

NLFAC 2011



Topics Covered:



-  **Smallmouth overview**
-  **Smallmouth regulation discussion**
-  **Angler survey results**
-  **Species summaries**
 -  **Crappie**
 -  **Walleye**
 -  **Black Bass**
 -  **Striped Bass**
 -  **Sunfish**
 -  **Forage**
-  **Fish attractors**
-  **Stocking**



Smallmouth Bass

NLFAC's objectives:

- **1998-2009: Manage for a high-quality smallmouth bass fishery.**
- **2010-present: Manage for a trophy smallmouth bass fishery.**



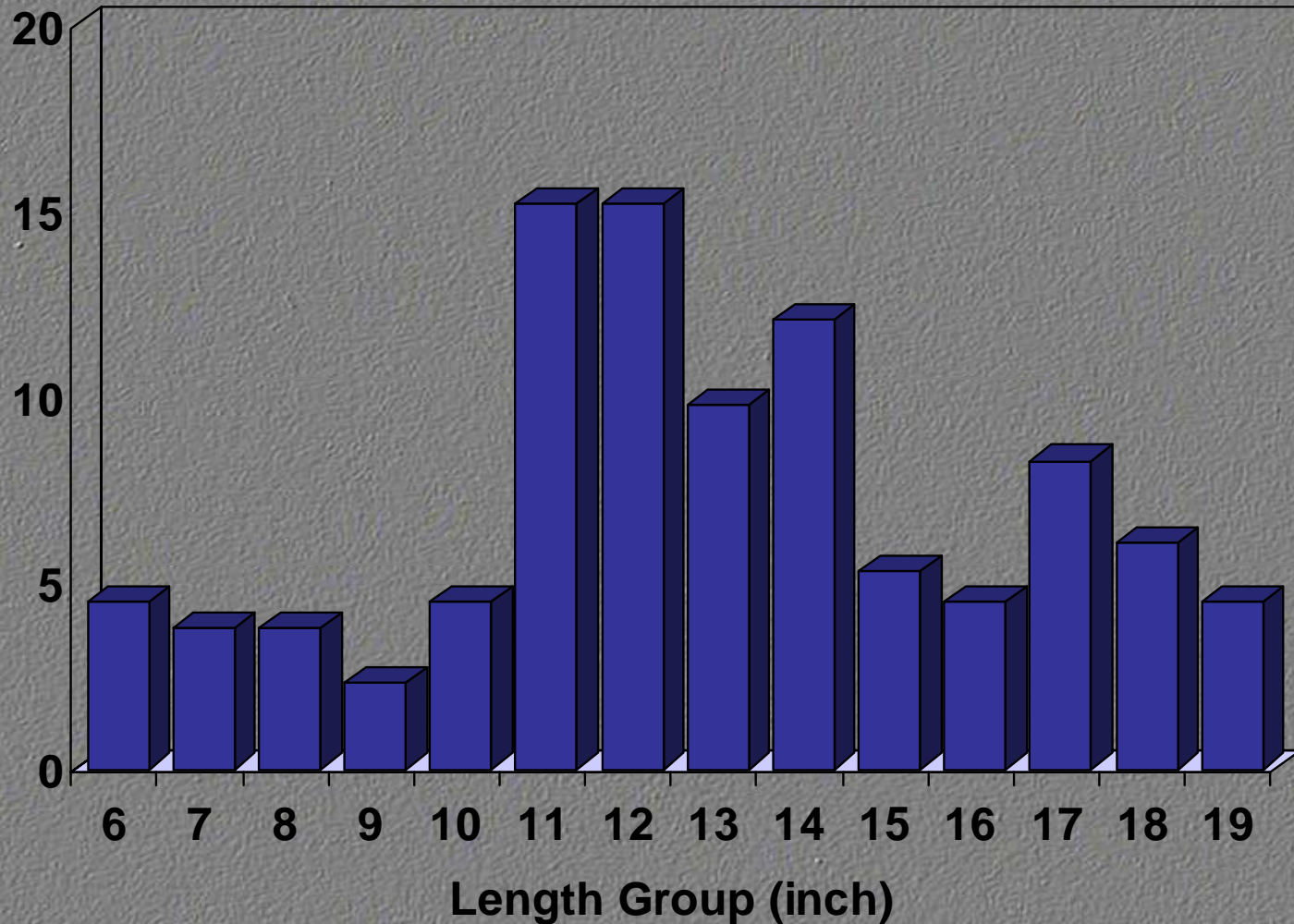
Smallmouth Bass – size structure

2011 targeted electrofishing LF – prelim.

132 fish, 25 hours effort, 10.5% > 18-inches



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Smallmouth Bass – age structure

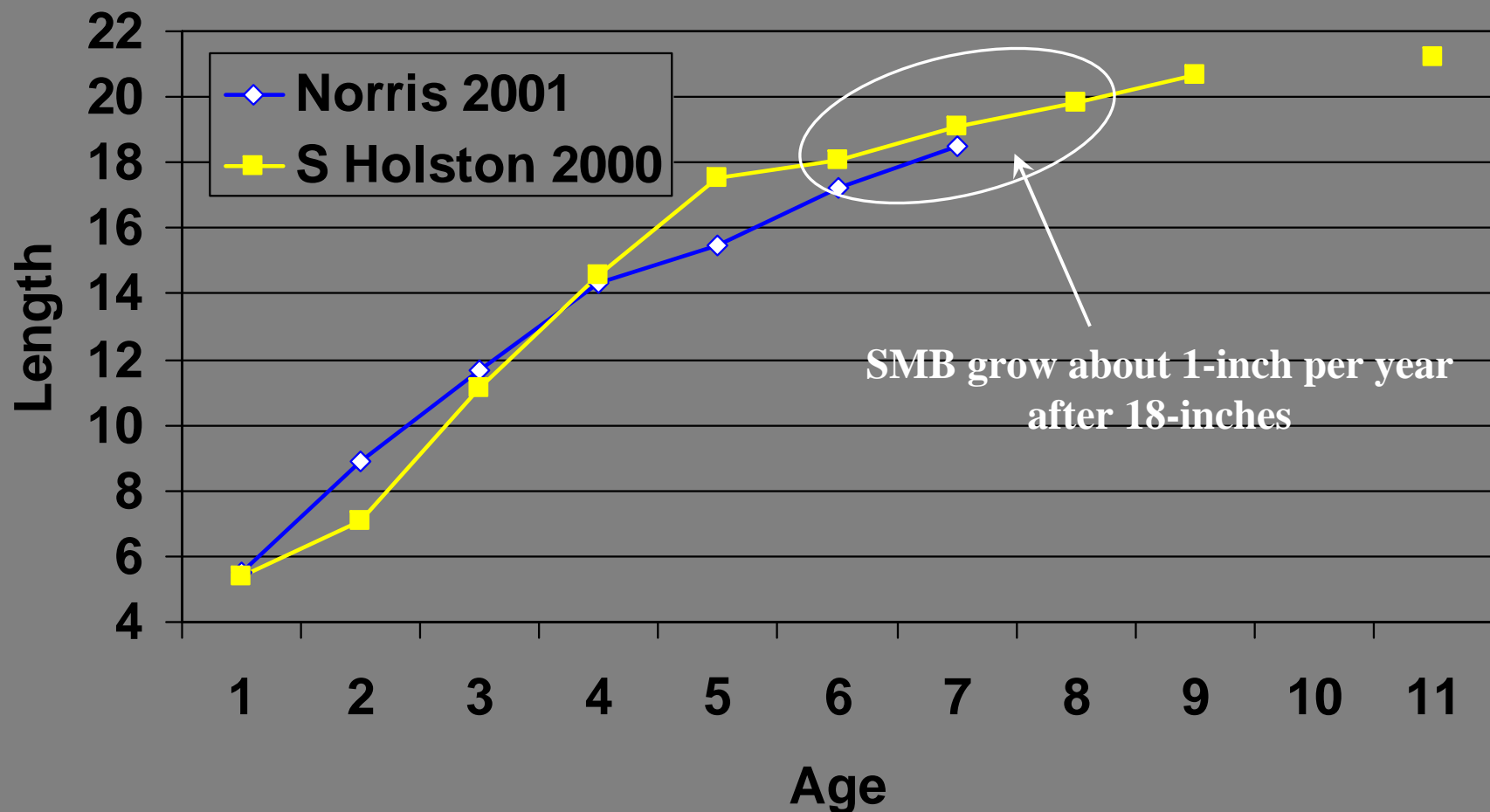
Mean length at age from Norris **2001** electrofishing

(We are already getting a larger data set of big fish in 2011)

AGE	Mean length at capture	N
1	5.5	4
2	8.9	19
3	11.7	34
4	14.3	25
5	15.5	22
6	17.2	6
7	18.5	2

Smallmouth Bass – length at age

(2011 sample is robust and will provide length estimates of old fish)



Smallmouth Bass – mortality

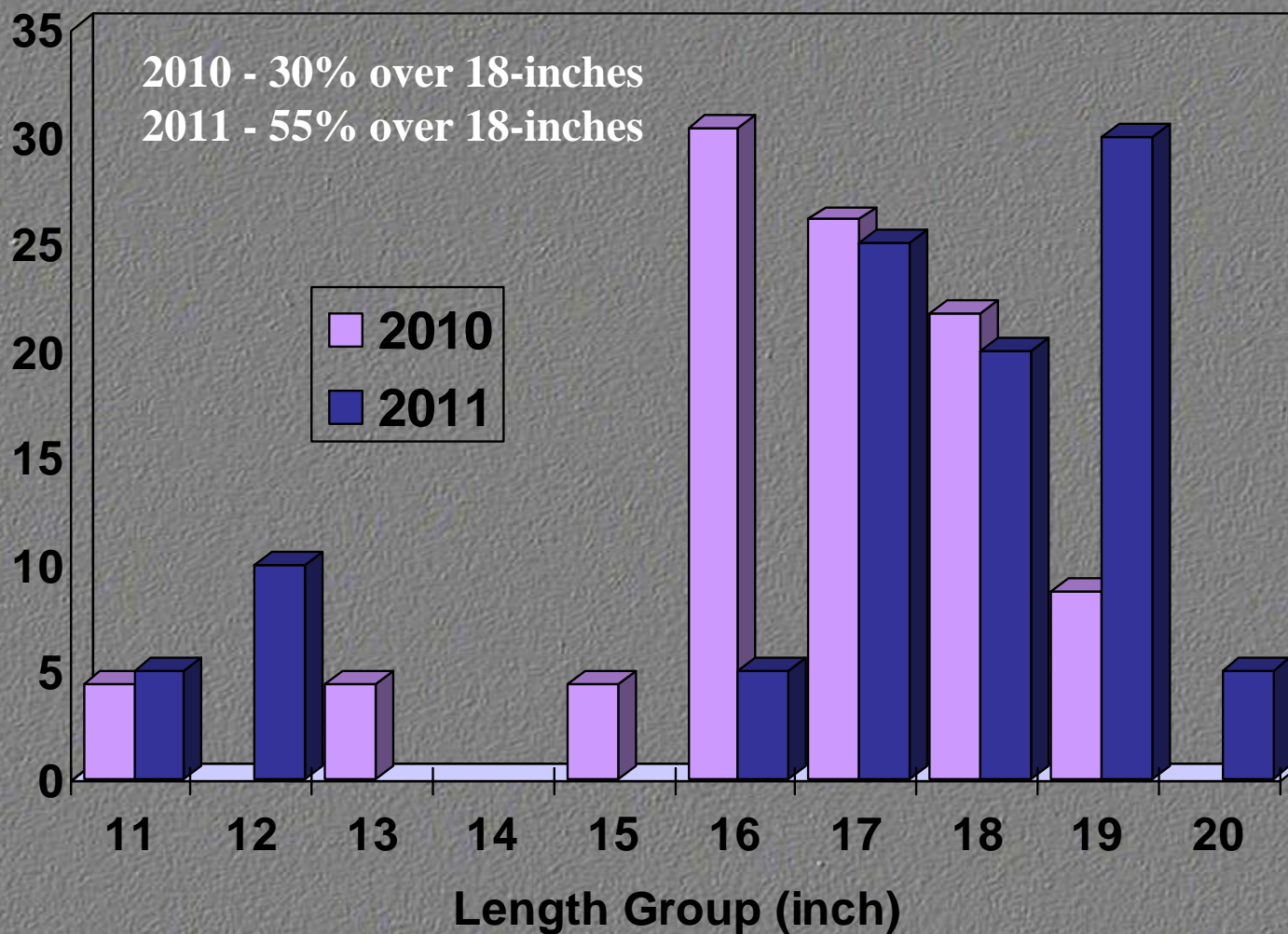
We will get another good mortality estimate in 2011

(More restrictive limits = lower angler induced mortality
allowing more fish to reach advanced ages/size)

Lake	Year	Limit Type	Limit	Length Limit	Mortality
Dale Hollow	1999	restrictive (since 1991)	2/day	18 inch	40%
Norris	2001	new from liberal , low slot	5/day	18 inch	48%
S. Holston	2006	long standing liberal	5/day	none	48%
Watauga	1999	long standing liberal	5/day	12 inch	48%
Tims Ford	2005	new from liberal , 15 inch	5/day	18 inch	58%

