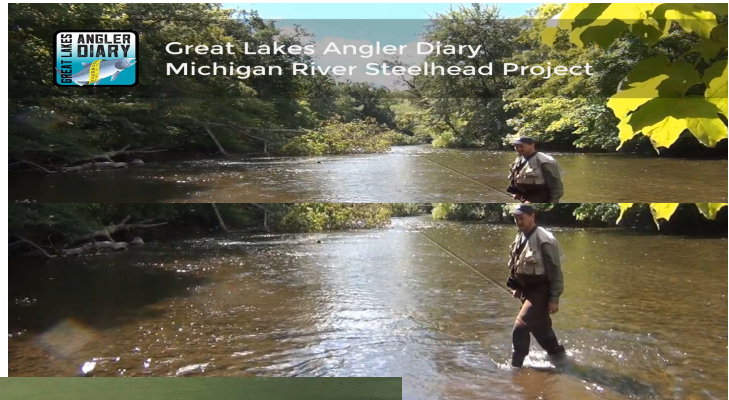




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## 2022 Kickoff Meeting

Dan O'Keefe, Ph.D.  
Michigan Sea Grant  
MSU Extension  
10/5/2022



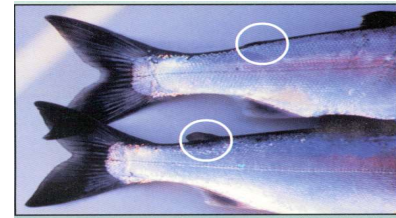
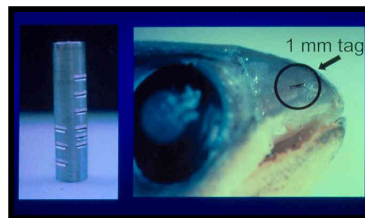
1



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## USFWS Great Lakes Mass Marking Background

- Yearling steelhead stocked in MI since 2018 have AD clip
- Missing stocked 2021 year-class in Michigan waters
- This season we will be missing lake-age 2 stocked fish
- Around 90% of steelhead in creel are lake-age 2 or 3, few reach 5 or 6



USFWS Photos

2

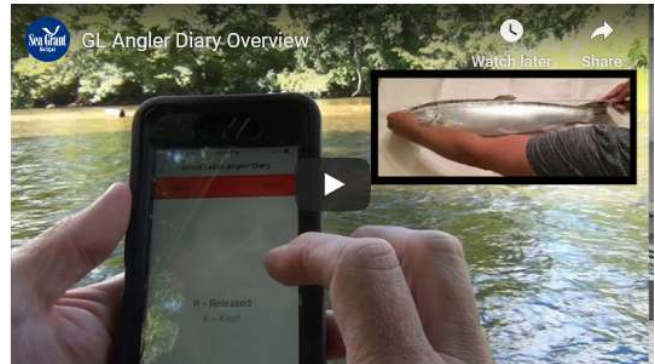


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# Michigan River Steelhead Program Instructions

- **REGISTER** at [GLanglerdiary.org](http://GLanglerdiary.org) or download the GL Angler Diary app for **IOS** or **Android**
- **RECORD** every river fishing trip that targets steelhead, including skunk trips
- **MEASURE** each and every steelhead caught
- **CHECK** for fin clips and other marks
- Recording every trip from the time you sign up is fine
- If you cannot measure accurately, estimate <15, 15-19, 20-24, 25-28, 29+ inches

This video provides a quick overview of the program and instructions for data entry on Apple devices:



3



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## New for 2022

New Android App and IOS updates now available

Android Dashboard screen fixed

New locations:

Plaster Creek

Buck Creek

White River Hesperia to N. Branch (Upper White R)

White River N. Branch to Mouth (Lower White R)

N. Br. White River

[Back](#) Great Lakes Angler Diary

Season	2022 Fall (Oct-Dec)
Species	All Species
Location	All
<a href="#">Calculate</a>	
Trips Taken	2
Angler Hours	5.0
Fish Caught	1
Fish/Trip	0.50
Fish/Angler Hr	0.20
%Unclipped	0.00

