

2015 Blackwater Lake Association Update

July 18, 2015

Walker Fisheries Management Staff
Carl Pedersen - Fisheries Specialist
Doug Schultz - Area Supervisor



Outline

- 2015 assessment
 - Spring bass population estimate
 - Summer gillnet
- Northern Pike statewide regulations
- Bass-walleye interactions
- Bass regulation review



Photos courtesy of
Bill Lindner Photography

How we manage a lake:

- Surveys & data
- Input
 - Lake Association
 - General Public
 - Colleagues
 - etc....

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NA-01570-01

FISHERIES MANAGEMENT PLAN (SUMMARY)

Lake Class 25

Region	Area	D.O.W. Number	County	Lake Name	Acreage
I	Walker	11-0274-00	Cass	Blackwater	Total 722 Littoral 339

Long Range Goals:

- Black crappie: None specified. Consider implementing targeted spring sampling with trap nets.
- Bluegill: Trap net catch rate of 30-50 fish/net, PSD \geq 50, RSD-P \geq 5.
- Cisco: Gill net catch rate \geq 2.0 fish/net.
- Largemouth bass: Spring electrofishing catch rate \geq 50 fish/hour, PSD \geq 70, RSD-P \geq 30.
- Northern pike: Maintain a gill net catch rate below 8 fish/net, PSD \geq 50, RSD-P \geq 5.
- Smallmouth bass: Spring electrofishing catch rate of 4 to 8 fish/hour, PSD \geq 70, RSD-P \geq 40.
- Walleye: Gill net catch rate \geq 4.0 fish/net.
- Yellow perch: Gill net catch rate \geq 5 fish/net.
- Maintain associated fish communities.
- Protect or restore desirable aquatic and riparian habitats (eg. water quality, aquatic and riparian vegetation, and shoreline substrate) where appropriate.

Operational Plan:

- Base stocking: Stock 2 lbs/LA (678 lbs.; 1 lb/LA/year equivalent) of medium walleye fingerlings during even-numbered years beginning 2012 (MIS strain, 15-35/lb, 20/lb average).
- Stocking contingency: None.
- Regulation(s): 12" maximum length limit for largemouth and smallmouth bass (implemented as C&R in 2004, converted to current in 2010). Current end date is March 1, 2016.
- Surveys: Population assessments in 2015 and 2019. Spring electrofishing targeting bass alternating years (2013-2019). Black bass population estimate using mark-recapture in spring 2015 to facilitate regulation evaluation.
- Evaluation(s): Fingerling stocking: Consistent stocking strategy over a 14-year period (2006-2019) assessed with four surveys (2008, 2011, 2015, 2019). Bass regulation: Current end date is March 1, 2016. Public notification will occur during the 2015 angling season, with analysis and public comment period during fall 2015.
- Habitat: Identify critical habitat in need of protection and/or restoration and pursue as appropriate.
- Next plan revision: 2019


Potential Plan:

Black bass population estimation (2015)	\$	3,000
Repeat 12-lake creel (2022)	\$	10,000
Purchase of critical fish habitat	\$	1,000,000
TOTAL	\$	1,013,000

NARRATIVE: (Historical perspectives - various surveys, past management, social considerations, present limiting factors, survey needs, land acquisition, habitat development and protection, commercial fishery, stocking plans, other management tools, and evaluation plans)

SEE FOLLOWING PAGES

FOR CENTRAL OFFICE USE ONLY	
Entry Date:	Year Resurvey:
Stock Species - Size - Number per Acre	
Schedule:	Year Beginning
Population Manipulation	
YES _____ NO _____ YEAR _____	
DEVELOPMENT	
YES _____ NO _____ YEAR _____	
Creel or Use Survey	
YES _____ NO _____ YEAR _____	
Other:	
YEAR _____	

Primary Species Management Largemouth Bass, Northern Pike, Smallmouth Bass, Walleye	Secondary Species Management Black Crappie, Bluegill, Cisco, Yellow Perch
Area Supervisor's Signature: 	Date: 3/28/13
Regional Manager's Signature:	Date:

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Primary Species Management

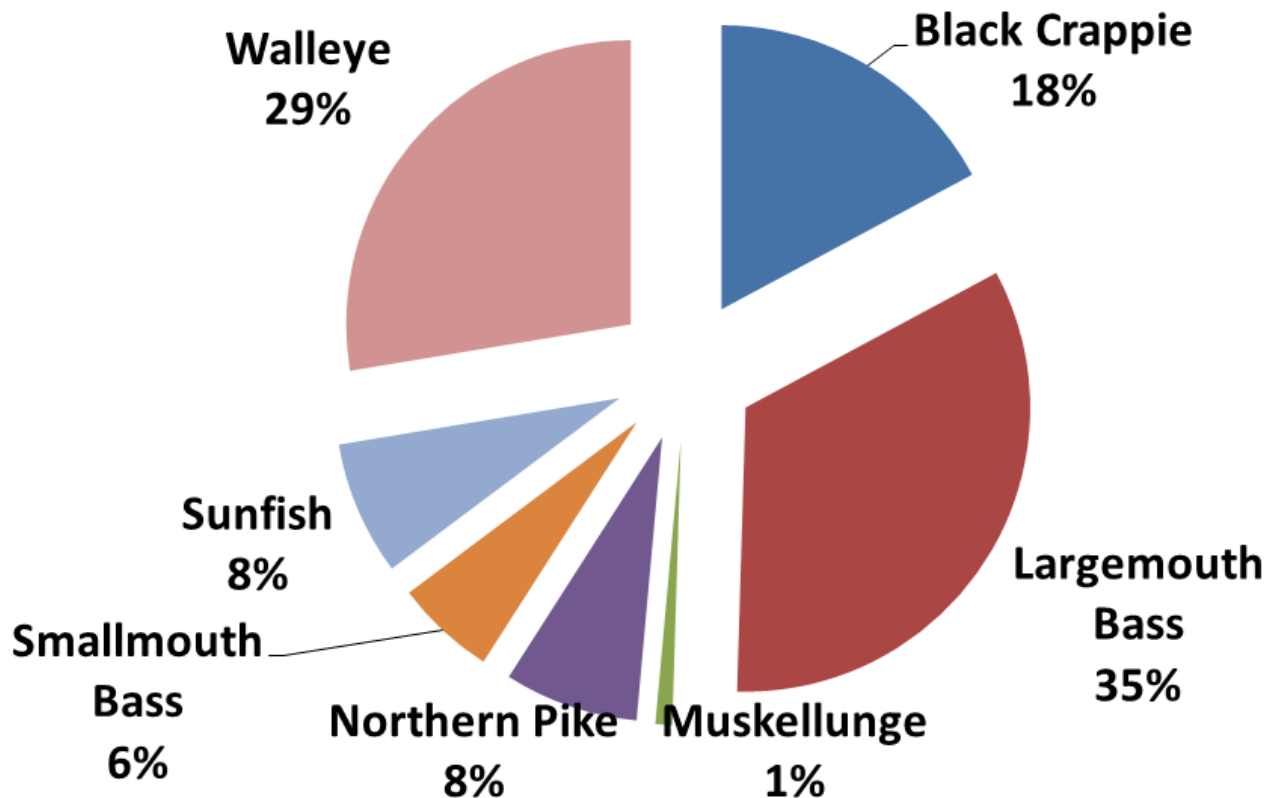
Largemouth Bass, Northern Pike,
Smallmouth Bass, Walleye