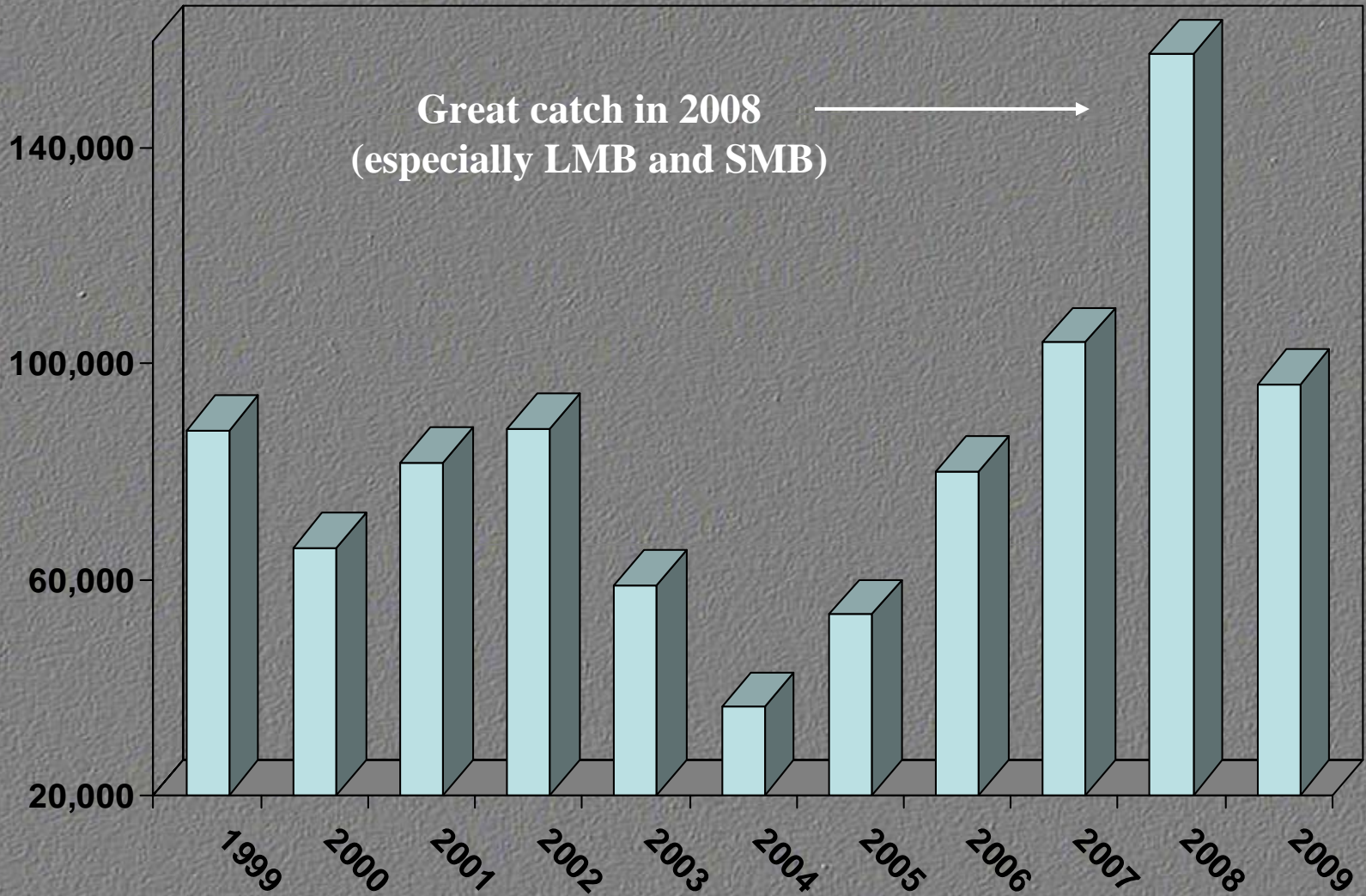
Smallmouth Bass – size structure

Gill netting length frequency



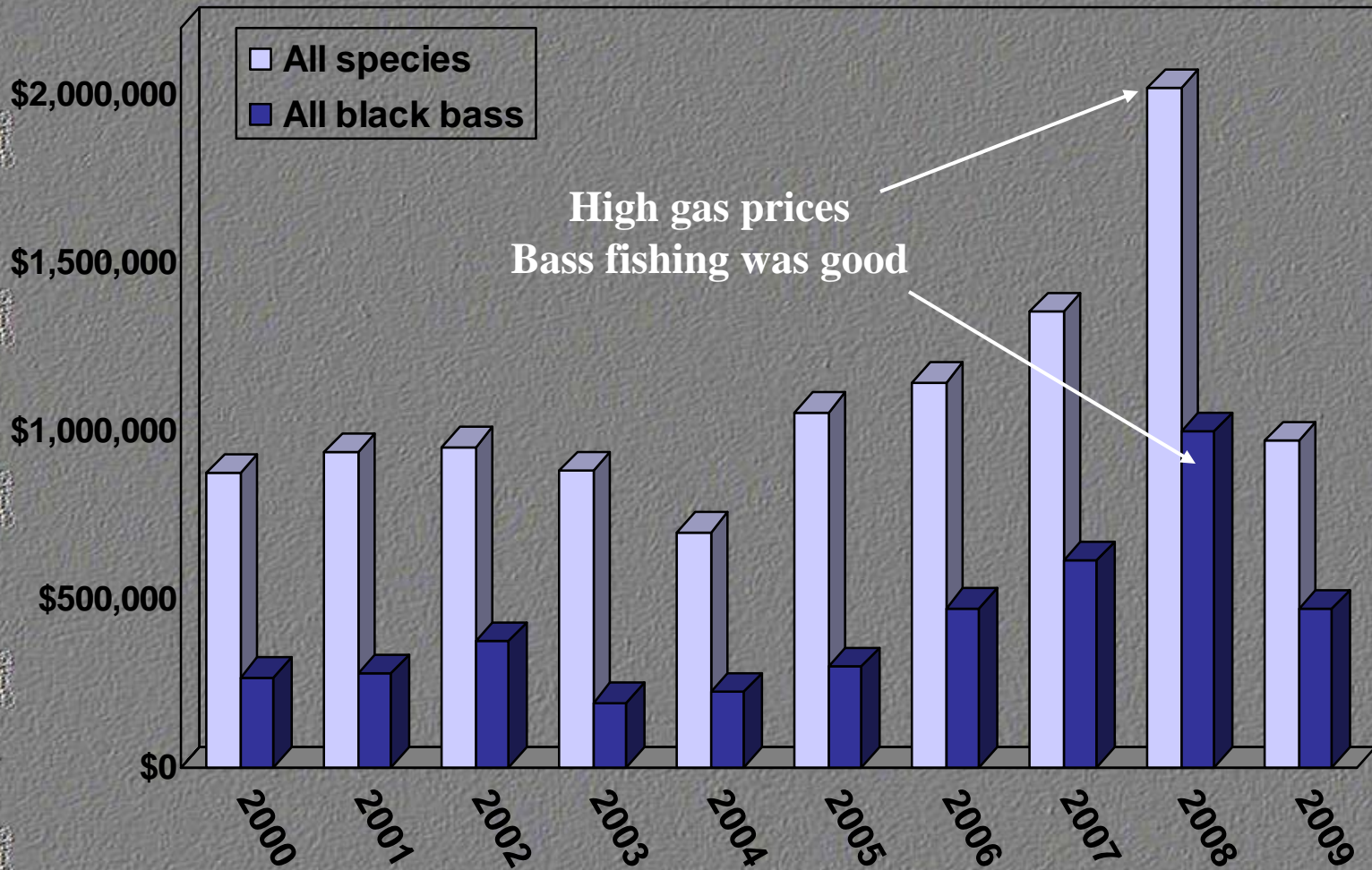
Black Bass General

Creel – total black bass caught 1999- 2009



Black Bass General

Trip expenditures 2000-2009



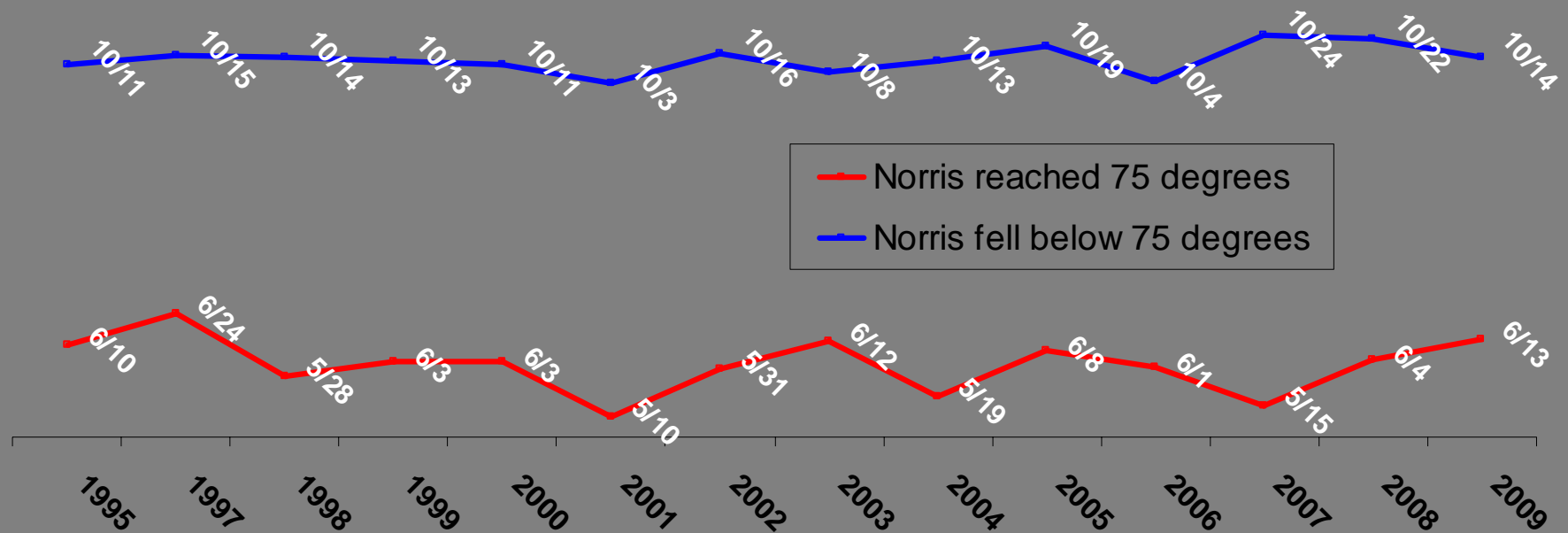
Black Bass General

75 degree surface water – LMB studies

(a guide for catch and release anglers)

(SMB are less tolerant)

June 1 and October 13 are average dates



Smallmouth Bass



➤ Targeting SMB by night electrofishing in 2011. Huge sample for mortality, age structure, and growth rates.



➤ Collected some nice SMB in 2010 and 2011 walleye nets. Began recording in 2010 since numbers are increasing. 35% were >18-inches in 2010. 55% in 2011.



➤ Anglers report good catches of large fish and several 21-inch fish in 2010. Paul has seen several over time. We cannot always find them shocking.





➤ Gill netting and creel are good at documenting large fish and the progress of SMB regulations.



Smallmouth Bass




 I have been attending some weigh-ins this year to get a feel for opinions and see what is being brought in.

 Tournament anglers are still fishing. Winning usually with bags of five LMB. Many < 17-inch SMB are being weighed-in.

 Many anglers I have spoken to recently are for the slot, and some are adamantly against the slot.

 Weigh-in handling techniques could be vastly improved.

 Angler catch of SMB has increased over the past several years.

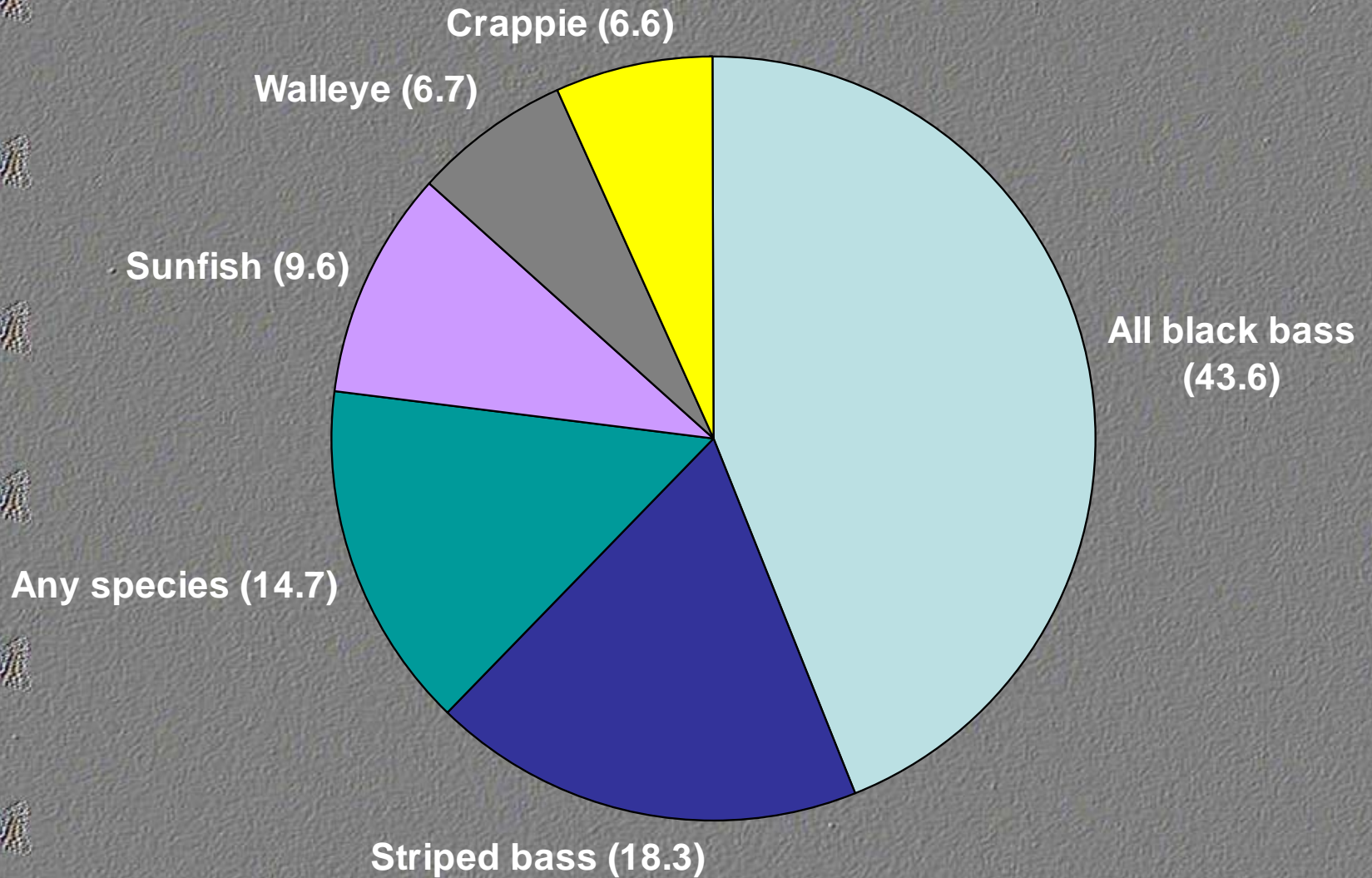
Where to go from here?



Following are additional slides and updates

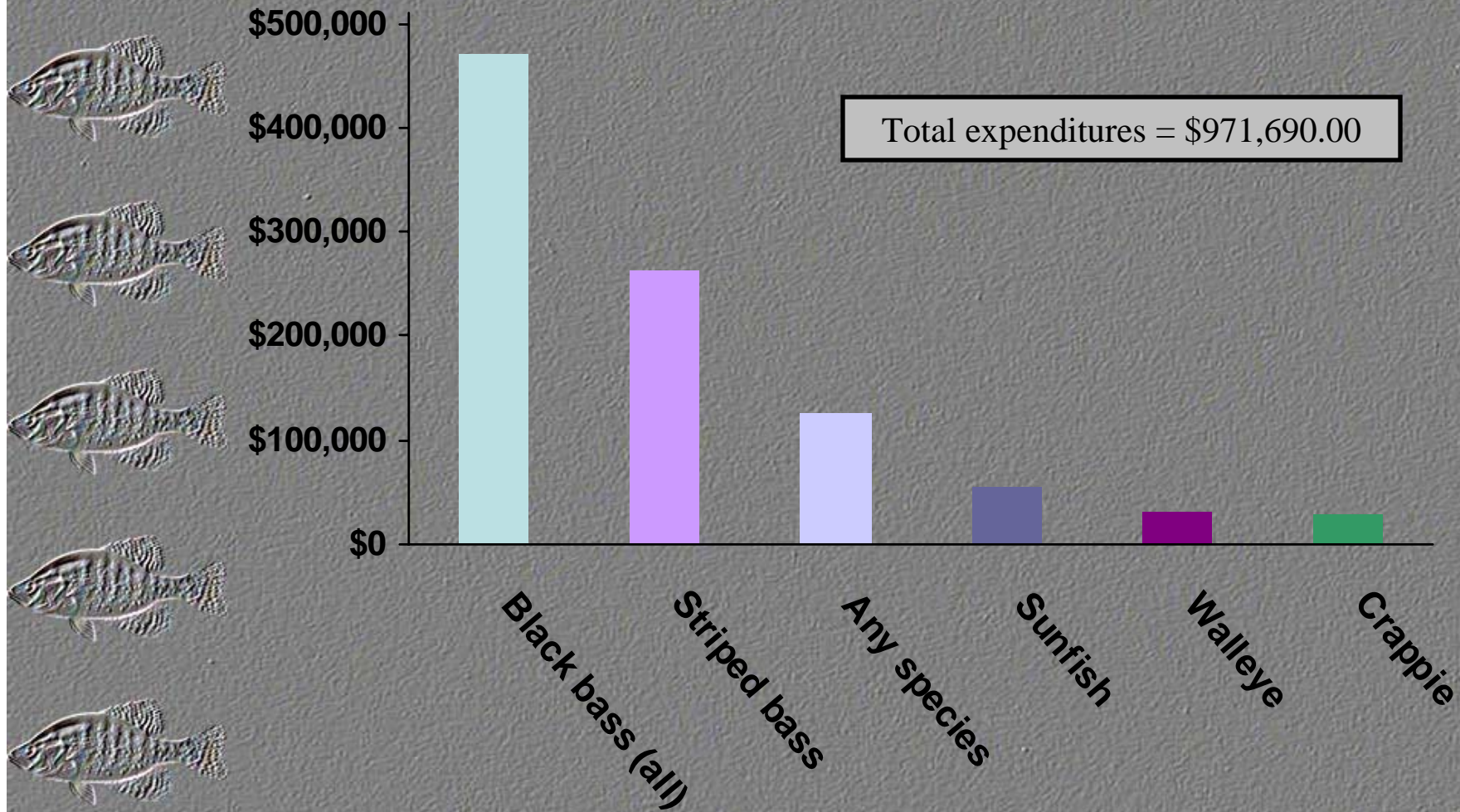
if time allows:

Creel – Intended Species Percent Effort - 2009



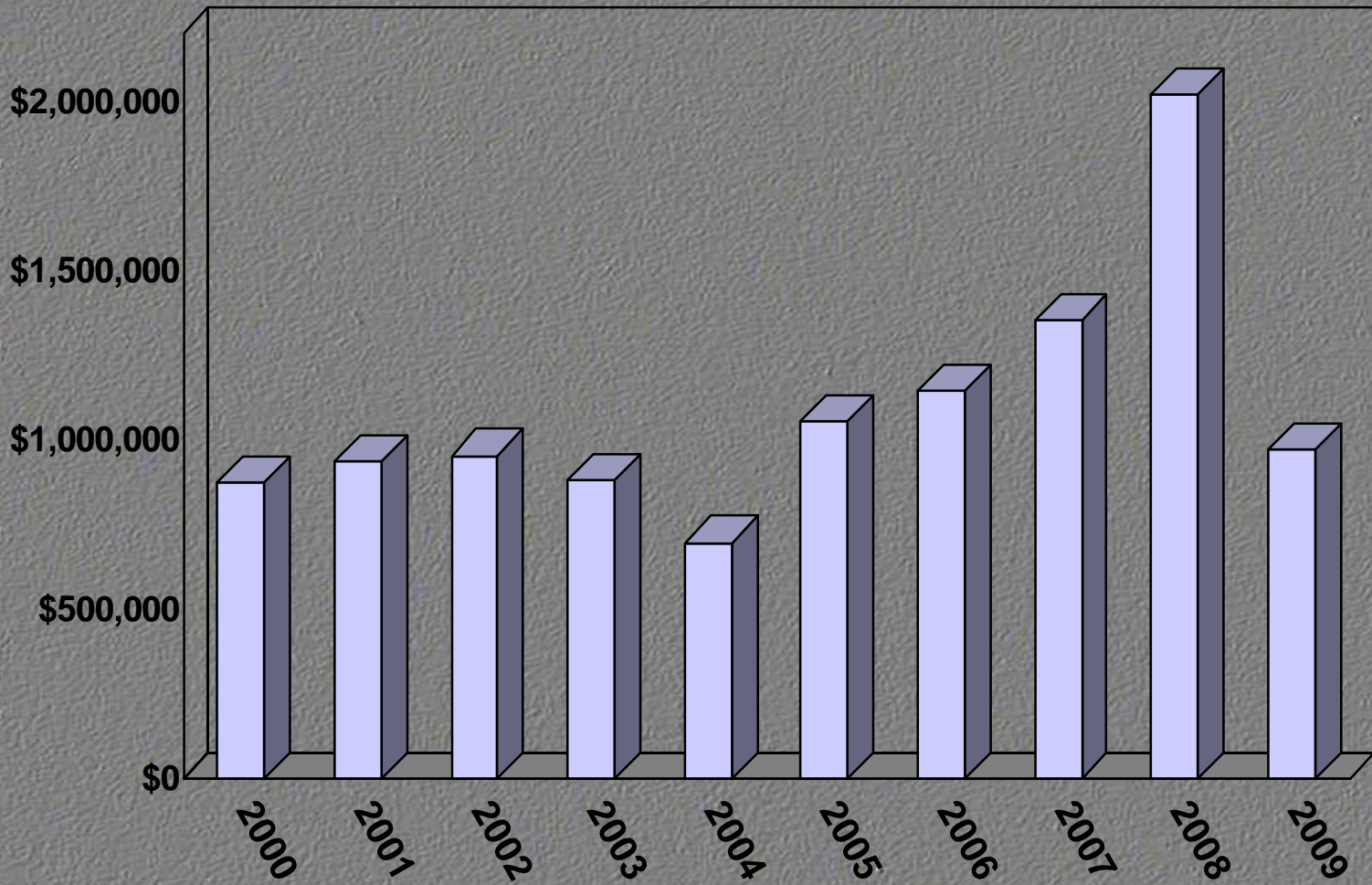
Creel – Intended Species

Trip Expenditures - 2009



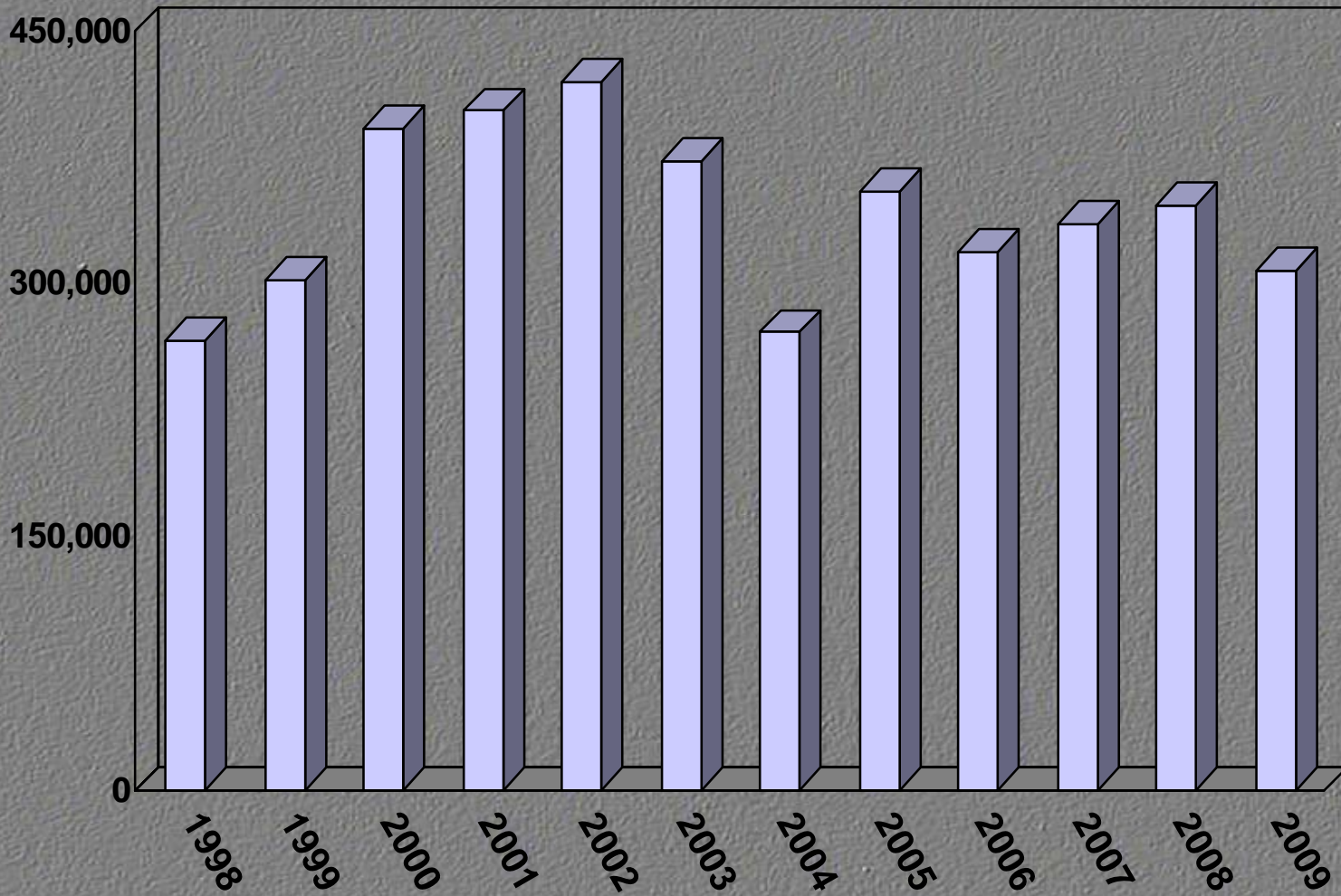
Creel – All Intended Species

Trip expenditures 2000-2009



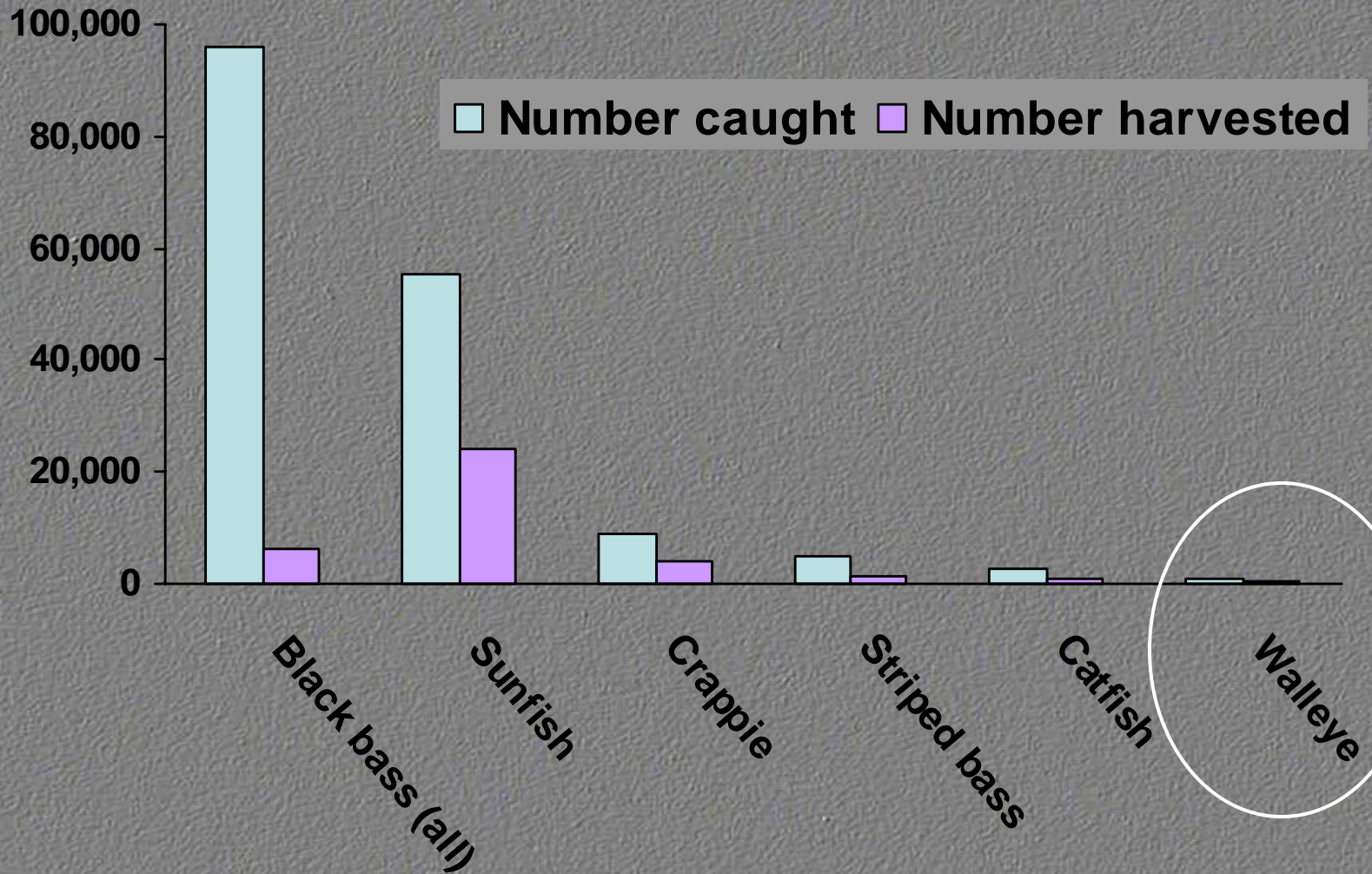
Creel – All Intended Species

Total Angler Hours 1998-2009



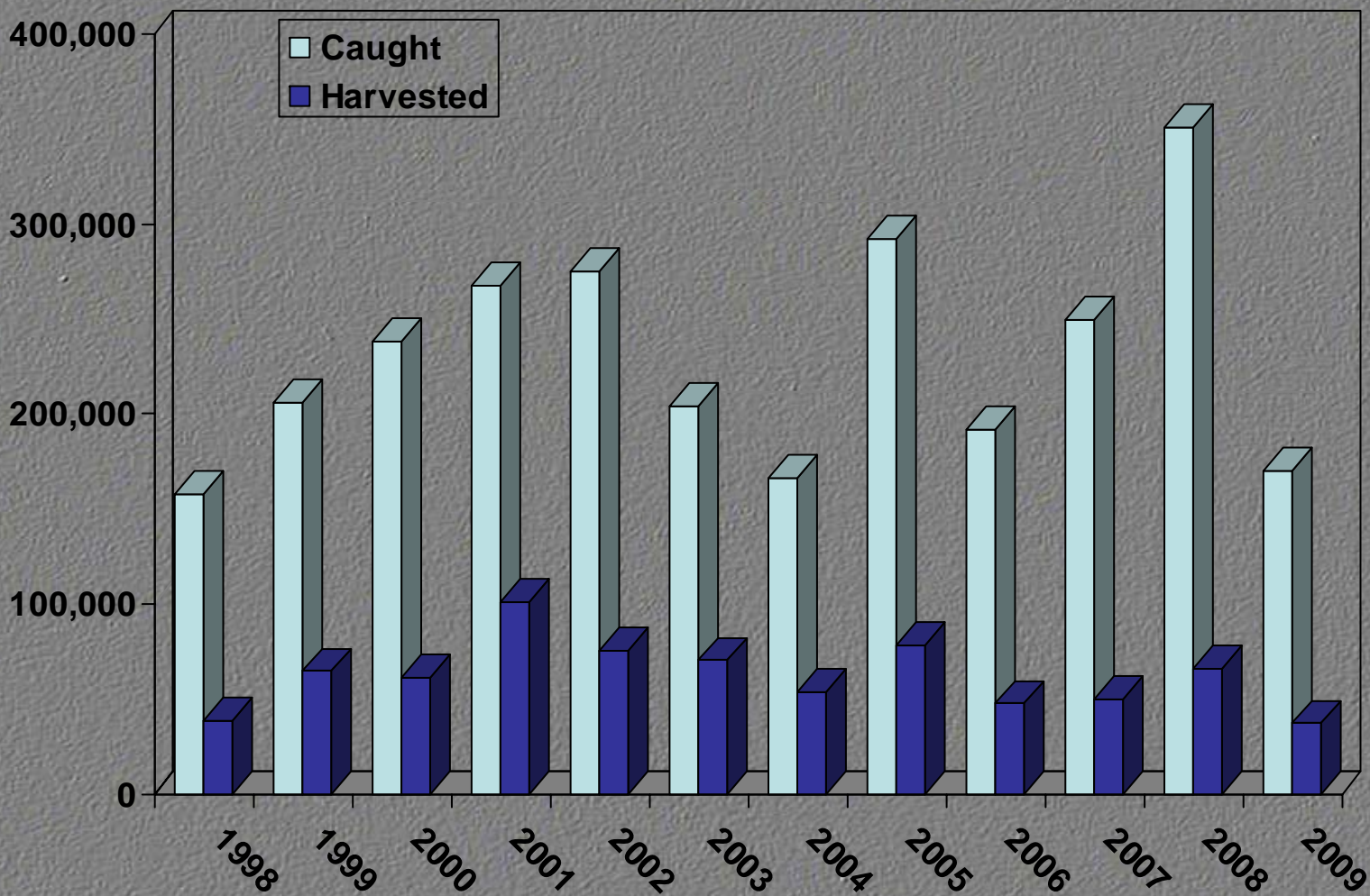
Creel

Total Catch and Harvest - 2009






Creel – All Anglers


Total Caught and Harvested 1998-2009



Crappie

Objective: Manage for a sustained annual harvest of quality-size crappie.



 2010 trap netting effort was limited to Big Sycamore Creek. The small sample suggested low numbers and limited reproduction.



 Below average crappie collected by trap netting in 2009 and few YOY - suggests a limited 2009 spawn.



 2010 electrofishing catch rate was average.