4



## Results from June 1, 2021 – May 31, 2022

Survey results

Overview by Great Lake Basin

Overview by watershed

Factors influencing selective harvest

Team reports with results by river



5

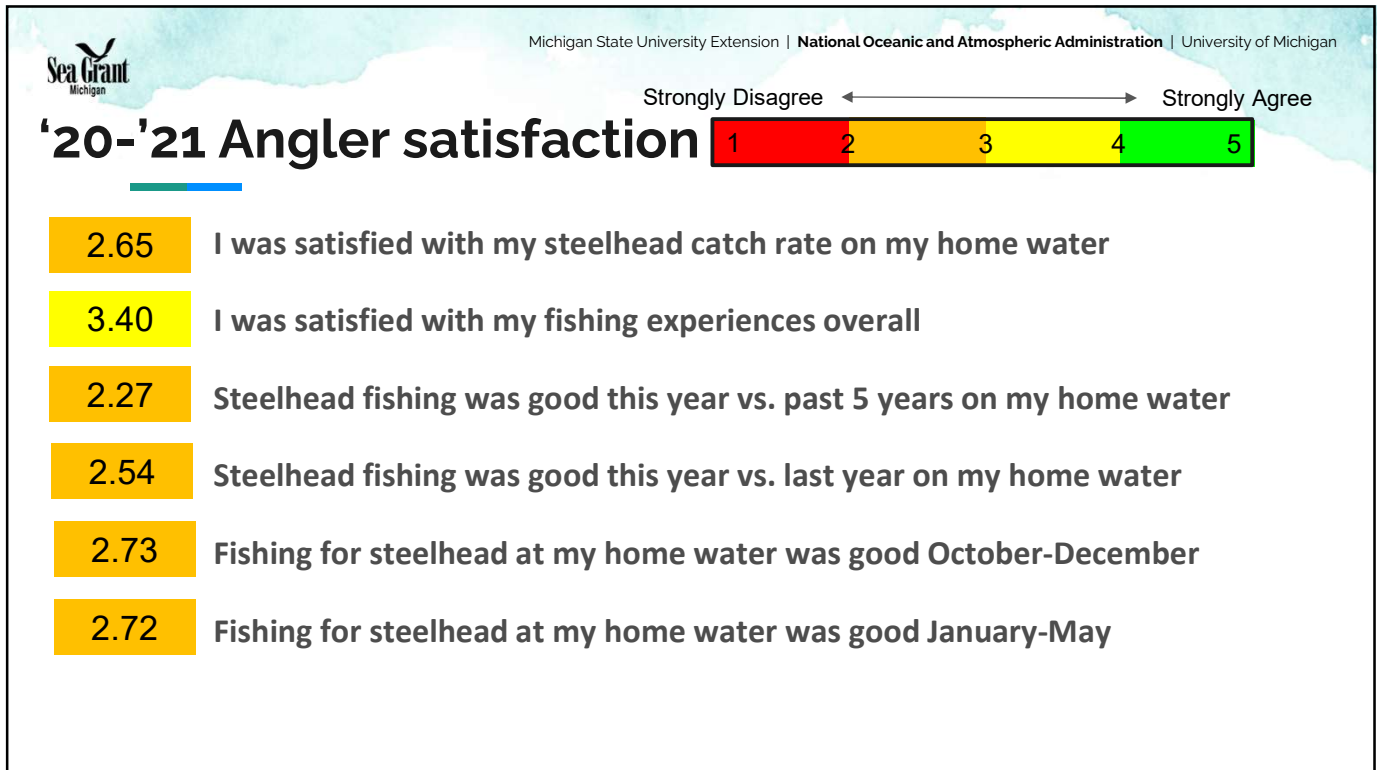


## Participation

	2020-2021	2021-2022
Number of Registrant VNs	199	496
Surveys Returned	84	91
Complete Steelhead Data Sets	46	65
Complete River Trip Data Sets	29	25
Complete Lake Trip Data Sets	10	6
Steelhead in Complete Data Sets	1,380	2,945