Secondary Species Management

Black Crappie, Bluegill, Cisco,
Yellow Perch

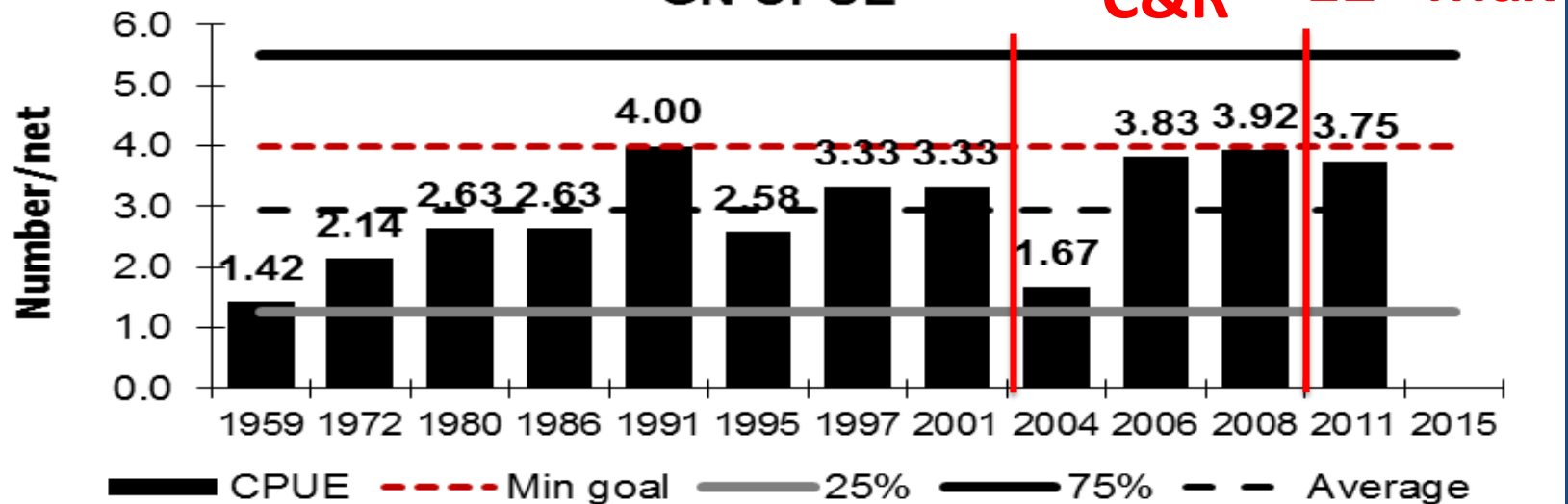
Creel Survey

**2011 Blackwater
% Targeting Anglers**

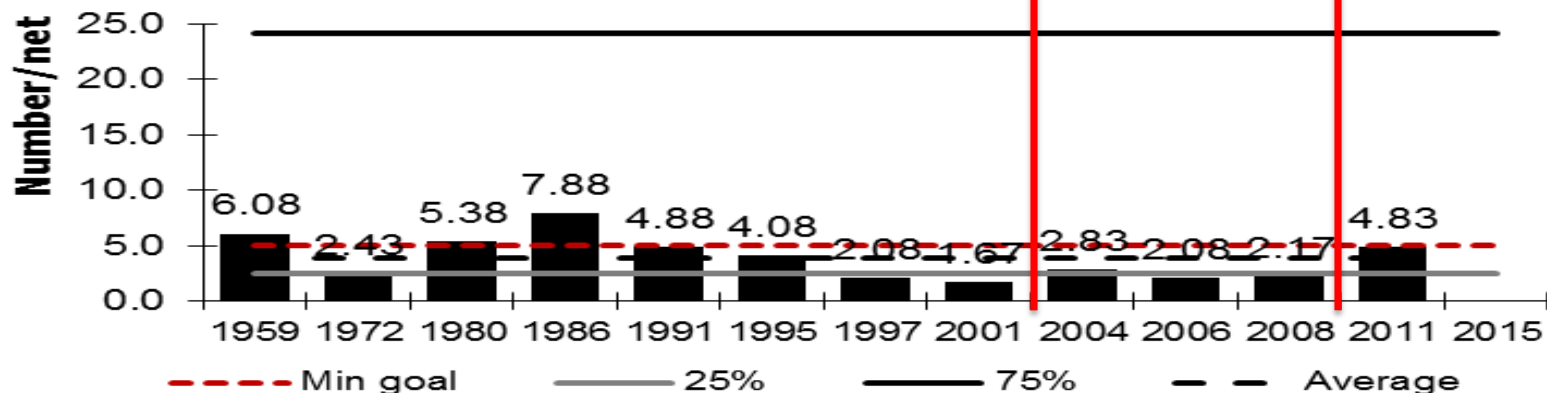


Walleye & Yellow Perch

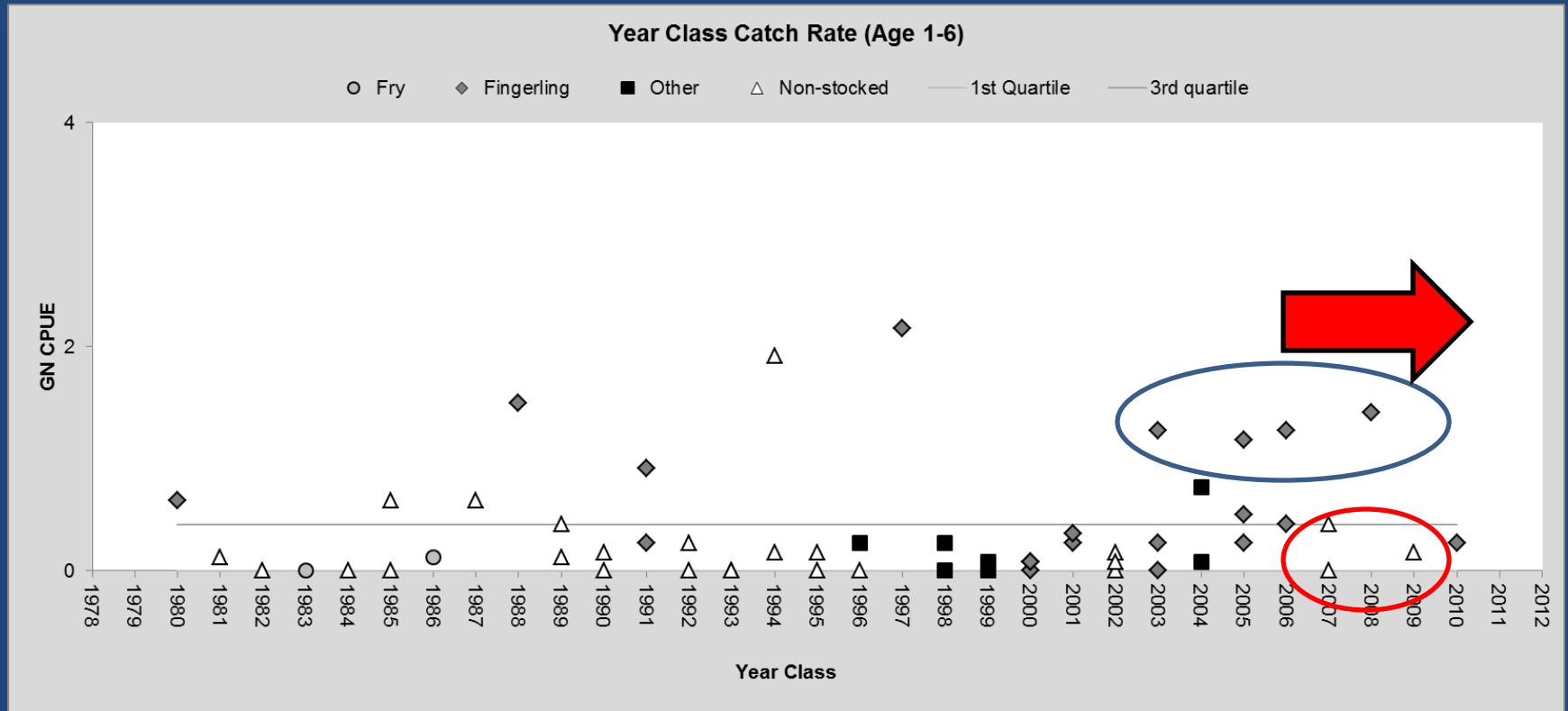