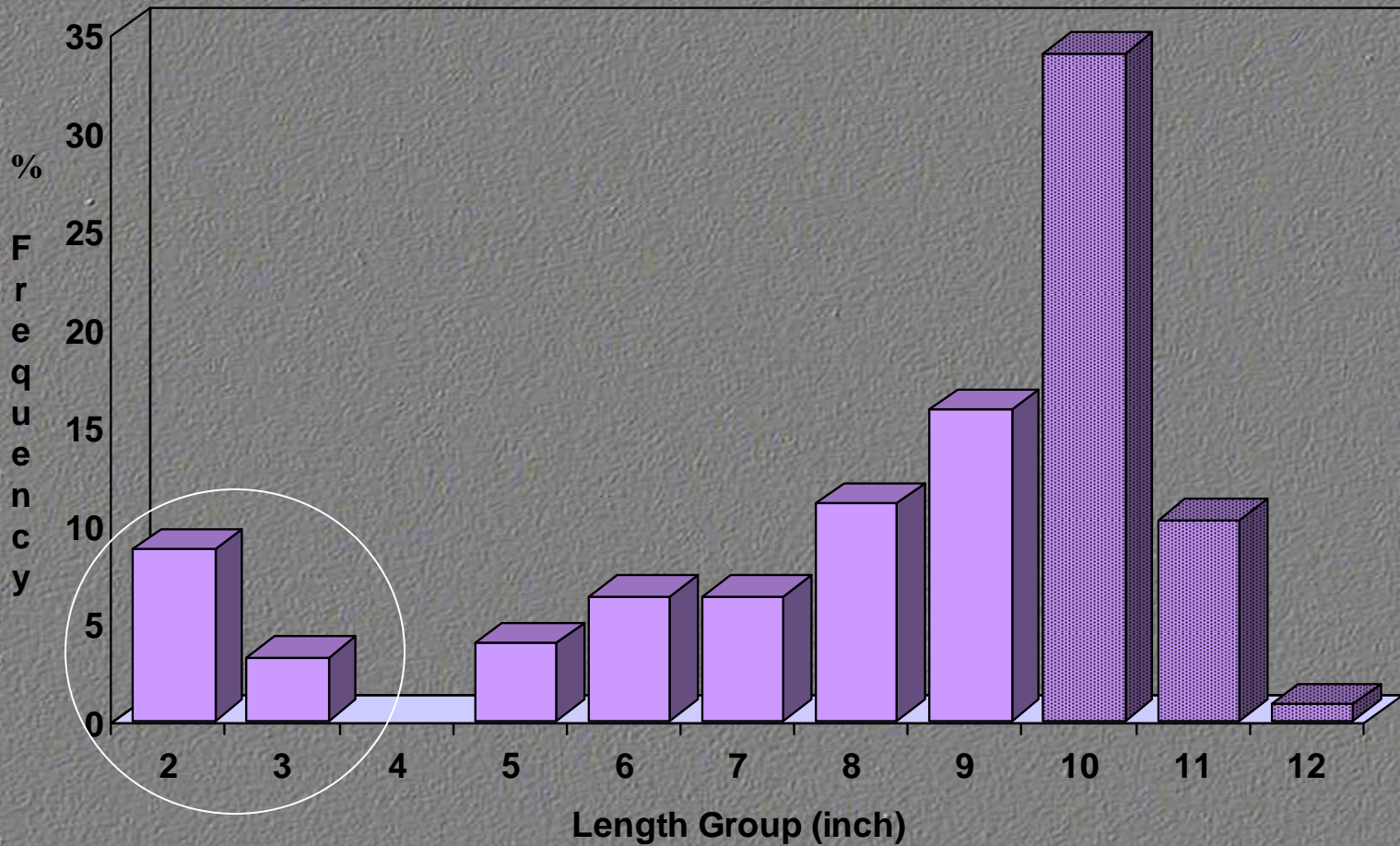
 2009 creel was below average for crappie caught and harvested. 2008 electrofishing and creel were well above average.



 Continue stocking program?

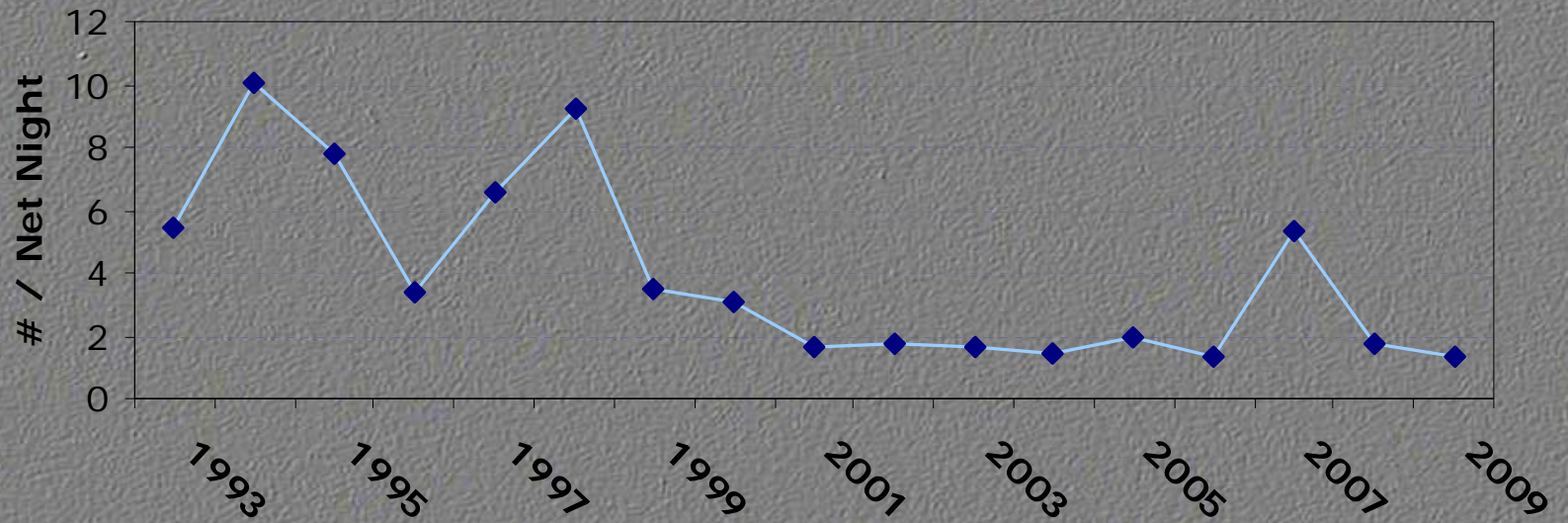
Crappie – Size Structure

Length frequency from 2009 trap netting (n=127)



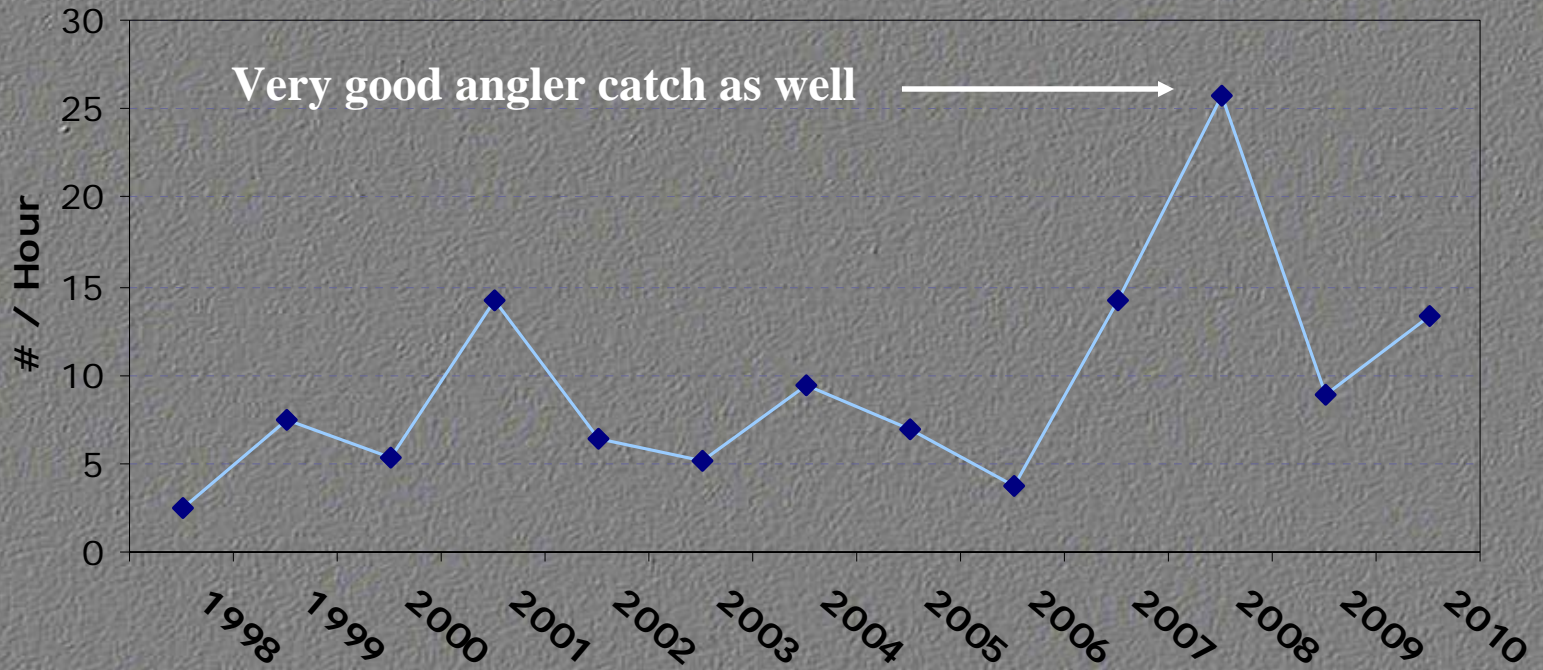
Crappie – Abundance

Trap netting CPUE for all black crappie 1993 - 2009



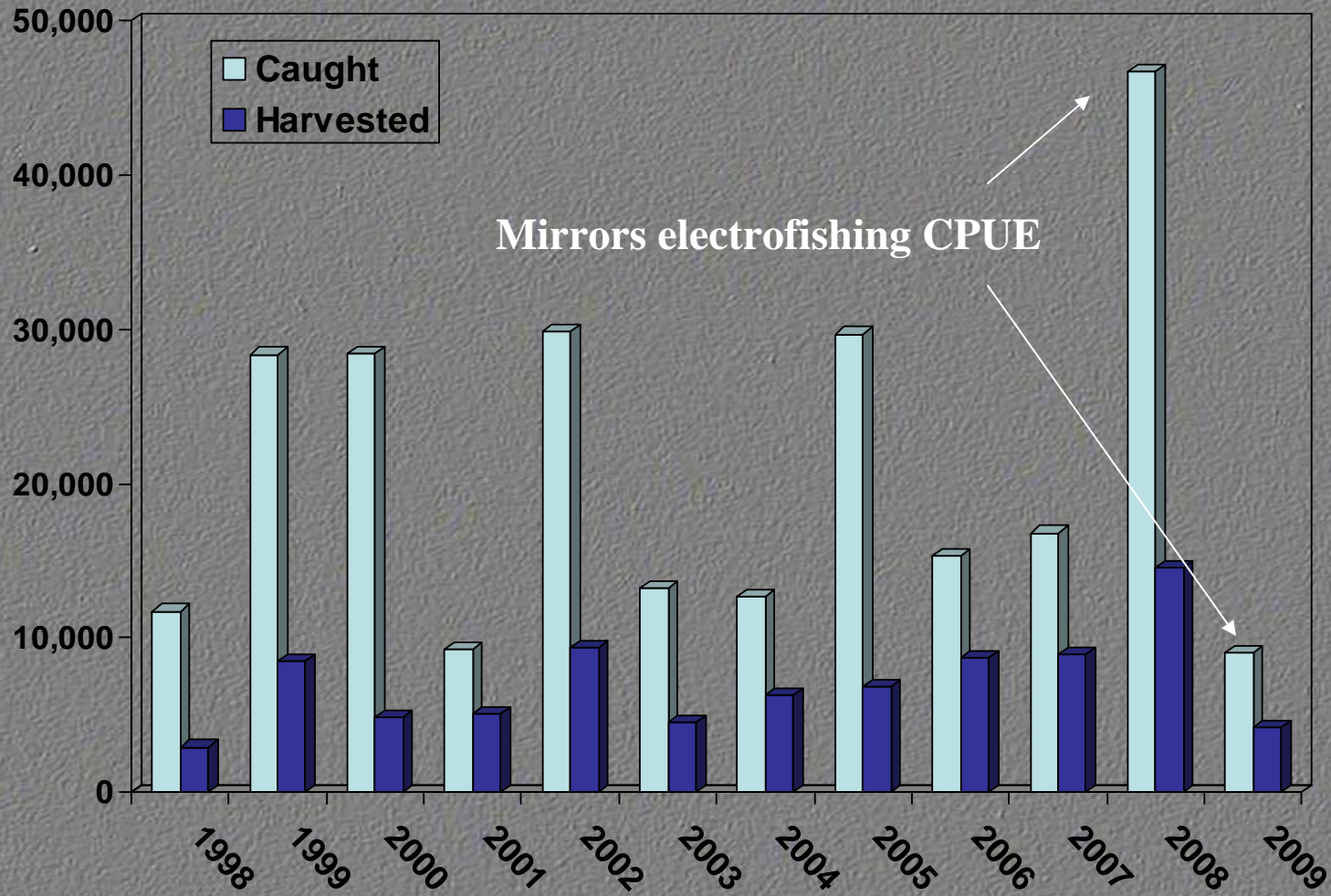
Crappie – Abundance

Electrofishing CPUE for all black crappie 1998 - 2010










Crappie


Total Catch and Harvest 1998-2009



Walleye

Objective: Maintain adequate walleye year-classes through stocking and protect adult spawning stock.



 TWRA's gill net catch rates have been relatively good for the past three years including 2010. Conflicts with daytime creel. Missing nighttime catches? Same issue expressed by Region 3 biologists.

 Age structure from 09 gill netting was exceptional.

 Angler harvest remained low in 2009.

 Continue stocking efforts at a higher rate?