**3,542 total**  
597 in unuseable data sets

6



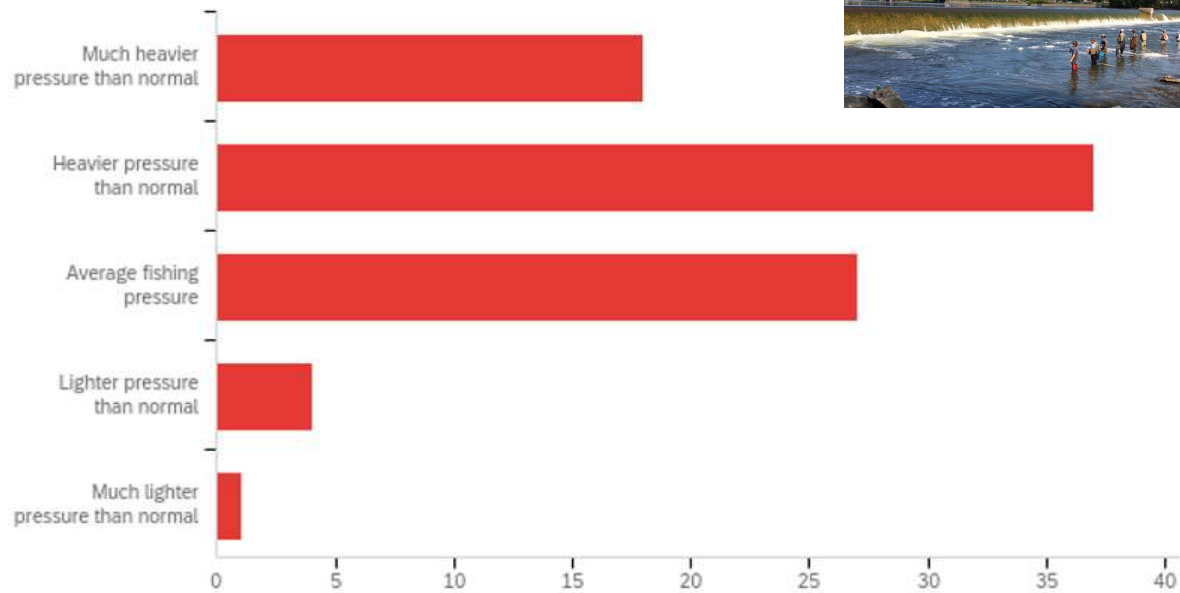
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8