**Blackwater 11-0274 WAE
GN CPUE**



**Blackwater 11-0274 YEP
GN CPUE**

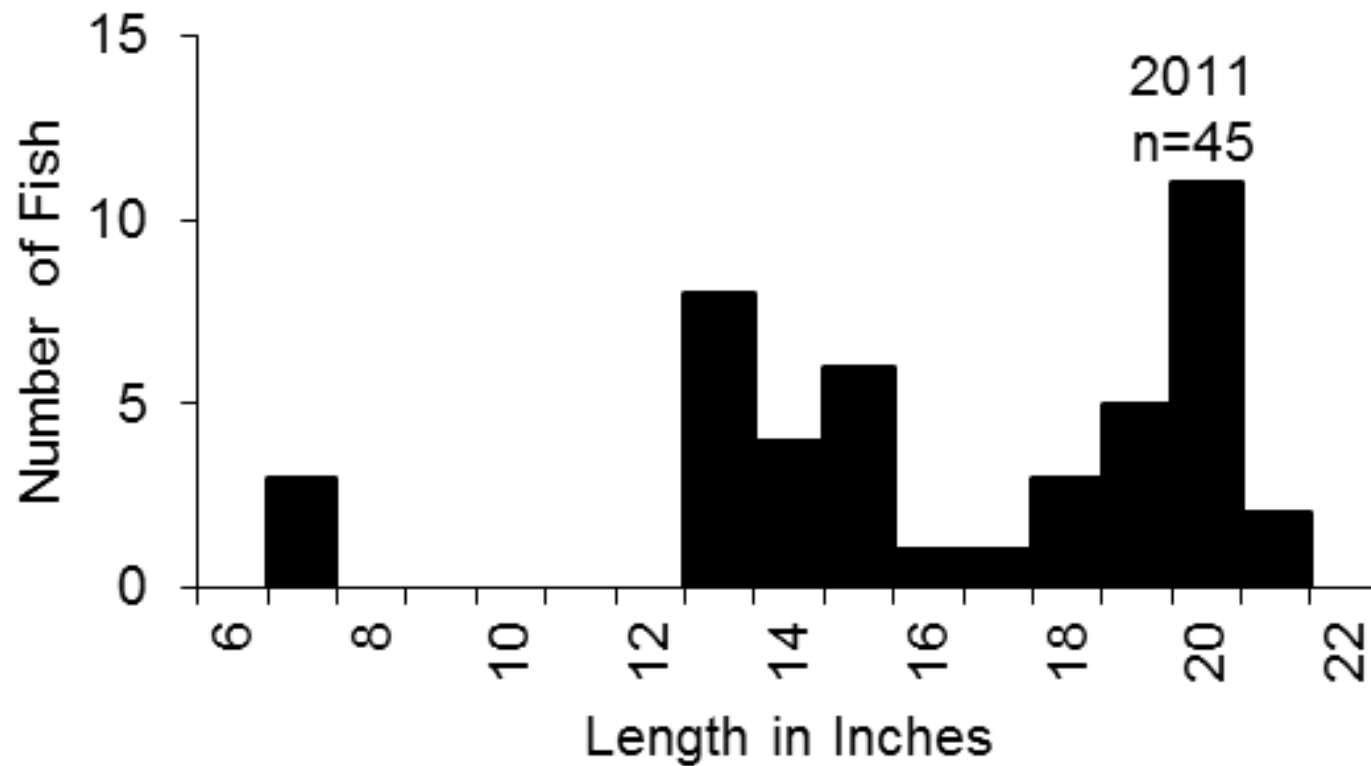


Blackwater Lake

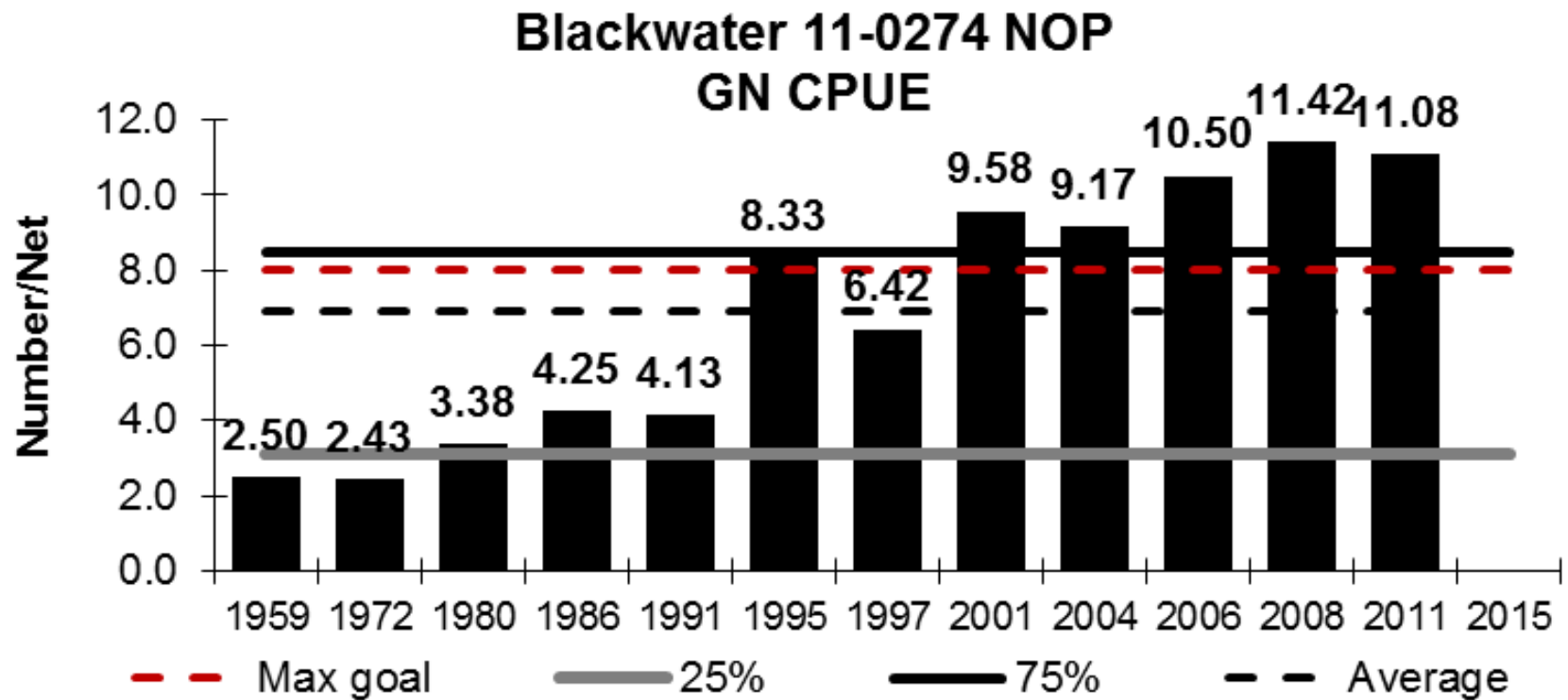


Evaluation ongoing: Fingerlings work, do twice as many fingerlings work better?