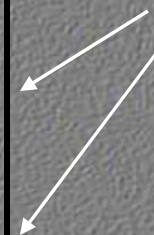


Walleye – age structure

Mean length at age from 2009 winter gill netting

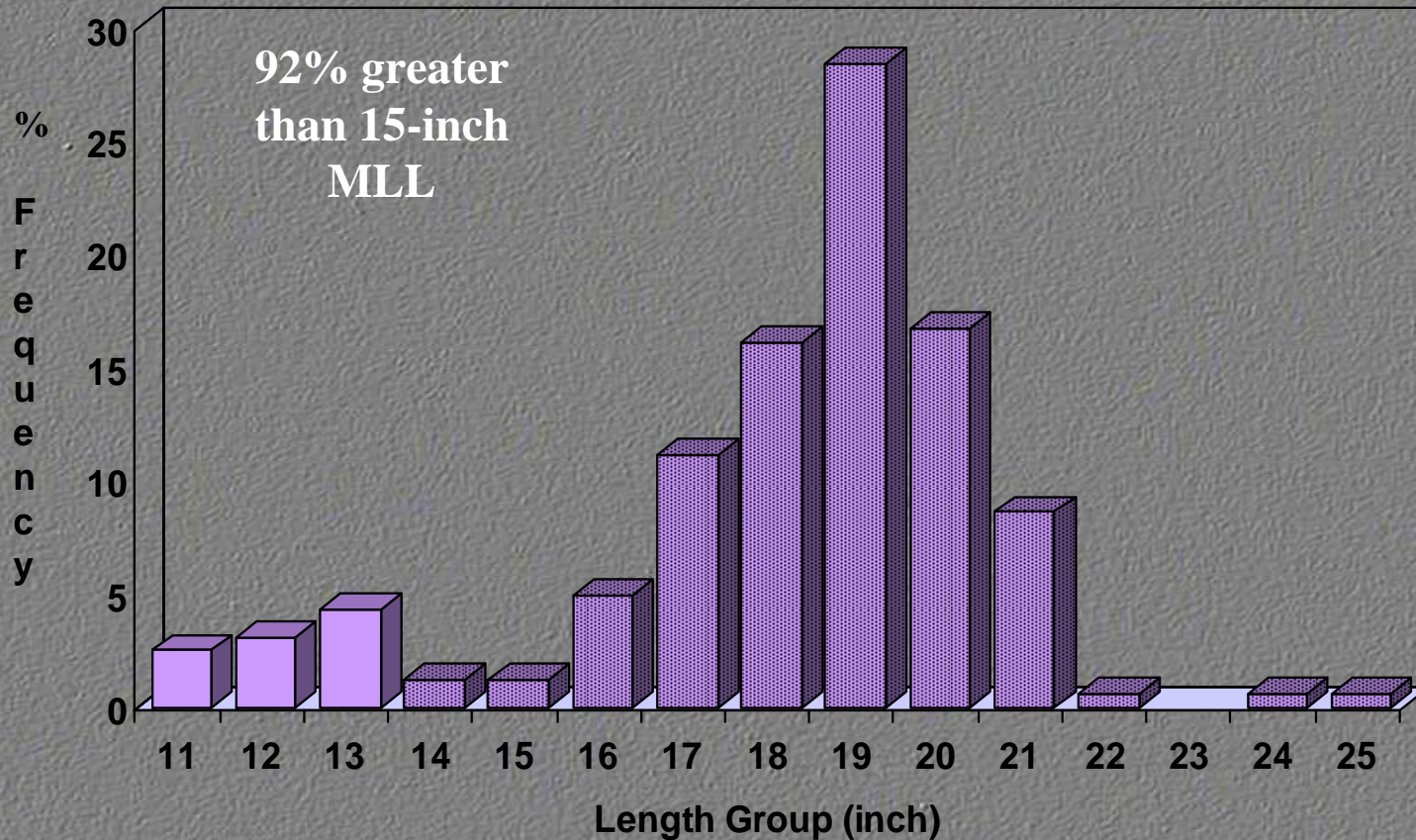
AGE	Mean length at capture	N
1	12.8	3
2	16.5	40
3	18.9	69
4	19.6	21
5	19.6	21
6	20.9	10
7	21.8	5
8	20.3	6
9	19.2	2

Always a bit messy with low numbers of older fish



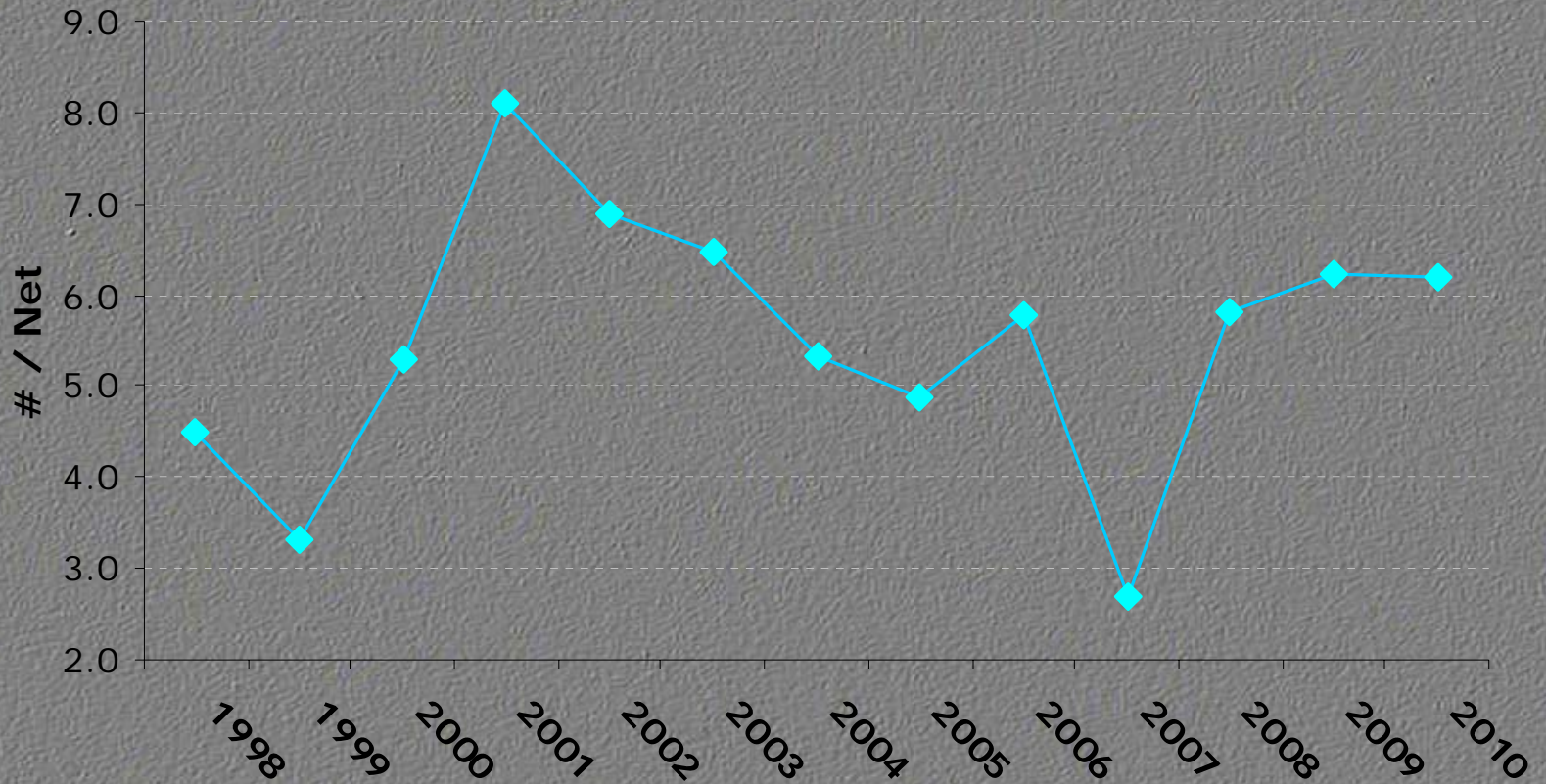
Walleye – size structure

Length frequency from 2010 winter gill netting (n=162)



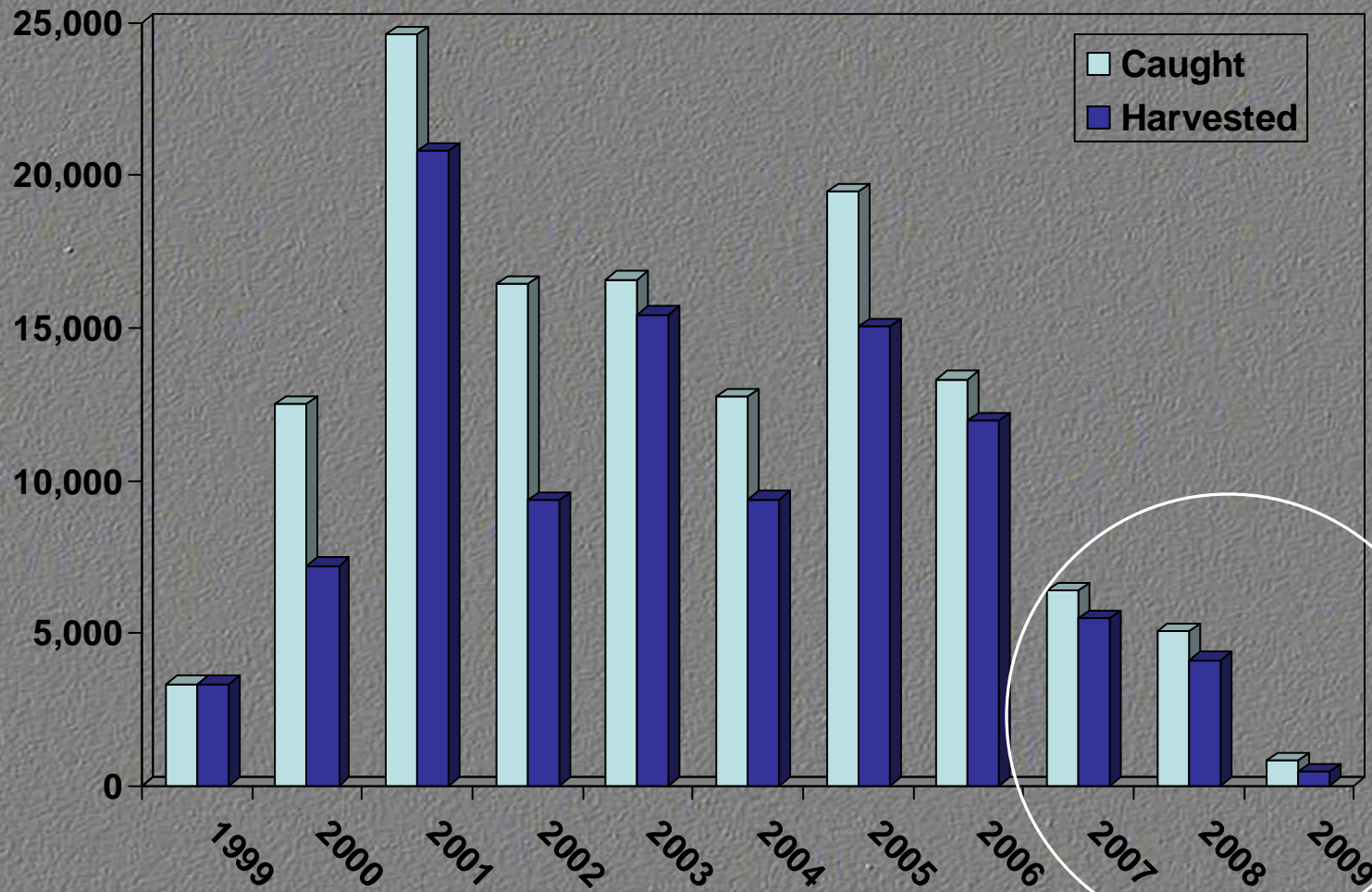
Walleye – Abundance

(gill net catch rates)
(consistent stocking began in 1997)



Walleye

Total Catch and Harvest 1999-2009



Spotted Bass

Objective: Manage for the increased harvest of spotted bass annually to improve size structure + reduce competition



Spotted bass made up 38% of the black bass collected by electrofishing in 2010.



Size structure remains poor and it appears anglers are still not harvesting enough to impact the size structure or reduce their density.



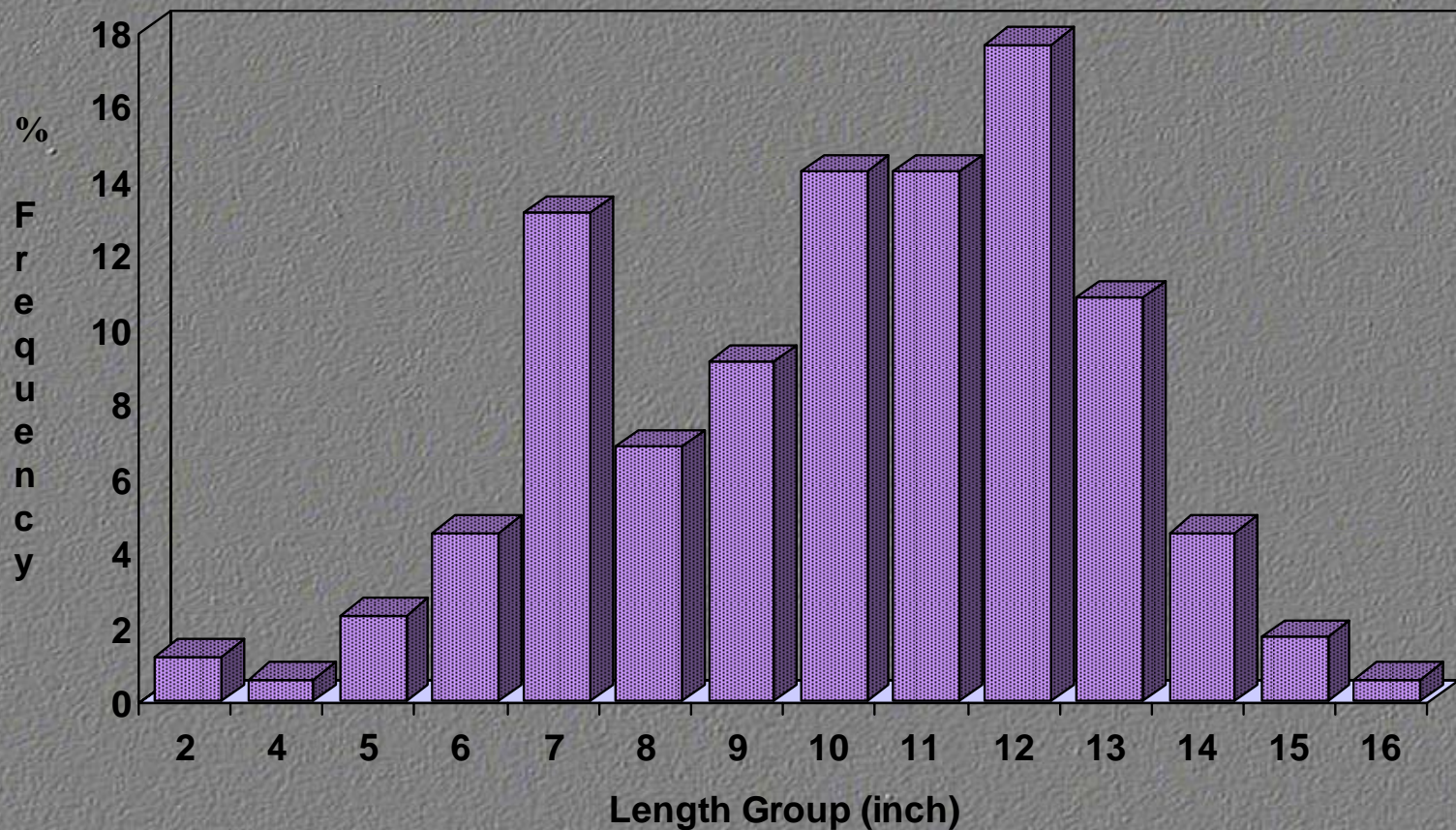
In 2007, this committee made an unprecedented recommendation to lift all restrictions on SPB. No number or length limit since 2008!



Continue to promote harvest.

