

Regulation Proposal Form

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Proposal Title Bass Regulation Change - No Minimum Size Limit with protective slot	
Author Gregory Matzke	Date 7/7/2011
Location Information:	
Affected water(s) Trump Lake	
County Forest	WBIC(s) 0479300
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 18-inch minimum length limit, 1 fish daily bag limit
Proposed Regulation No minimum length limit, 14 inch to 18 inch protective slot with only 1 fish over 18 inches, daily bag limit of 3 fish.
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) To decrease largemouth bass abundance, increase size structure and offer harvest opportunity on a high density slow growing population of largemouth bass.
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). Trump Lake covers a total of 172 acres with a maximum depth of 20 feet. It is a drained lake with no inlet and one outlet to Eugene Lake. The shoreline development is intense with an average of one structure every 147 feet (Young 2002). There is one public boat landing on Trump Lake providing public access. The fishery is dominated by an abundant largemouth bass population (2011 = 13.64 adults/acre). There is a low density walleye population (1998 = 0.8 adults/acre) that is being maintained via private stockings by the lake association. Muskellunge appear to be reproducing naturally and have a low relative abundance. Smallmouth bass and northern pike exist in very low abundances and probably provide little angling opportunity. Among the panfish, bluegill are more abundant than other panfish species. There is a history of abundant slow growing panfish which led to this protective bass regulation. During our 2011 fish surveys we did not collect pan fish, but visual observations from the boom shocker showed an abundant population of small bluegills. This is consistent with past surveys. Without actual pan fish analysis we can't tell if the pan fish size structure has increased with the current restrictive regulation. But from what we observed it appears the regulation did not change the pan fishery into one of good size structure. Bass Fishery: A two night electro fishing survey was conducted in 2011 to estimate abundance, size structure and growth of largemouth bass. This survey showed an over abundant largemouth bass population with poor size structure and growth rates. No smallmouth bass were observed during the 2011 surveys. A low abundance of smallmouth bass have been present during previous surveys of Trump Lake. Bass Abundance:

Largemouth bass abundance was estimated at 13.64 adults/acre in 2011. During our two electro fishing surveys the relative abundance was 86 and 114 largemouth bass caught per hour of electro fishing, we were only able to track the distance shocked during the 2nd electro fishing survey which lead to a catch rate of 51.6 bass/mile. The overabundance of largemouth bass has led to decreased size structure and below average growth.

Bass Size Structure:

A total of 401 largemouth bass were captured during the 2011 surveys, of which only 11 fish were > 14.0 inches and only 3 fish were > 15.0 inches in length, with the largest fish being 15.3 inches long. Trump Lake currently has extremely poor size structure of largemouth bass. Previous surveys conducted shortly after the 18-inch minimum length limit was applied showed a larger size structure including largemouth bass up to 22.0 inches (table 1).

Table 1. Size structure analysis, using relative stock density, for LMB captured during 2011 compared to the LMB size structure from 1998 (2 seasons after 18-inch MSL).

	2011	1998
RSD12:	53.27	42.9
RSD14:	2.76	10.1
RSD16:	0	3.4
RSD18:	0	2.5
RSD20:	0	1.7

Bass Growth:

Scale samples taken in 2011 from Trump Lake largemouth bass show growth rates similar to growth rates measured in 1998 (2 seasons after the 18-inch MSL) for fish age 2-10, during 1998 a few older fish were captured demonstrating above average growth at ages 10+. No fish greater than age 10 were captured during 2011 so no comparison could be made for growth rates of older largemouth bass. The sample size was very small for fish age 10+ in 1998 so those growth numbers may not have been representative of the total population, however it does show above average growth rates for a few individual fish and the potential to reach a large size. Both the 1998 and 2011 growth rates for Trump Lake are well below average for lakes in our region (Table 2). At the current conditions it takes largemouth bass over 6 years to reach 12 inches long and over 8 years to reach 14 inches. These slow growth rates are likely related to the lake's inherent nutrient-poor chemistry and resultant low productivity (Young 2002).

Table 2. Growth, indexed using average length at age, for LMB collected during 2011, compared to the 1998 survey and the NOR region average.