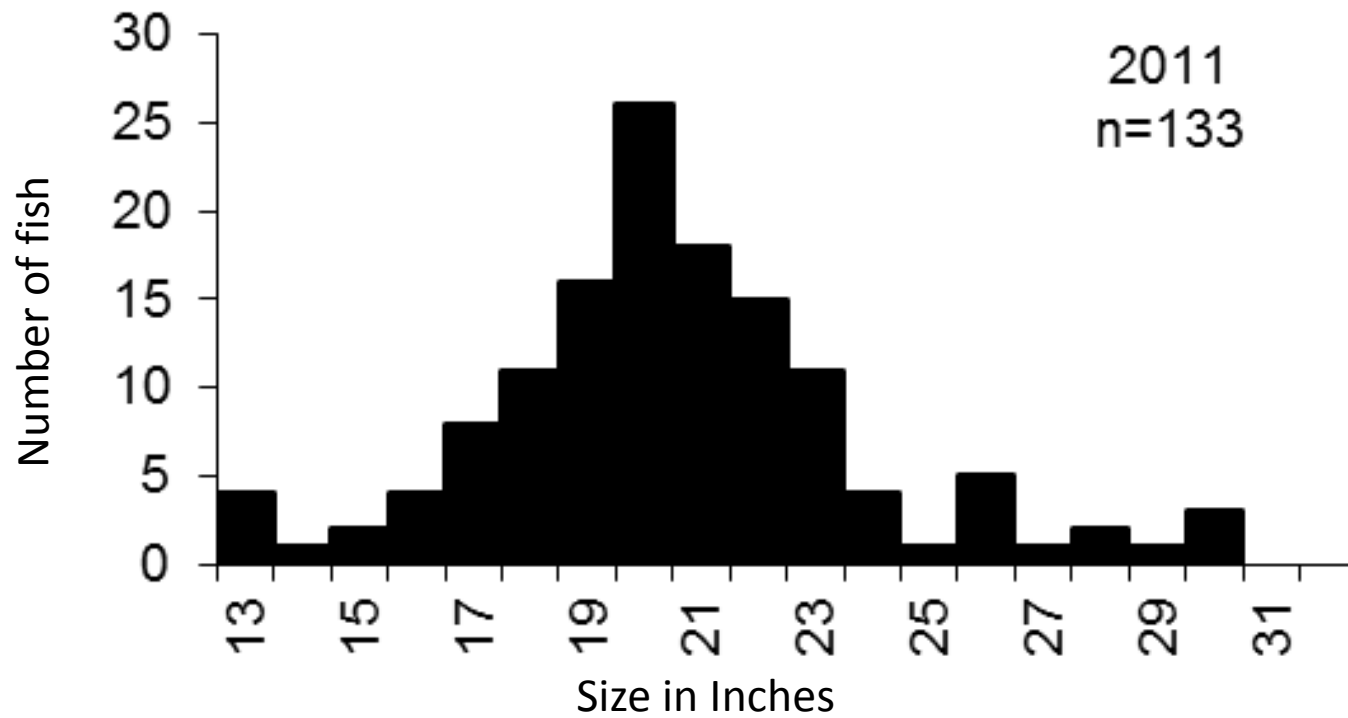
Walleye Sizes



Northern Pike



Pike Sizes



Statewide Pike Problem

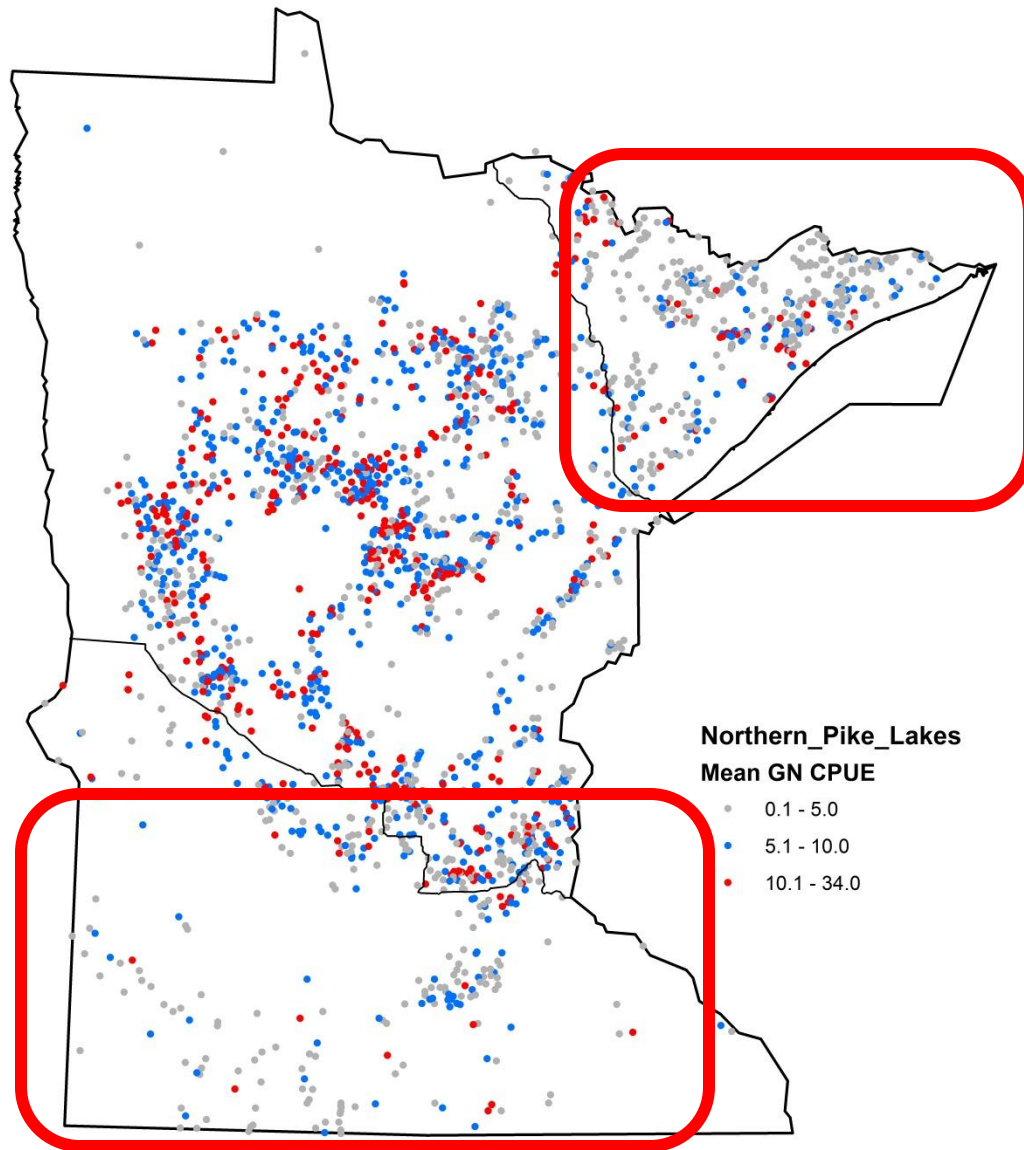
- Loss of quality pike fishing opportunity
- Shift in population size structure
- High densities of small nuisance pike
- Biological effects on fish community
 - Predation on stocked walleye
 - Loss of perch forage
 - Stunted panfish populations