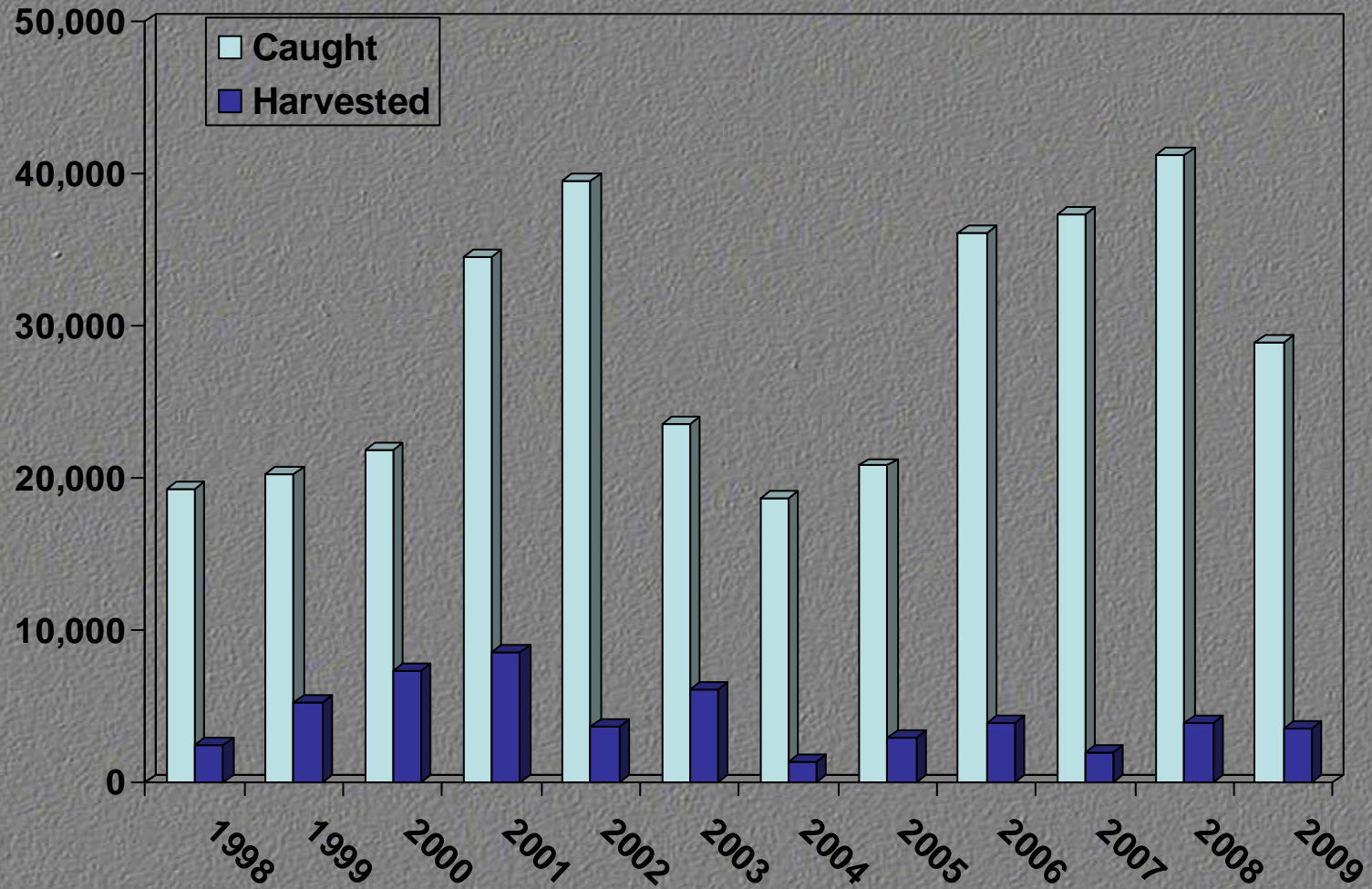
Spotted Bass – size structure

Length frequency from 2010 electrofishing (n=176)




Spotted Bass


Total Catch and Harvest 1998-2009



Largemouth Bass

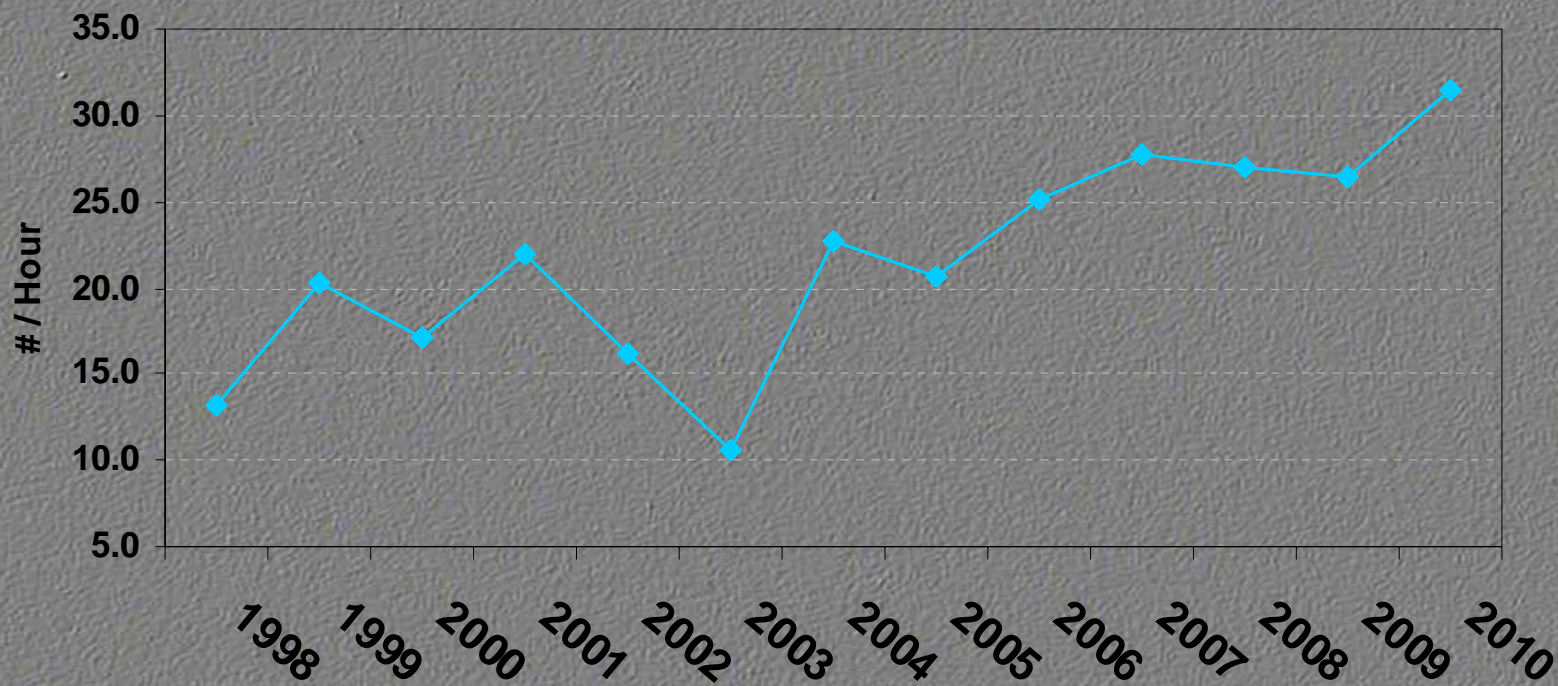
Objective: Manage for a sustained annual harvest of quality-size largemouth bass.

 Electrofishing catch rates have improved since 1998. 50% were over the 14-inch MLL in 2010.

 Angler catch was great in 2008, but back to average in 2009.

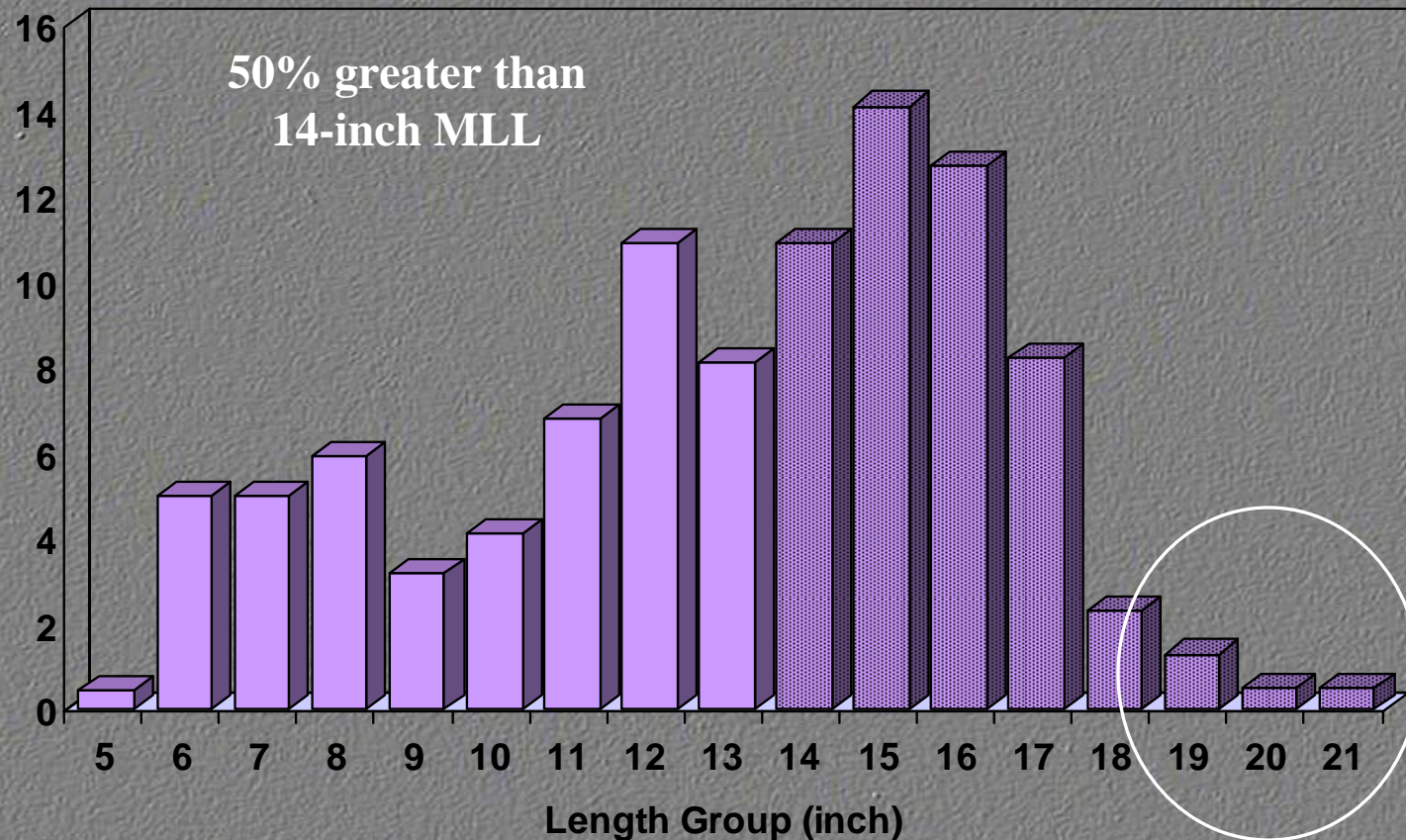
Largemouth Bass – Abundance

Electrofishing catch rates of largemouth 1998-2010



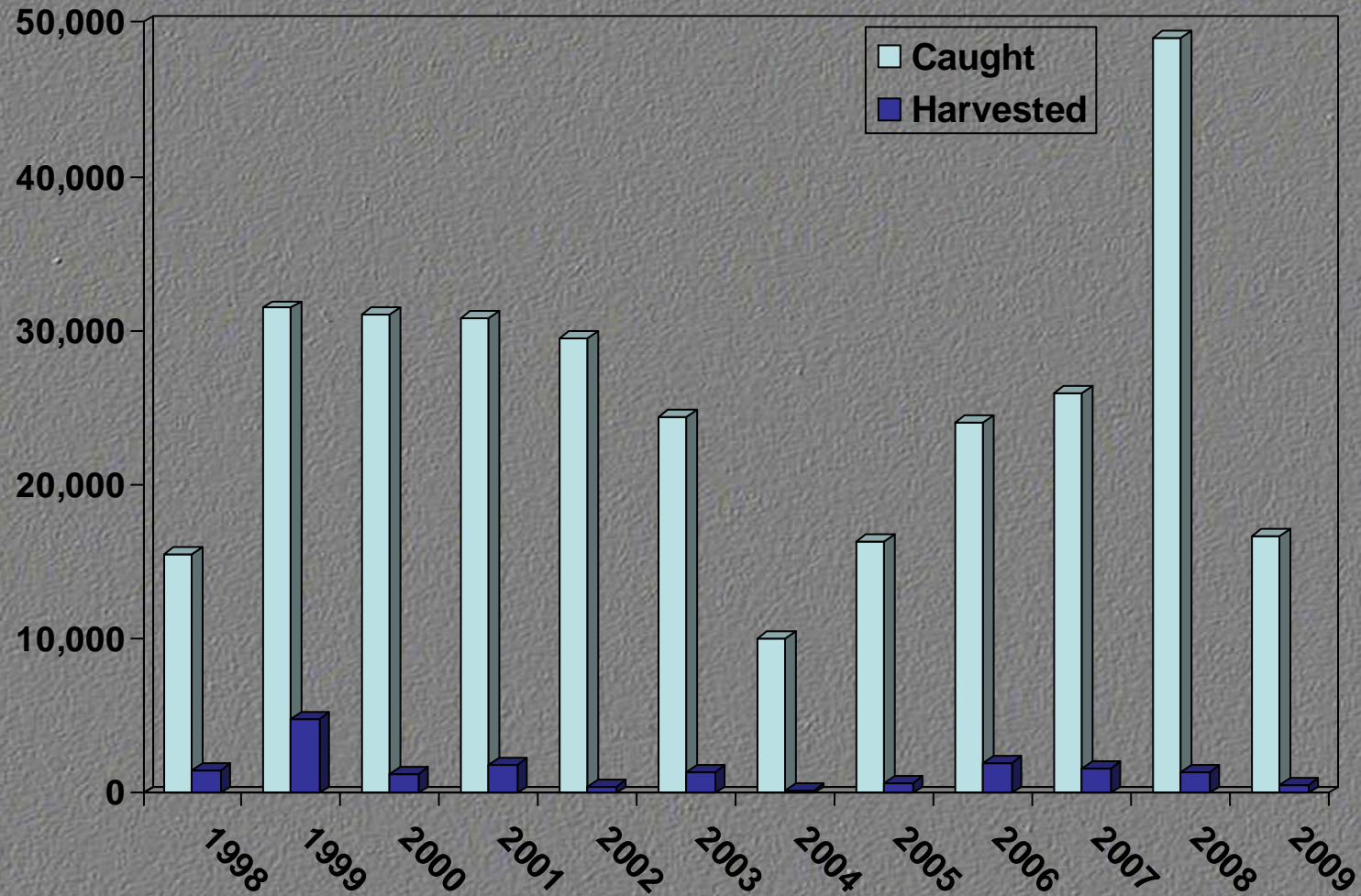
Largemouth Bass – size structure

Length frequency from 2010 electrofishing (n=220)



Largemouth Bass


Total Catch and Harvest 1998-2009



Striped Bass

Objective: Manage for a sustained harvest from a quality striped bass fishery.

 There was decrease in the number of fish caught by anglers in 2009.

 Decent numbers of stripers are showing up in our walleye gill nets even though not designed for STRB.

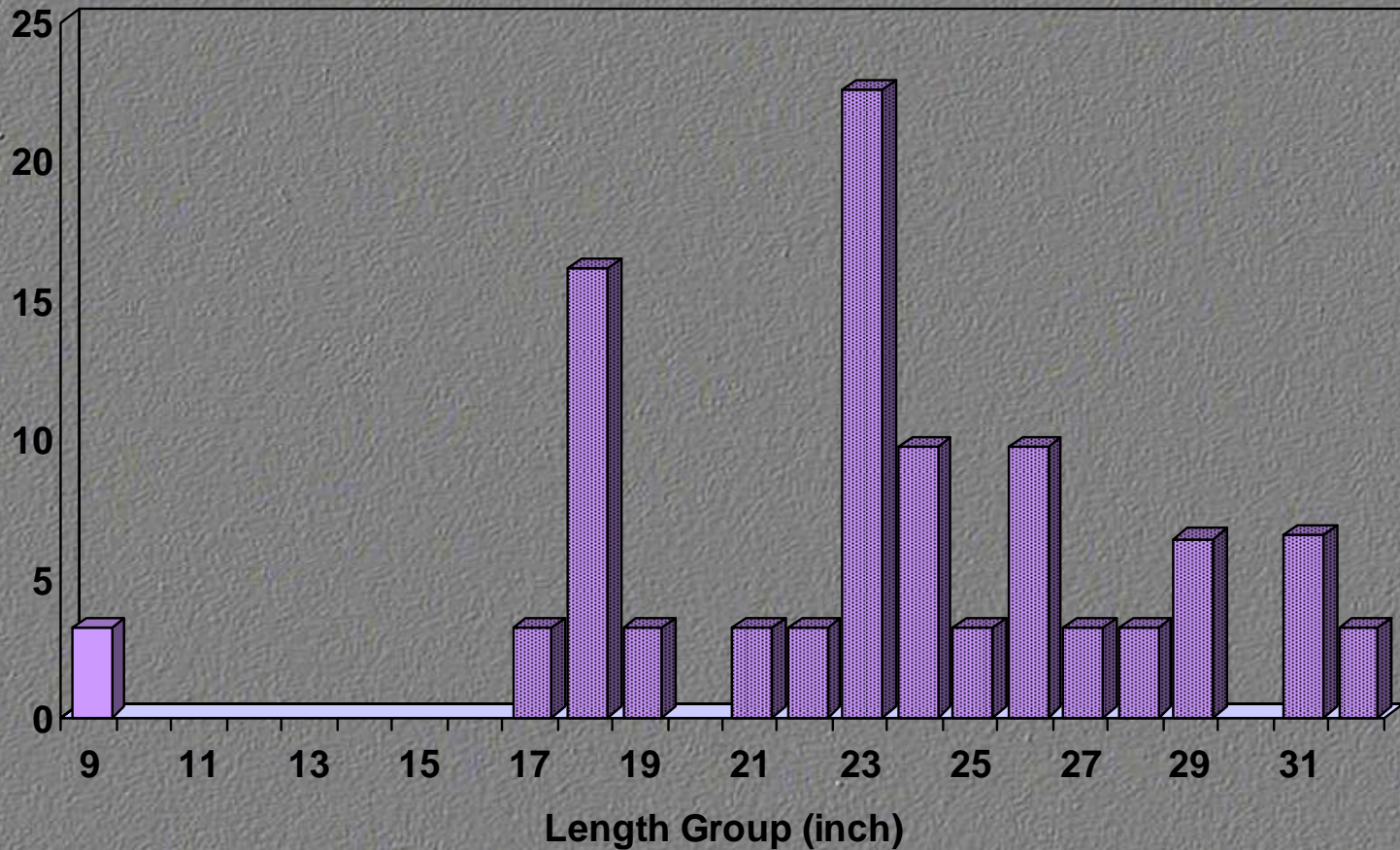
 Continue with the current 3/acre stocking rate?