Age	2011 Mean L	1998 Mean L	NOR Ave Mean L
2	7.2	n/a	6.6
3	8.15	7.8	9.0
4	9.41	8.8	10.8
5	10.62	10	12.7
6	11.7	11.3	14.3
7	13.26	12.7	15.7
8	13.87	13.7	17.0
9	14.97	13.7	17.9
10	14.13	15.3	18.5
11	n/a	20.3	19.5
12	n/a	n/a	19.1
13	n/a	19.8	18.4
14	n/a	22.0	20.2

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
Decrease the relative abundance of adult largemouth bass to under 75 bass per hour and increase RSD14 to a value greater than 15 within the next 10 years.

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)).

These levels were developed based off the size structure analysis from 1998 (just 2 years after the 18-inch minimum size limit was applied). During the 1998 survey the RSD14 value was approximately 10.1. By protecting fish between 14 and 18 inches and decreasing the abundance of small fish there is no reason the RSD14 value should not be higher than it was under the 14-inch minimum size limit.

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.

The current 18 inch minimum length limit has essentially eliminated harvest of largemouth bass (largest surveyed in 2011 was 15.3 inches) and increased the abundance to over 13 adults/acre (86 and 114 bass/hr of electro fishing). The current population is overabundant and having negative impacts on the size structure of bass in Trump Lake.

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...

Removing the minimum size limit will increase the harvest of largemouth bass, therefore decreasing the abundance. Reduced abundance would have positive impacts on the size structure and provide a much more enjoyable fishing opportunity. By protecting fish between 14 and 18 inches the density of these larger adults should increase creating a quality angling opportunity.

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.

A late spring electrofishing survey will be conducted on Trump Lake within 5 years of the regulation change and again 10 years after the regulation change to evaluate the results. During this survey CPE will be documented as well as size structure analysis to determine whether goals have been met. If goals have not been met and the size structure has not increased it would most likely be due the growing popularity in catch and release bass fishing. At that point it would be time to educate the public to the problems with the bass population in Trump Lake to increase the harvest on the population.

Previous Action

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

Past bass fishing regulations on Trump Lake have followed the general inland rules for the state until the 18-inch minimum size limit, 1 fish bag limit was applied in 1996.

If no action is taken to reduce the 18 inch minimum size limit Trump Lake will continue to maintain an overly abundant population with poor size structure, failing to provide a quality angling opportunity.

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...

The Trump Lake Association and other local residents are strongly in favor of this regulation change (Contact: Quentin Velicer). As a WCC advisory question at the 2011 spring hearings 74.4% of the voters were in favor of reducing the 18-inch minimum size limit and 1 fish daily bag limit to the statewide 14-inch minimum with a 5 fish daily bag limit. Based on the data gathered during the 2011 surveys a no minimum with a 14 to 18 inch protective slot is more appropriate to solve the problems with the bass population in Trump Lake since only about 2% of the bass sampled would be of legal size under the 14 inch minimum size limit.

Small Business and Fiscal Effect

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

This would provide a better bass fishing opportunity in the Wabeno area and could attract more fishermen to the area.

Draft Question: for inclusion in Spring Hearing questionnaire

This proposal would (insert proposed regulation):No minimum length limit, 14 inch to 18 inch protective slot with only 1 fish over 18 inches, daily bag limit of 3 fish.

The Management Goal is:To reduce the abundance of largemouth bass and increase size structure.

This regulation proposal is one tool to help meet the management goal because:The current 18 inch minimum size limit and 1 fish bag limit is not adequate to provide a quality bass fishery. Under the 18 inch minimum size limit the population has grown overly abundant which is having negative impacts on bass size structure. It is recommended that there be no minimum length limit with a protected slot from 14 to 18 inches (1 fish over 18") and a daily bag of 3 fish be applied to increase the harvest of smaller bass and protecting larger fish. A reduction in bass abundance should have positive impacts on bass growth and size structure in Trump Lake.

Do you favor : removing the minimum size limit, adding a protective slot from 14 to 18 inches and increasing the daily bag limit from 1 to 3 fish in total (only 1 over 18") for bass on Trump Lake in Forest County?