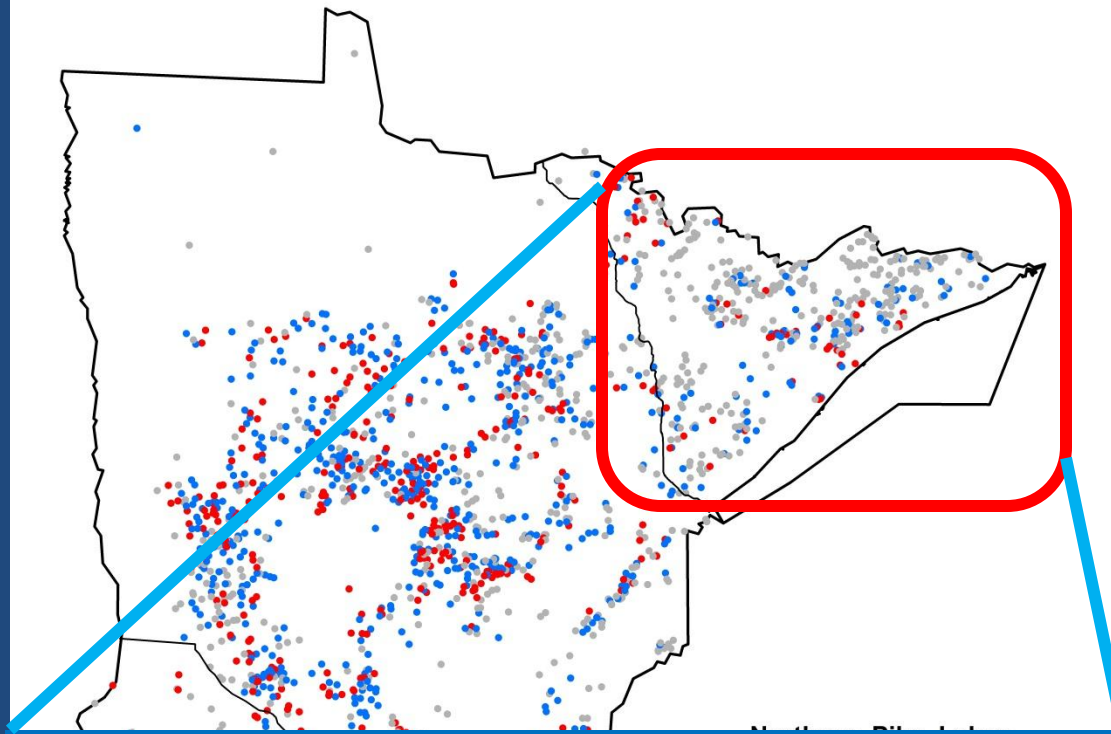




Proposed Zones



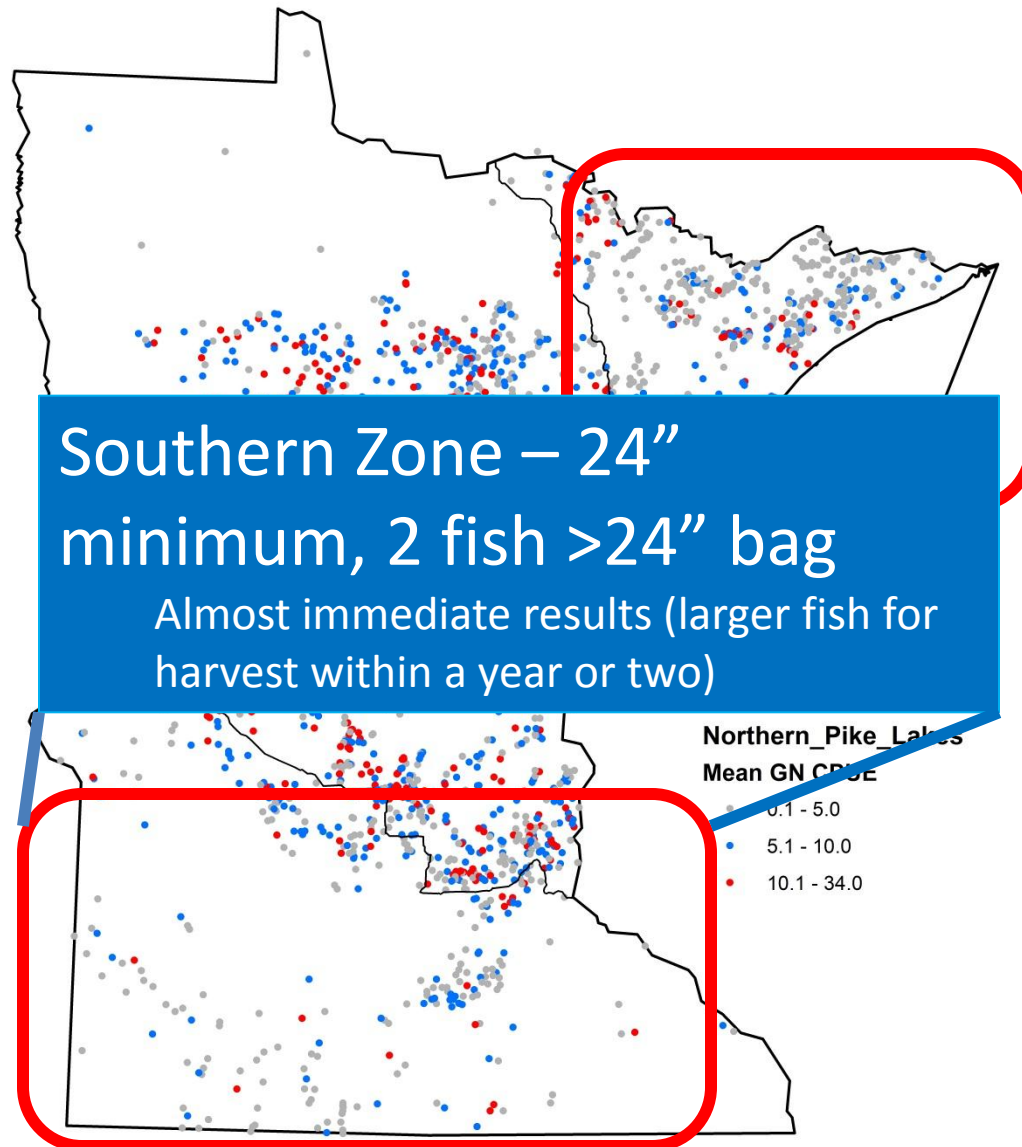
Proposed Zones



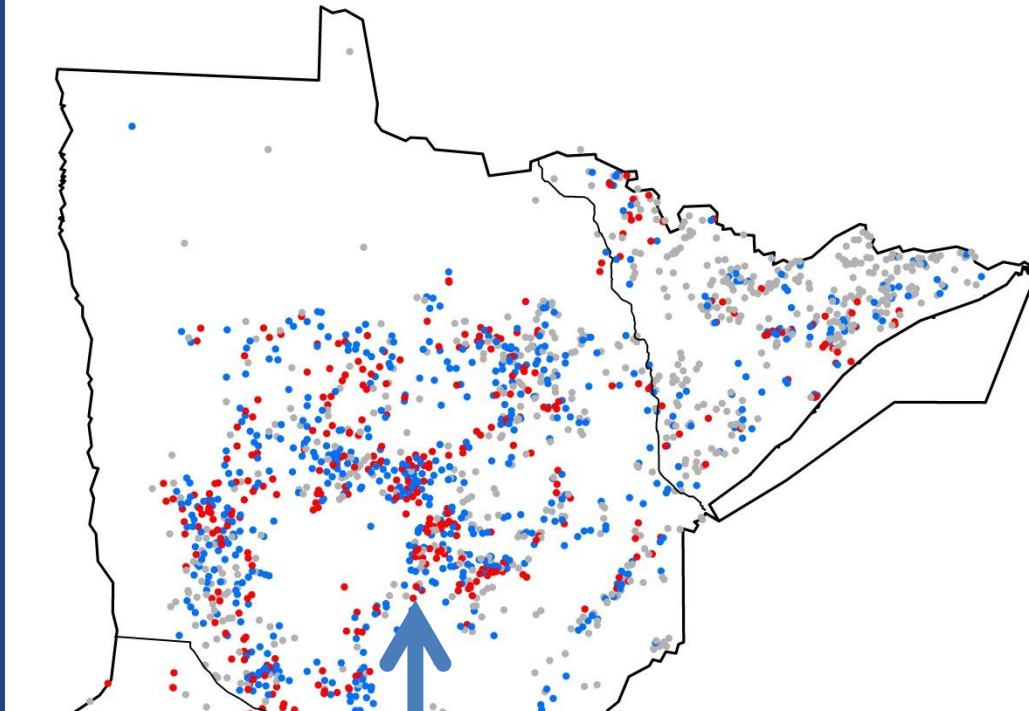
NE Zone - 30" maximum, 2 fish
<30" bag

No improvement expected
(maintain existing quality)

Proposed Zones



Proposed Zones



- NC Zone – 22-26" PSL, 10 fish bag, 2 fish > 26"
- Gradual moderate shift in size distribution
- Harvest versus trophy
- Will take time



http://www.dnr.state.mn.us/pike

Crystal Reports Viewer Northern Pike: Minnesota D...

MN Self Service Site FishPAD Software Walker, MN (56484) Weat... Google 7-Day Forecast for Latitud... Bomgar Support portal

Minnesota
Department of Natural Resources

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Home > Recreation > Fishing >


Northern Pike: Finding A Fix That Works

You'll find this voracious predator in nearly every Minnesota lake and stream. It's one of the easiest fish to catch because it so willingly bites lures or bait.

And – big or small – they're one of Minnesota's most fun fish to catch.

But the comparatively small fish often landed – what experienced anglers call hammer-handles – cause problems throughout Minnesota.

Too many of these fish, generally less than 22 inches long, in a fish population can reduce perch numbers to unhealthy levels, tip the balance toward smaller panfish and reduce the effectiveness of walleye stocking.



The Pike Problem

There isn't just one problem – or one solution – because pike populations differ in various regions of the state.

In **the northeast**, pike are present in relatively low numbers and at relatively large sizes. They reproduce naturally. Although they grow slowly, they can grow quite large because relatively few anglers scatter limited fishing pressure across a large number of lakes.

In **southern Minnesota**, pike are less abundant and don't reproduce as well as in the north. Southern Minnesota has high fishing pressure and a high harvest rate relative to the number of pike; however, these fish grow fast.

The **north-central area** is plagued by too many small pike. There is moderate to high fishing pressure and high harvest of large and medium size pike. Pike grow slowly here, and an over-abundance of small pike is the result.

One Size Doesn't Fit All

DNR fisheries is exploring the idea of implementing a zone concept for northern pike fishing. Such an

The goal is to improve pike fishing and spearing for those who are harvest-oriented as well as those keen about pursuing trophy northern pike. Working toward more balance among fish species and sizes in lakes and streams across Minnesota where pike are having a negative impact is important, too.

Learn More

Watch the video at right and the click the link below to learn more about the northern pike zone concept.

- [**Northern Pike Technical Committee presentation**](#)



Click play above to watch the video

Frequent Questions

Click a question to view or hide the answer

In the past some experimental regulations have not seen good compliance and have then proven to be ineffective. How will the proposed zone regulations for northern pike be different?

How long before these proposed regulations will produce noticeable results for anglers?

How long will the new zone regulations be in place before they are evaluated and someone decides whether they are working?

How will DNR measure angler satisfaction with the new regulations?

What kind of public input process will the DNR use with respect to the zone regulations?

If the Legislature approves new regulations, when would they go into effect?

What about existing special and experimental regulations for northern pike?

Participate & Discuss

As local and area meetings are scheduled, they'll be listed on this page.

Have a question or want to leave an informal comment? Then use the form below. The frequent questions section will be updated to reflect the most common questions and comments.

To get notices when new or updated information becomes available, including local or area meetings where the concept will be explained and discussed, sign up for email updates.

Your Question or Comment



Get Pike Zone Updates

Get regular updates on how to participate in a citizen dialog on establishing northern pike fishing zones in Minnesota.

Submit

Other Species

- Sunfish*: abundance is down and sizes are small
- Black crappie*: few, small fish
 - Targeted spring sampling needed
- Cisco (Tullibee): historic low (2011)
 - Marginal lake for Cisco under climate change

Summary

- Walleye: No changes in abundance or sizes despite stocking efforts (so far)
- Pike: Numbers steadily increasing, avg. 20" and (holding/shrinking/increasing)
 - Good candidate for new statewide proposal
- Bass have "settled in" post-regulation
 - Abundance lower, average size increasing(?)