Striped Bass – size structure

Length frequency from 2010 walleye gill netting (n=31)

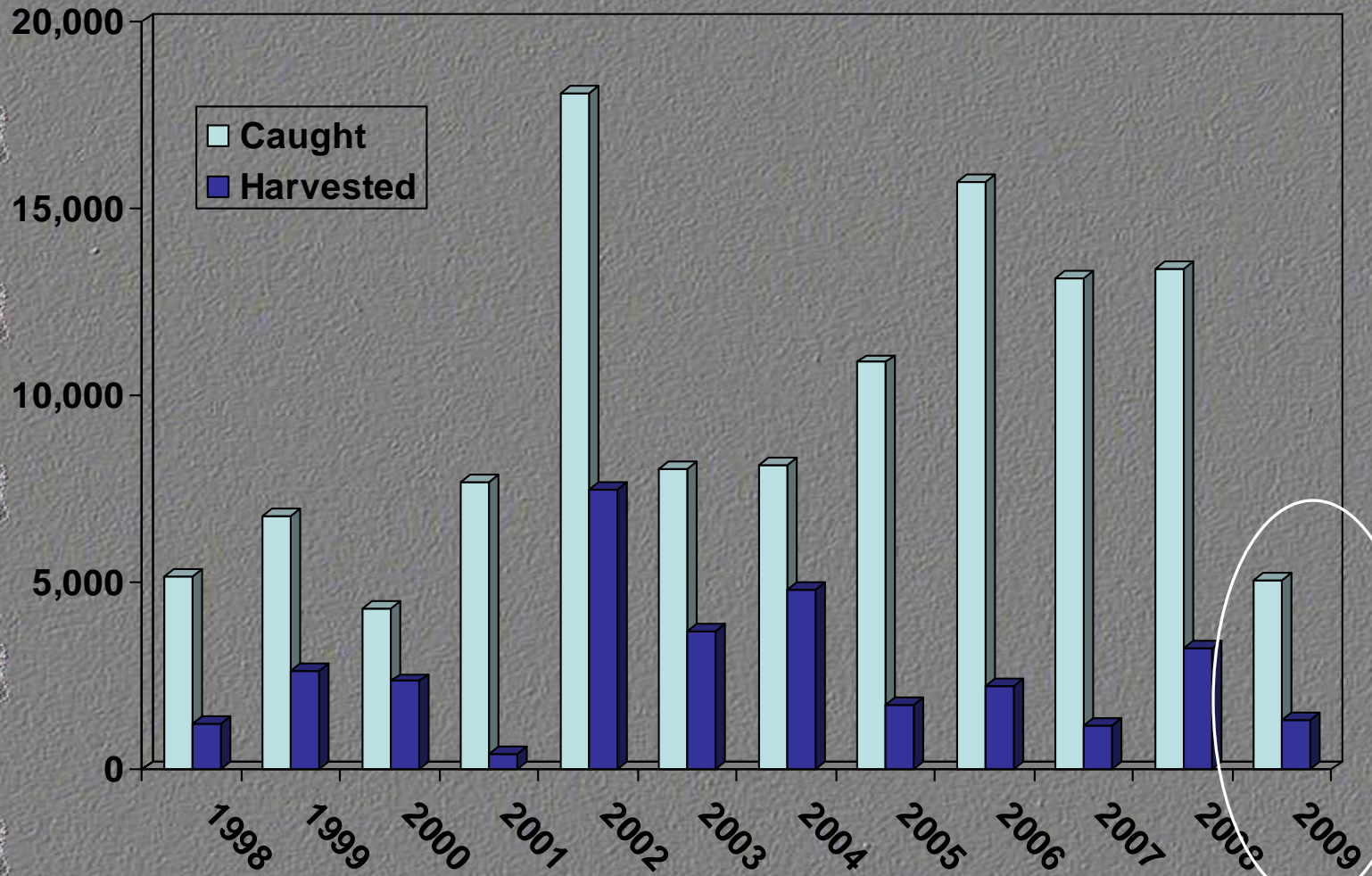


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Striped Bass


Total Catch and Harvest 1998-2009



Sunfish

Objective: Manage for a sustained annual harvest of various sunfish species.

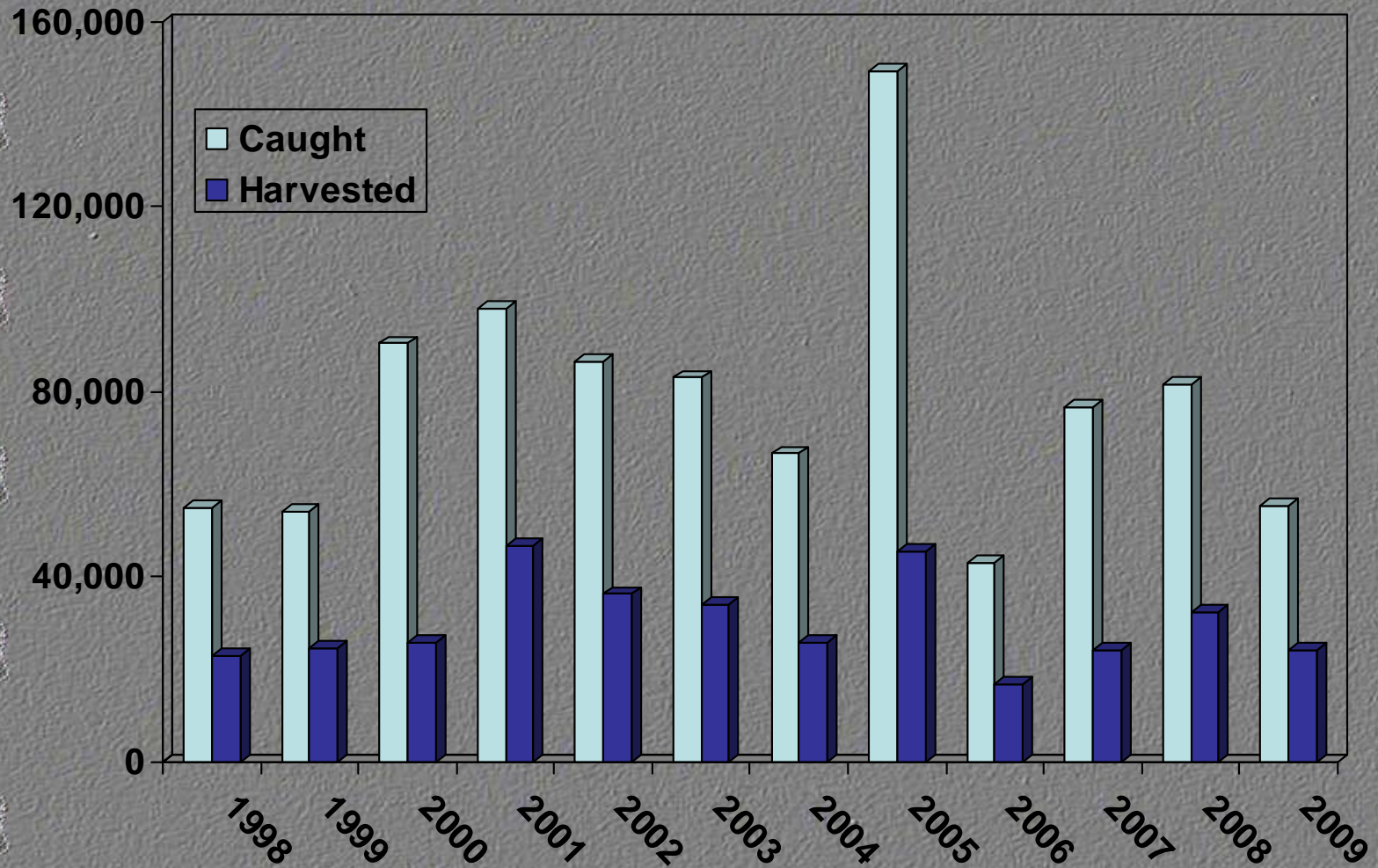
 Sunfish (mostly bluegill) continue to make up the highest percentage of harvested game fish (65 % in 2009).

 4,178 redear were caught in 2009 with an average weight of 0.8 lbs! Rarely recorded in creel prior to 2008. Seeing them everywhere while electrofishing.

 Catch and harvest was about average in 2009.

Sunfish

Total Catch and Harvest 1998-2009




Forage (Shad)

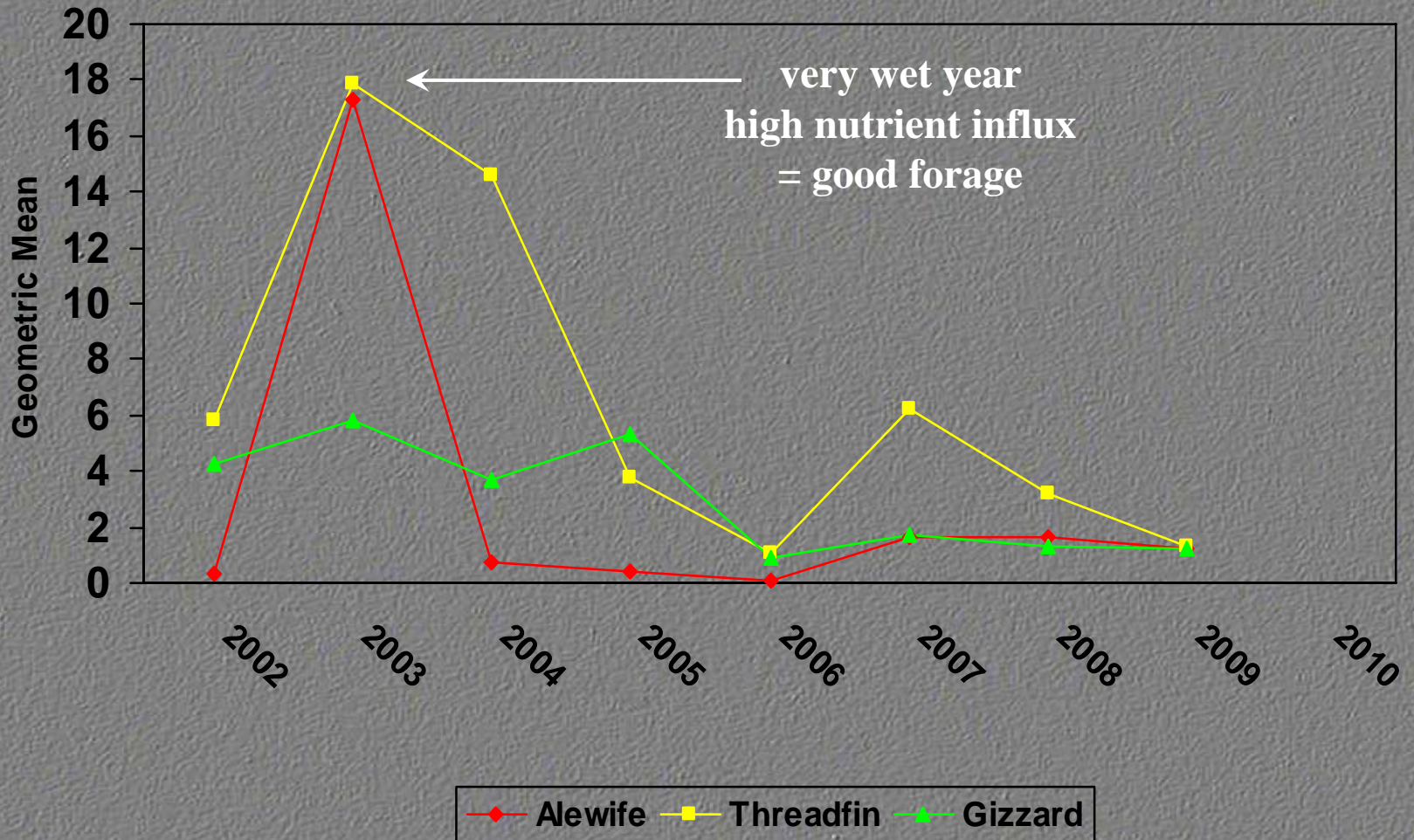
Objective: Manage for sustainable shad and alewife populations containing the numbers and size distributions necessary to support various sport fisheries.

 Did not shad net in 2010.

 Significant TF winter kill in 2011.

 Norris experienced below average forage production from 2004-2009, so care should be taken when stocking predators to ensure adequate food is available (Miranda's 1998 STRB study).

Norris Shad Gill Netting Catch 2002-2010



Habitat Enhancement

 3,850 Christmas trees covering ~43 acres were placed in Norris in 2010.



Stocking - 2010

 **Striped bass – 103,201 or 3.0/acre**

 **~1,278,000 since 1999**

 **Walleye – 194,584 or 5.7/acre**

 **~2,866,000 since 1999**

 **Crappie – 132,453 or 3.9/acre**

 **~2,139,000 since 1999**







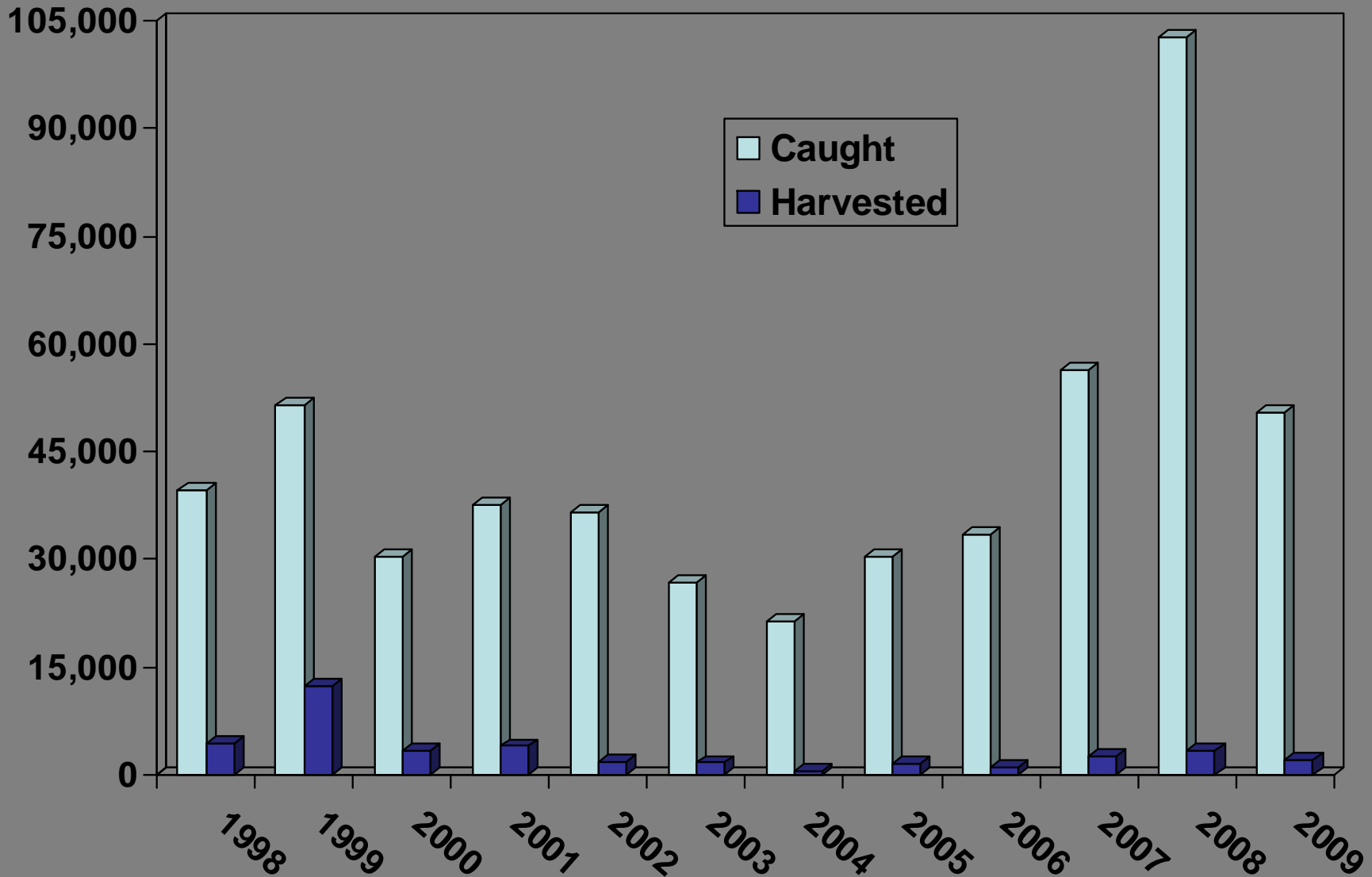
Questions?