Fish Team Supervisor Regulation Proposal Review Checklist

Proposal Title No Minimum, 14" to 18" Protected Slot - Trump Lake		
Author Greg Matzke	Reviewer Mike Vogelsang	Date 7/8/11
Location Information		
Affected waterbody(ies)? Trump Lake		
County Forest	WBIC(s) 0479300	
Fish Team Supervisor Reviewer Notes: This proposal (like Patten Lake) should have received attention two rule cycles ago, but did not due to biologist vacancy. This will be another high-ranking proposal in order of priority for Headwaters. It appears the 18" minimum 'worked' from a standpoint of building numbers but impacted size structure negatively and severely. Not much background provided about bass fishery prior to 18" min, but must have had some potential back then, otherwise quality reg wouldn't have been proposed. Slot seems to be the way to go as any "min" reg will not allow growth and bottleneck fish. A "no min" could possibly be another option here.		

Recommended Action by Fish Team Supervisor Approve Reject

Regional Fish Supervisor Regulation Proposal Review Checklist

Proposal Title Bass Slot Limit (from 18" minimum), Trump Lake, Forest County		
Author Greg Matzke	Reviewer Steve AveLallemant	Date 07/18/11
Location Information		
Affected waterbody(ies)? Trump Lake		
Regional Fish Supervisor Reviewer Notes: Growth rates are very slow and RSD14 of <3 is unbelievably low for a lake with an 18" minimum length limit. It would have been good to have some age/abundance data to prove it out but is highly likely that most bass do not live to the length limit. Abundance is also very high with electrofishing catch rates of over 100 bass/hour. There is virtually no quality in the bass fishery from an angling standpoint and no harvest opportunity either. There is considerable pressure to remove the 18" minimum length limit from the lake association as well as the local publics and culminated with a Cons Cong resolution to remove it and replace with the statewide base minimum of 14". However I support Greg's assessment that a slot would be better since virtually all of the population is less than even the 14" minimum. Improvement in panfish size structure was a major goal of the original regulation proposal (it was mine). It followed a couple of years of mechanical removal of panfish. It was not advanced as a trophy regulation and growth rates were never great. Greg did not sample panfish in this latest survey and so cannot evaluate that goal directly. I would perhaps reject the rule proposal until he can get that information but his visual assessment was that there were a pile of small bluegills currently. I am also thinking that bass size structure has become so poor that predation on bluegill is likely ineffective and they may be competing for the same limited food resources. Plus a slot limit would address keeping more larger bass in the population as a bluegill predator and was probably a better choice as a regulation in the first place. A straight no minimum length limit would be an option but would likely not further the goal of panfish predation if harvest was excessive.		

I am going to advance this proposal but will require an expansion of the bass size structure and growth information to include

- 1) a comparison of size structure of the current bass population with earlier surveys. It is alluded to with stating there were fish up to 22".
- 2) a comparison of growth rates for bass with earlier surveys

Recommended Action by Regional Fish Supervisor

Approve Reject

Species Team Regulation Proposal Review Checklist

Proposal Title Bass Slot Limit (from 18" minimum), Trump Lake, Forest County		
Author Greg Matzke	Reviewer Bass Team	Date 12/14/2011

Location Information

Affected waterbody(ies)?

Trump Lake

Species Team Reviewer Notes:

The bass team agrees with previous reviews and supports this proposal. The current regulation (18" min) appears to be a poor fit for the bass population in Trump Lake (very few fish greater than 15 inches). Removing the size limit is an obvious step and seems warranted and the addition of the protected slot does not seem unreasonable if the goal is to provide some larger fish. One thing to note is the question of whether fish will grow fast enough to enter the protected slot. Growth rate data from 1998 suggest similarly low growth rates as 2011 however the main difference being large fish were actually encountered. Additionally, the proposal indicates that the slow growth rates are likely due to the lake's "nutrient-poor chemistry". Seeing abundance data from previous surveys (at least 1998) could shed some light on the implications for density-dependent release of growth.

Recommended Action by Species Team

Approve Reject