Bass-Walleye Interactions

- Bass populations expanding in Upper Midwest
 - Warmer summers
 - Improved water quality & vegetation
 - Catch & Release
 - Introductions
- Investigations underway in Minnesota and Wisconsin

Fish Lake Reservoir, MN

- Expanding bass, bluegill, and black crappie populations
- Declining walleye population, poor recruitment



Are bass eating small walleye in Fish Lake?

- 2011-2012: zero walleye found in 148 bass stomachs examined
- Other factors?



Wisconsin Study

- 4 lakes, approx. 200-1,200 acres
- May-October, 2012-2013
- 1 WAE in 945 LMB stomachs
- Diet overlap between LMB and WAE when YEP limiting
 - Forces WAE to eat LMB food
 - Works against WAE production

Are bass negatively affecting walleye in Blackwater Lake?

- Not predation, maybe competition
- Improved water quality
- Warmer & longer summers
 - Favors bass, bluegill/crappie, & pike reproduction, foraging, and survival
 - Works against walleye fishing (low-light)



Key Points

- If predation is limiting recruitment, pike are most likely culprit
- Cannot ignore declining perch (forage)
 - Potential for competition
 - Works against WAE management
- Habitat shifts benefit bass, bluegill, and pike & may impact walleye behavior

What you can do

- Communicate
 - Property owners, resort owners, & guests
- Encourage harvest of pike <24"
- Understand that stocking does not equal catching
- Continue to work with Walker staff
 - Special thanks to those who assisted with work this year

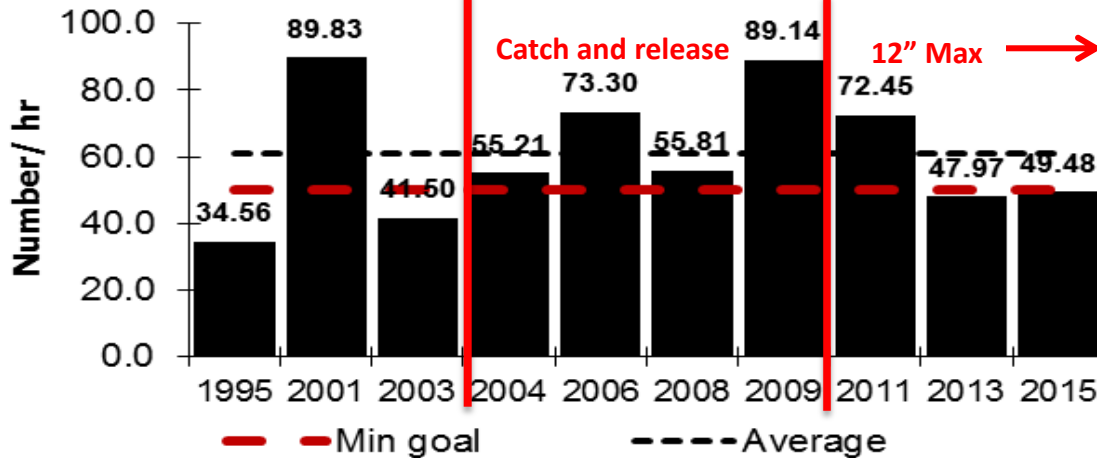
Bass Regulation Review

A man wearing sunglasses and a light-colored shirt is holding a large bass fish. The fish is green and white, with its mouth open. The background shows a blue sky with clouds and a boat.

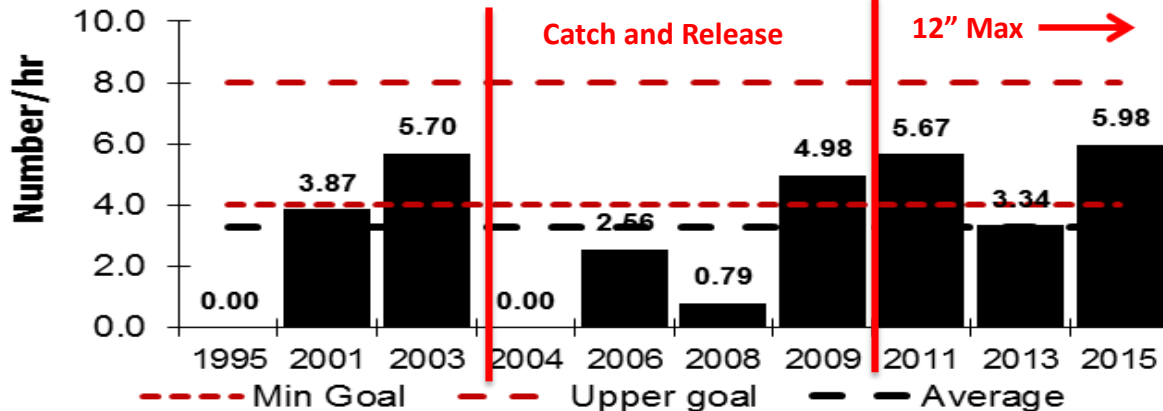
- Implemented spring 2004
- Modified 2010
- Goal: improve size structure of population

Bass Electrofishing Catch Rates

**Blackwater 11-0274 LMB
EF CPUE**

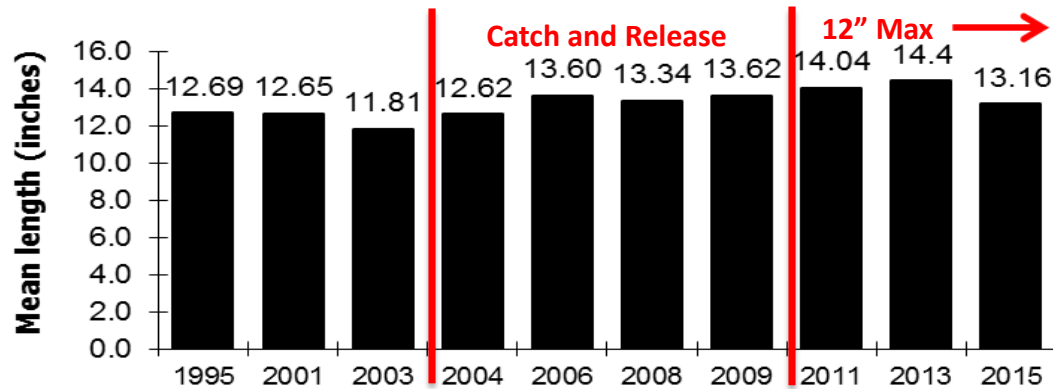


**Blackwater 11-0274 SMB
EF CPUE**

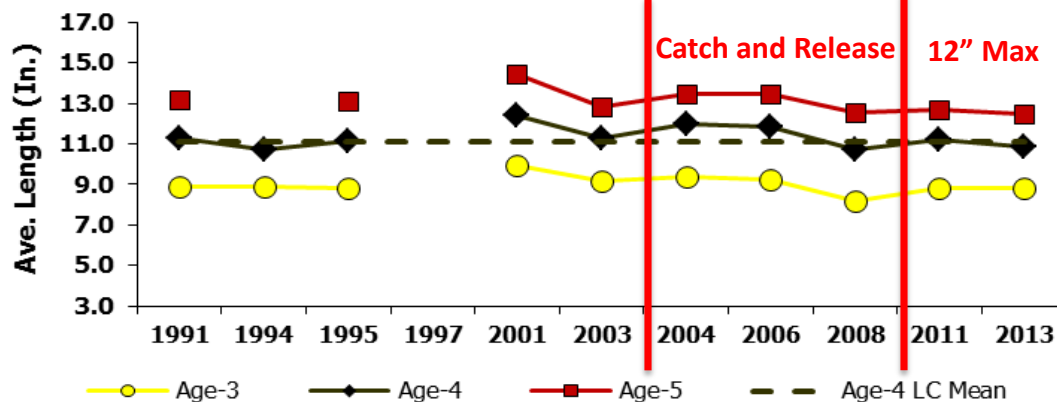


Largemouth Growth

Blackwater 11-0274 LMB EF
Mean Length (inches)

