Such a change would simplify regulations when special regulations are found to be ineffective and no other regulation alternatives are applicable.

The Management Goal is: To simplify regulations when special regulations are found to be ineffective and no other alternatives are applicable.

This regulation proposal is one tool to help meet the management goal because:

Do you favor : the elimination of the panfish 10 bag limit regulation on Thompson Lake, Pepin County which would be replaced by the statewide general panfish bag limit regulation of 25?

Fish Team Supervisor Regulation Proposal Review Checklist

Proposal Title Eliminate 10 panfish bag limit on Thompson Lake, Pepin County		
Author Marty Engel	Reviewer Bob Hujik	Date 7-07-2011
Fish Team Supervisor Reviewer Notes: Simplification of rules. The 10 bag did not work so we are reverting back to the statewide regulation.		

Recommended Action by Fish Team Supervisor

Approve Reject

Regional Fish Supervisor Regulation Proposal Review Checklist

Proposal Title Eliminate 10 panfish bag limit on Thompson Lake, Pepin County		
Author Marty Engel	Reviewer Bob Hujik	Date 7-07-2011
Regional Fish Supervisor Reviewer Notes: Good reason to simplify regulations.		

Recommended Action by Regional Fish Supervisor

Approve Reject

Species Team Regulation Proposal Review Checklist

Proposal Title Eliminate 10 panfish bag limit on Thompson Lake, Pepin County		
Author Marty Engel	Reviewer Panfish Team	Date 12/14/11
Evaluation Plan (Suggested plan and timeline for evaluating whether the objectives are being met in response to the regulation change)		
Is there a scientifically valid evaluation plan to determine whether the regulation was effective in achieving the objective?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Were additional potential courses of action included?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Previous Action (regulation history, include whether the proposal has previously been proposed)		
Is this complete?		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Species Team Reviewer Notes:

The panfish team recommends moving this proposal forward. It is a straightforward request to revert back to the statewide regulation. We have a few comments, questions and suggestions that do not affect our decision..

Background Information: The 10 panfish rule on Thompson Lake was developed by Heath Benike in 2002 when he managed Pepin County and I developed the Squaw Lake proposal in St. Croix County. When Heath transferred to Polk/Barron County I was assigned Pepin county and completion of Heath's part of the panfish project.

A 10 panfish bag limit evaluation was drafted to include both Thompson Lake, Pepin County and Squaw Lake, St. Croix County.

1. What types of analyses were completed to compare the pre and post data? Were there enough data to do a statistical analysis or are the analyses not described? Is this something we can help with in the future?

There was only two years of pre data available for Thompson Lake and six years of post data. The ability to do statistical analysis is questionable due to limited pre data. The findings to date are reported in the attached interim report. If someone wishes to review the data for statistical evaluation I am open to that. During this last biennium work plan the panfish evaluation project was cut. Therefore, I have not spent any more time doing a final evaluation other than this report. I believe the report clearly shows failure on Thompson Lake and it is proof enough to defend the regulation change without statistical analysis.

2. The evaluation section was entered as N/A. We assume that you will still be sampling the lake as part of the monitoring sampling rotations. We hope that data will be collected in the future to add to this great data set.

Thompson Lake is next scheduled for 2016.

3. There is some question as to how crappie fit into this regulation proposal since Thompson Lake was said to also contain "abundant and heavily harvested" crappie. However, no crappie data were presented. If we are basing our decision entirely on bluegill, we should say so. If the author knows more about crappie, maybe it should be mentioned.

Crappie was not included in the study because funding of the 10 bag panfish evaluation was limited to one night of electrofishing per lake each spring and the difficulty in obtaining a reasonable crappie sample with one night of effort (we simply cannot effectively sample crappie with one night of electrofishing). So the primary focus was placed on bluegill where we were confident that a reasonable sample could be obtained in one night. Bluegill therefore became the indicator species and success or failure was based on the bluegill response.

While statements were made during post surveys about crappie being abundant and heavily harvested in Thompson Lake no such data exists to substantiate it. Data is available to prove total mortality is high but there is no link to over fishing as the primary reason.

Bluegill growth is slow and mortality is high, such information in my opinion suggests there are other factors other than fishing that are responsible for high mortality. My professional opinion should also matter, it is my professional opinion that crappie suffer the same fate as bluegill.

4. The stated Goal and the stated Objective is "Simplify regulations when special regulations are found to be ineffective and no other alternatives are applicable." For the author's future consideration, I would submit that the above statement is a well-written strategy, but goals and objectives are different and should reflect the manager's vision of the end product. For example, a good goal statement might be "A bluegill population that provides the opportunity for anglers to catch at least a few preferred-size fish on any given trip." And a corresponding objective, being more specific and measurable by definition, might simply be "Bluegill RSD8 = 3-5%." I'm not saying these should be the target goal or objective for Thompson Lake; I'm just offering this language as an example of appropriate expressions of goals and objectives. Given the author's feeling that Thompson Lake is generally not capable of producing many sizeable bluegills (I trust his data and judgment on that), he might eventually want to write a different goal and a different objective that reflects his low (and presumably more realistic) expectations.

We certainly could have included this type of goals and objectives. It is only word smithing at this time. Our data on Thompson Lake has not changed, RSD8 equals Zero, both pre and post data.

5. The Draft Question says, "That investigation found Thompson Lake to suffer from slow growth..." I would submit that the lake is not suffering from slow growth, but the bluegills are. And apparently we don't know about the crappies. So let's just be clear that we are proposing to drop this special regulation on the basis that bluegills are not responding as hoped, because they continue to grow too slowly to expect the desired number or proportion of them (never stated originally or now) to achieve 7 or 8 inches in length. If we want to change the Draft Question to specifically state bluegill growth is slow I am fine with that. The results are perfectly clear to me. Perhaps those reviewing the proposal need to give the author a chance to defend or clear up questions in person.

Recommended Action by Species Team

Approve Reject