Extra Info

Smallmouth Bass

Total Catch and Harvest 1998-2009



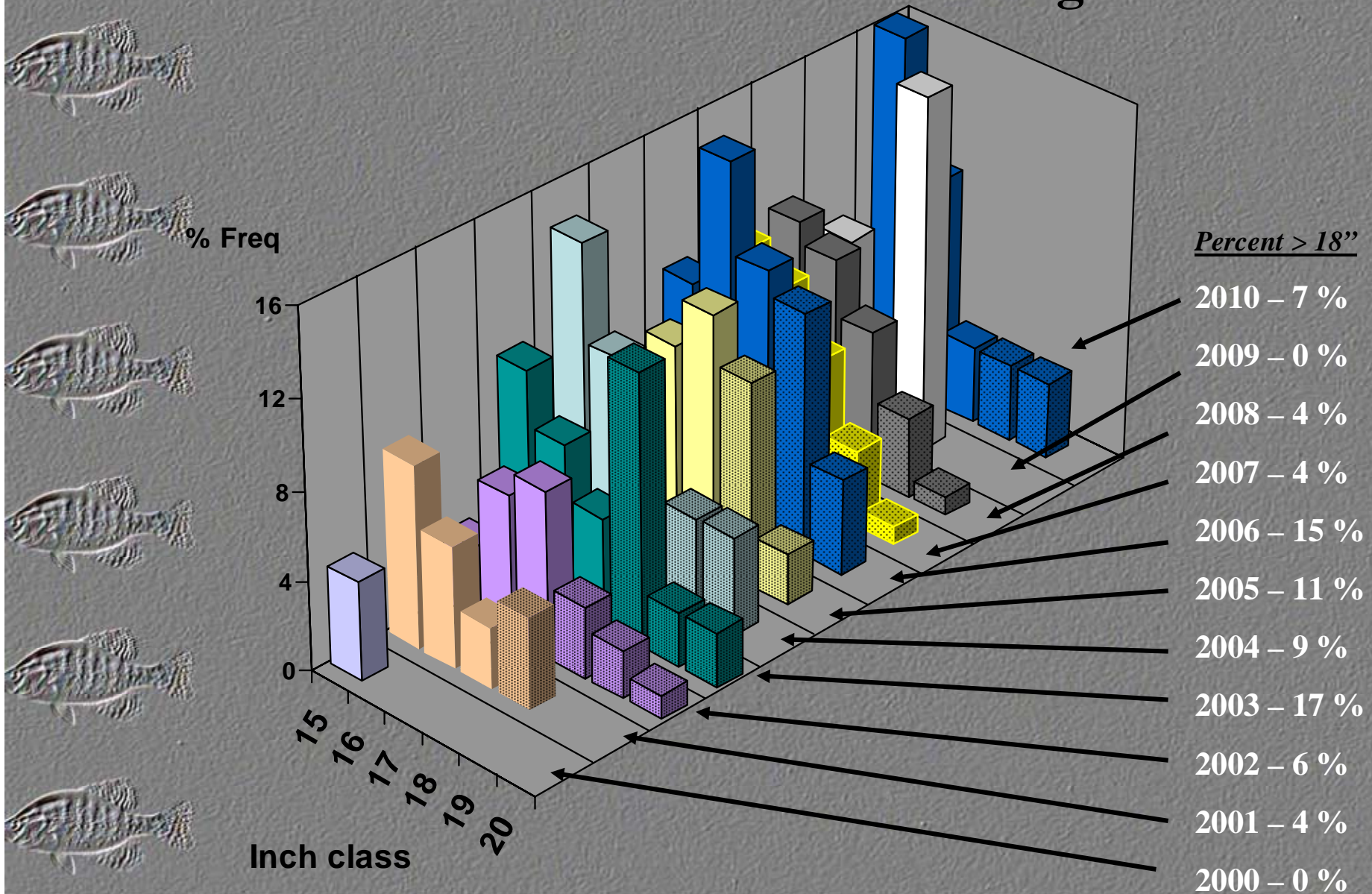
NLFAC Numerical Creel Objectives

2009 Summary of Results 75th % range of creel values prior to 1999

	<i>Intended angler hours</i>	<i>met?</i>	<i>Intended catch rate</i>	<i>met?</i>	<i>Intended harvest rate</i>	<i>met?</i>
Largemouth	(110,000 - 200,000)	Y	(0.12 - 0.22)	<u>N</u>	(0.05 - 0.10)	<u>N</u>
Smallmouth	(110,000 - 200,000)	Y	(0.13 - 0.23)	Y	(0.02 - 0.04)	Y
Spotted	(110,000 - 200,000)	Y	(0.05 - 0.09)	Y	> 0.05	<u>N</u>
Crappie	(31,000 - 41,000)	<u>N</u>	(0.35 - 0.43)	Y	(0.14 - 0.22)	Y
Striped Bass	(86,000 - 160,000)	<u>N</u>	(0.07 - 0.13)	Y	(0.05 - 0.09)	<u>N</u>
Walleye	(42,000 - 78,000)	<u>N</u>	(0.13 - 0.24)	<u>N</u>	(0.09 - 0.18)	<u>N</u>
Sunfish	(27,000 - 51,000)	Y	(1.38 - 2.57)	Y	(0.93 - 1.74)	Y

Year Changed	# Bass	SMB limit	Combination
2012	no limit	2 SMB, 17-22 PLR, only one over and one under	5 SMB + LMB
2011	no limit	By typo: 2 SMB, 17-22 PLR, only one over	5 SMB + LMB
2010	no limit	2 SMB, 17-22 PLR, only one over and one under	5 SMB + LMB
2009	no limit	spotted bass limit went to no limit	5 SMB + LMB
2001	20	5 SMB, 18-inch MLL	5 SMB + LMB
2000	20	5 SMB, 14-18 PLR, only one over	5 SMB + LMB
1999	20	spotted bass limit went to 15	5 SMB + LMB
1997	5	5 SMB, 14-inch MLL	5 Bass
1982	10	10 SMB, 14-inch MLL	10 Bass
1981	8	8 SMB, 14-inch MLL	8 Bass
1950	10	10 SMB, no MLL	10 Bass
1949	25	25 SMB, no MLL	25 Bass

Trend in Norris SMB Length Frequency 2000-2010 electrofishing



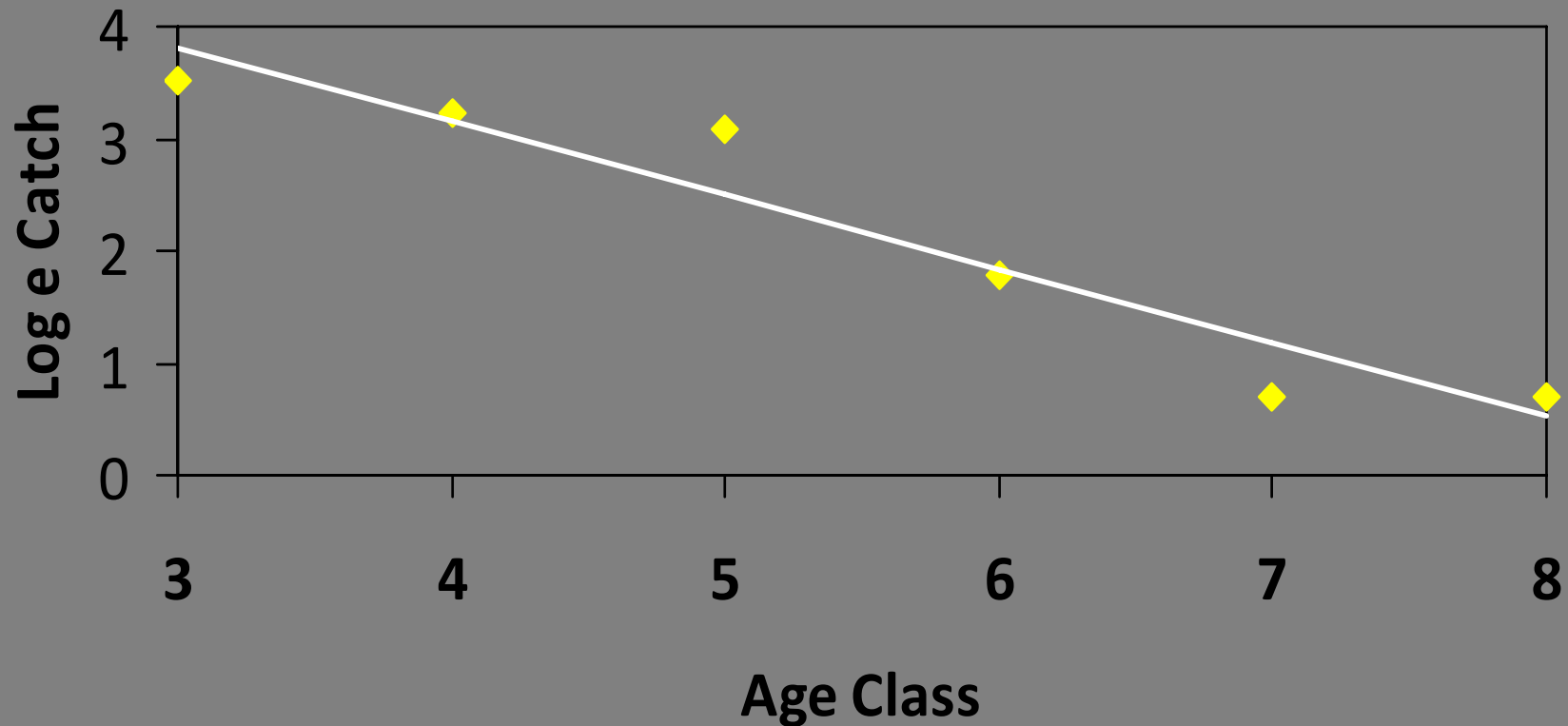
Shaw's creeled large SMB

year	length
2000	22.3
2001	20.3
2003	20.6
2003	20.5
2005	21.0
2005	20.3
2005	21.5
2005	21.7
2005	21.5
2005	21.0
2005	20.0
2006	20.2
2006	20.2
2007	20.0

Smallmouth Bass – mortality





Norris 2001 example

Total annual mortality = 48% (with range)



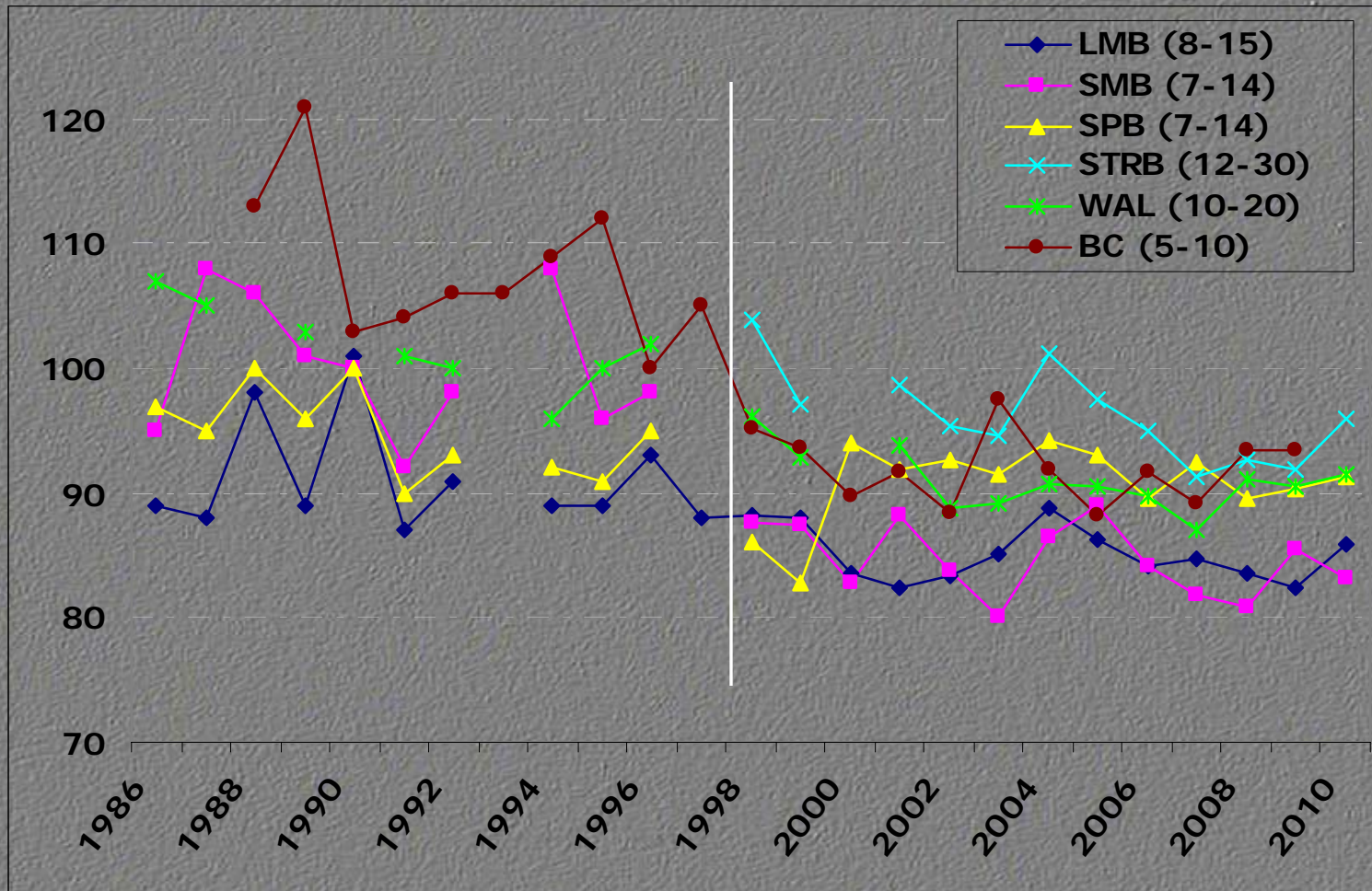
Black Bass General


UT's Phone Survey of Licensed Anglers

-  Do you fish reservoirs? (March 1 – August 31)
-  Do you fish in organized bass tournaments?
-  90% of reservoir bass anglers did not fish organized bass tournaments (AVG 2000-2008).
-  In 2008, 77% of reservoir anglers said they supported current reservoir regulations.

	2000	2001	2002	2003	2004	2005	2006	2008
% Yes	5.6	8.5	5.5	8.0	9.2	9.8	18.8	16.3
% No	94.4	91.5	94.5	92.0	90.8	90.2	81.4	83.7

Al Ryon's Wr's



 Perhaps a general decrease in condition over time?
(not statistically analyzed/proven to date)