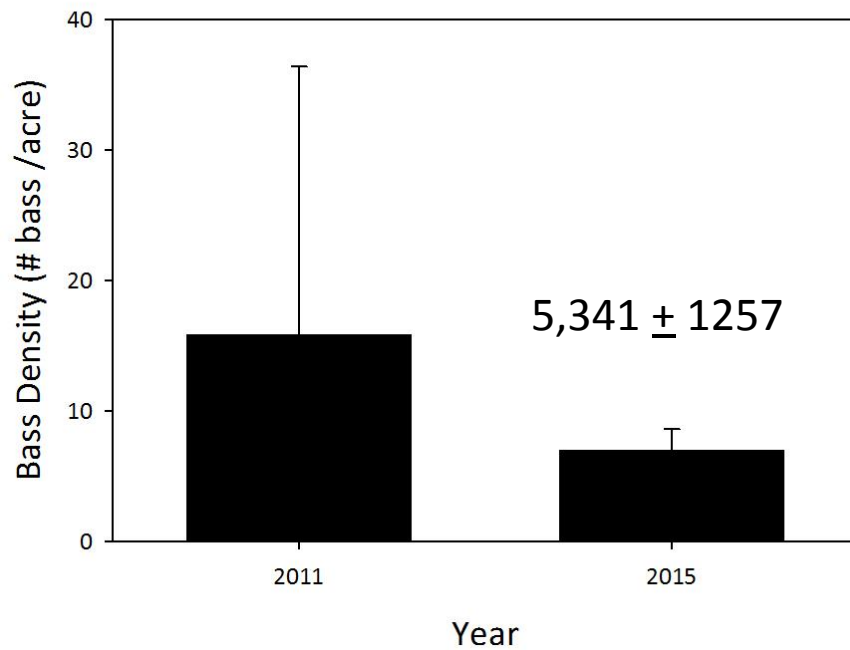


Blackwater 274 LMB
Growth (combined gears)



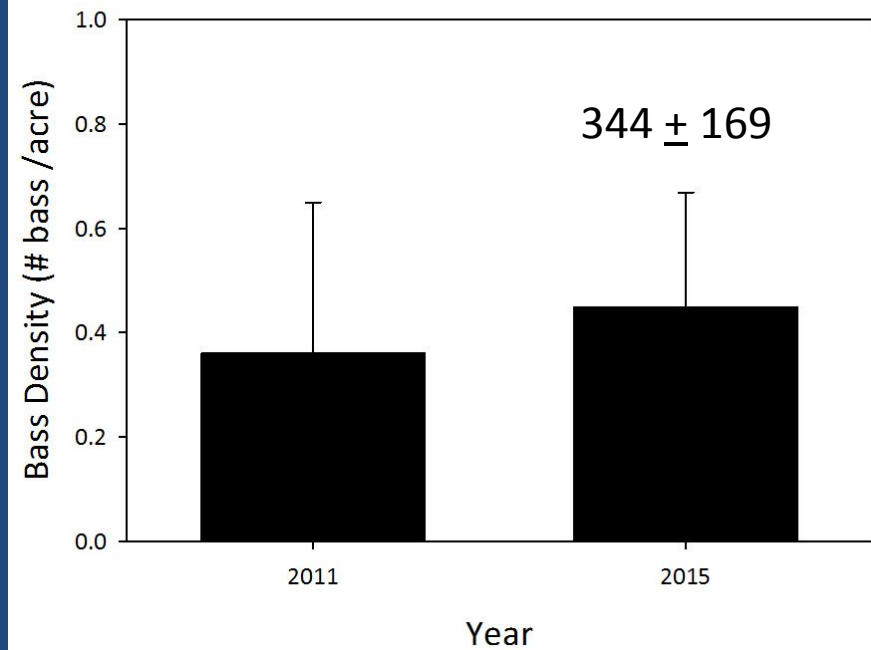
Bass Numbers

Blackwater Lake Largemouth Bass Density



Largemouth

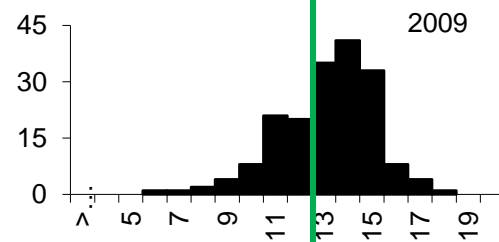
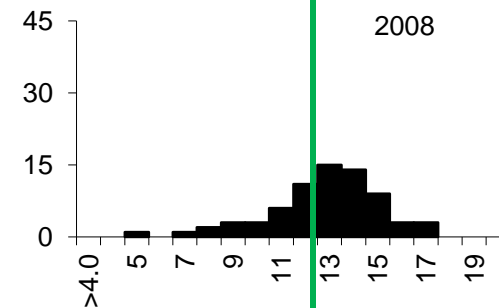
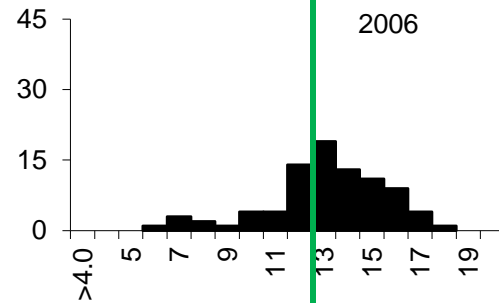
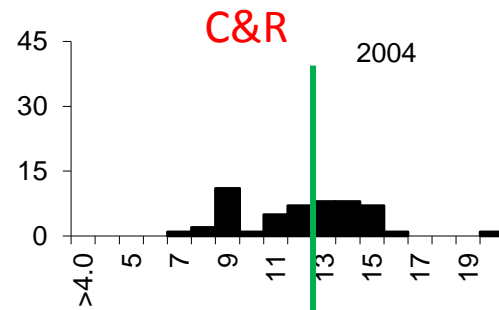
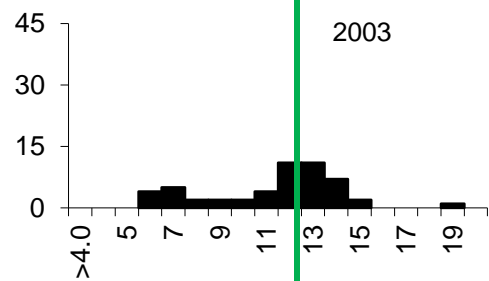
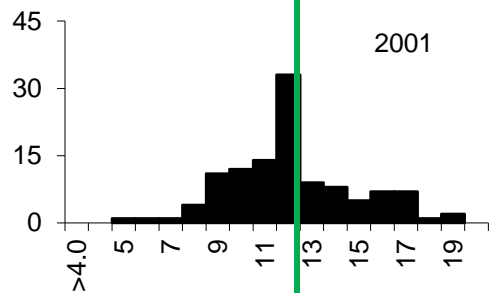
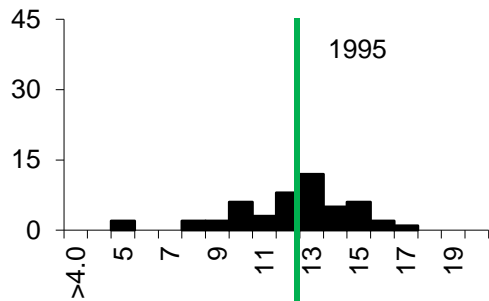
Blackwater Lake Smallmouth Bass Density



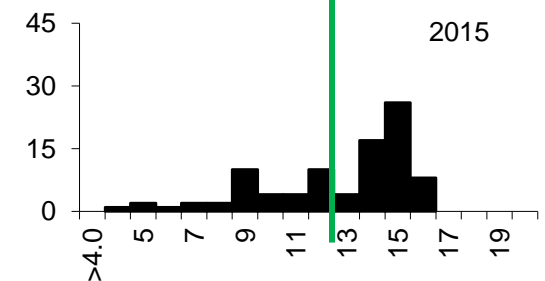
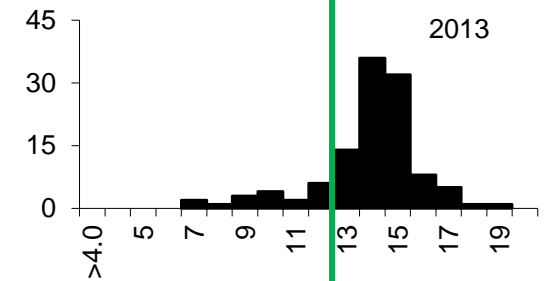
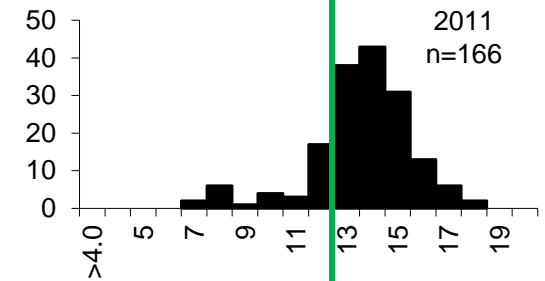
Smallmouth

LMB

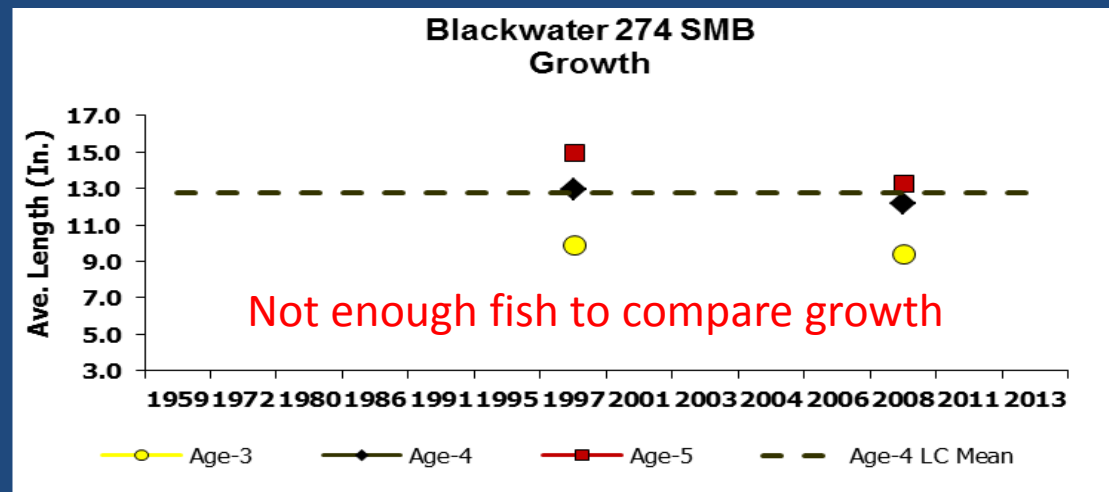
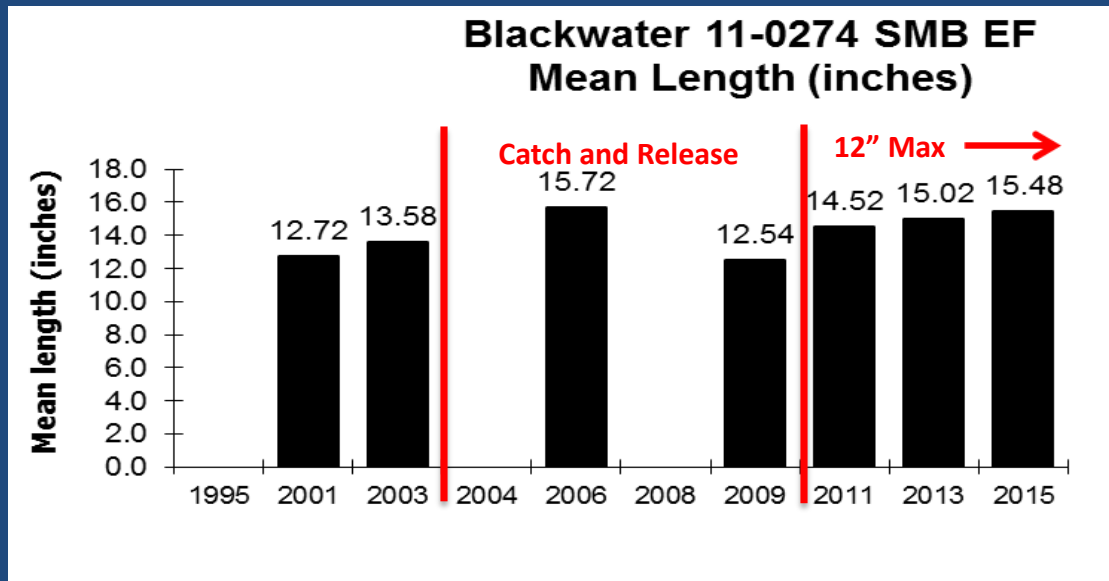
Pre- reg.



12" max.

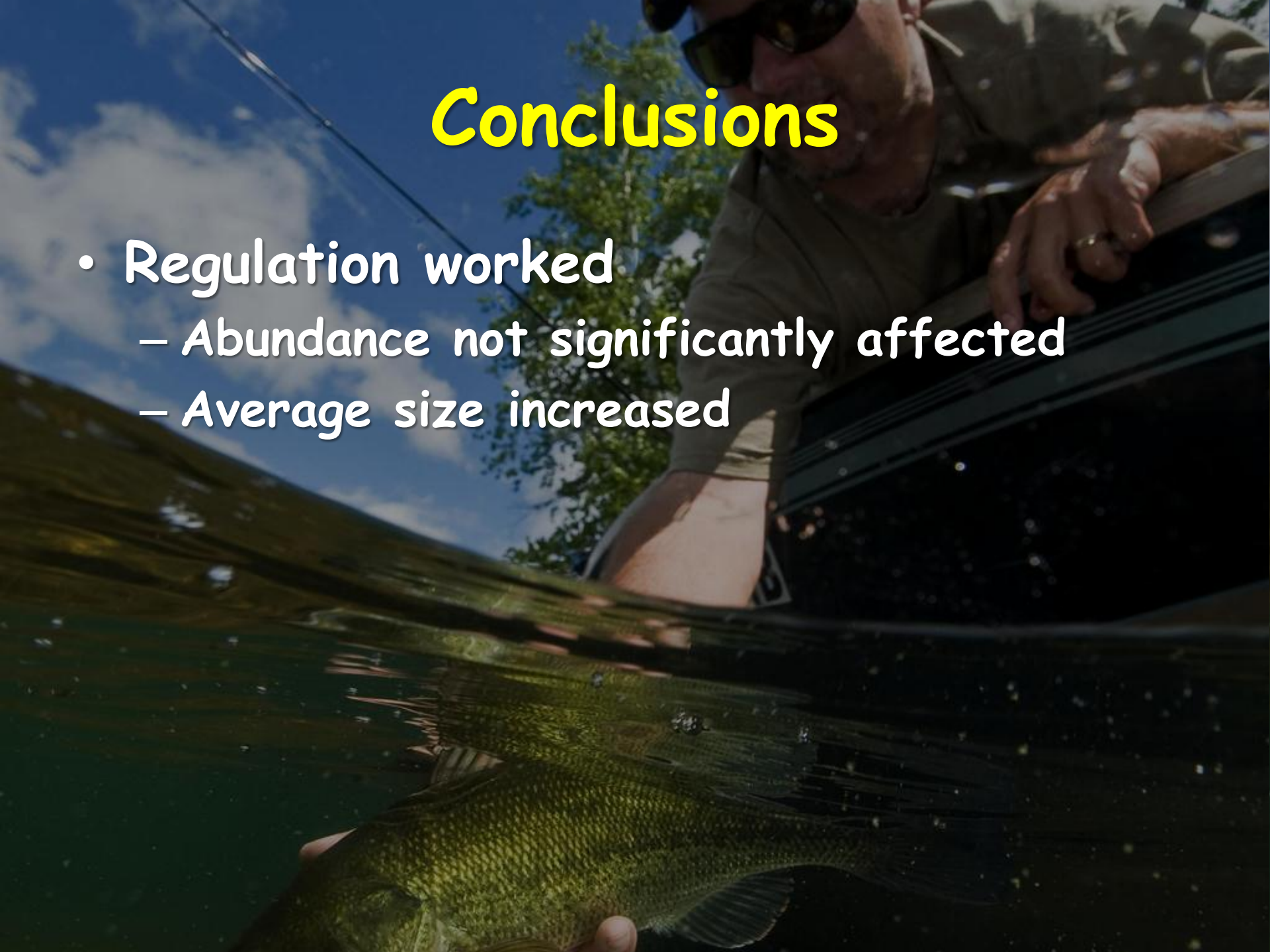


Smallmouth Growth



Conclusions

- Regulation worked
 - Abundance not significantly affected
 - Average size increased



Regulation Proposal

- Largemouth & smallmouth: Propose relaxation to a 14-20" PSL, 1 over 20" allowed in possession
 - Keep it simple (bass ID)
 - Maintain goal of ≥ 50 total bass/hr
 - Maintain "Experimental" status - review in 2024
 - Maintain success (size) while allowing some additional harvest opportunity

Regulation Process

- Post at landing 90 days
- New release announcing review
 - 30-60 days
 - 7-14 days
- Public meeting
- Comment period at least 10 days (Oct. 9th)
- Decision this fall

Regulation Process

- Open house public input meeting
 - September 29 @ 6:00-8:00 pm
 - Woodrow Town Hall
- Unable to attend?
 - Email: doug.w.schultz@state.mn.us
 - Phone: 218-547-1683
 - Mail: 07316 State 371 NW, Walker, MN 56484
 - Comments received after October 9 will be discarded

Questions?

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