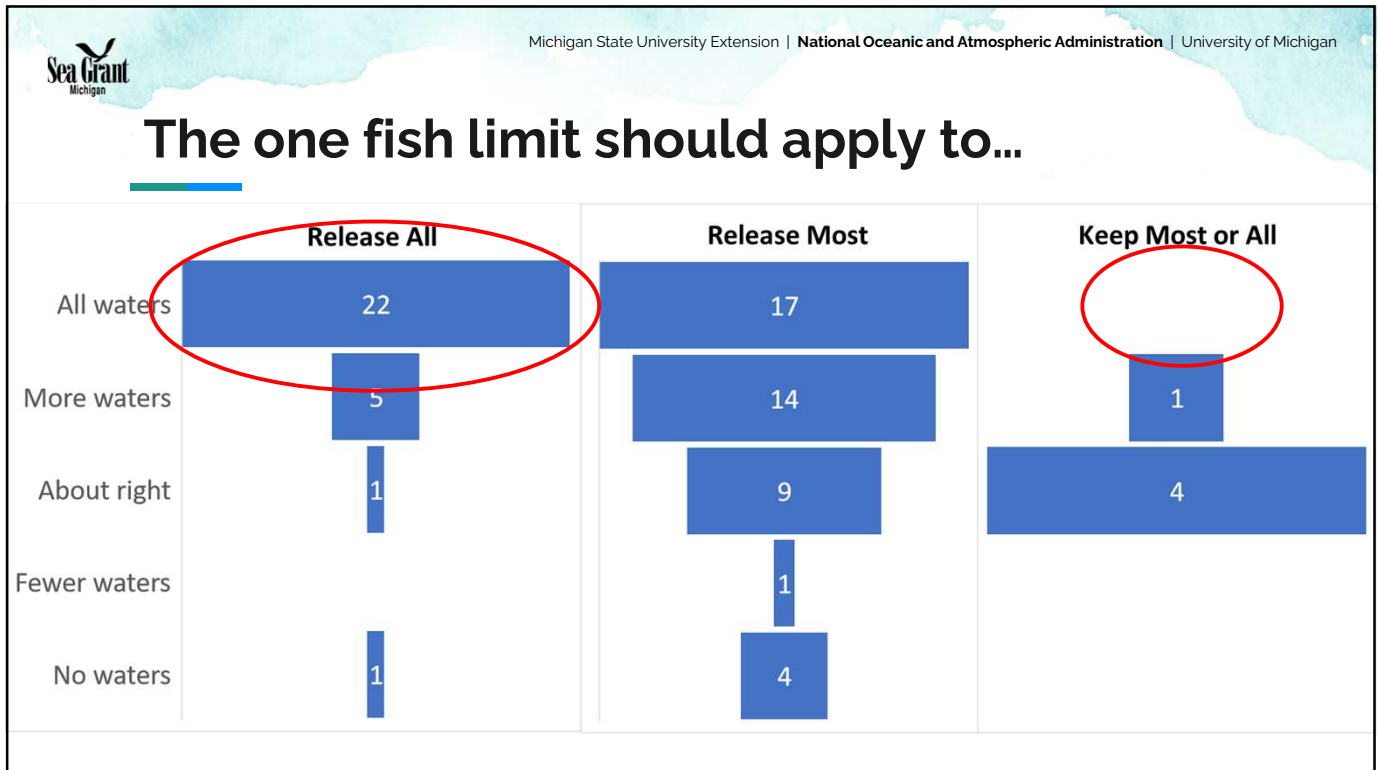
**Q20 - How would you describe steelhead fishing pressure on your home water over the past season (Oct. 2021 - May 2022)?**



9



10

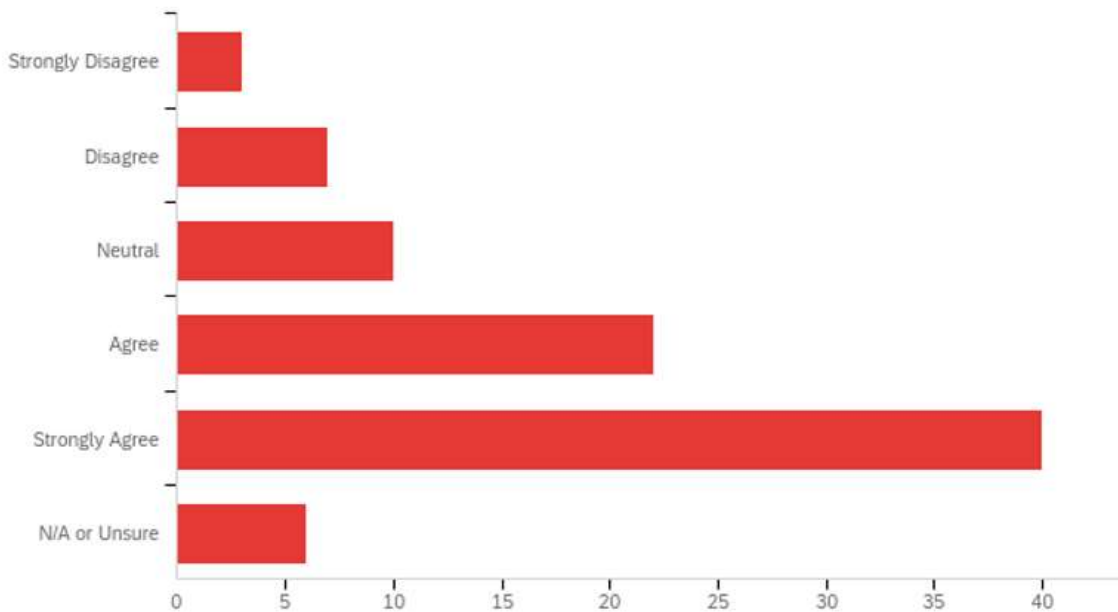


11



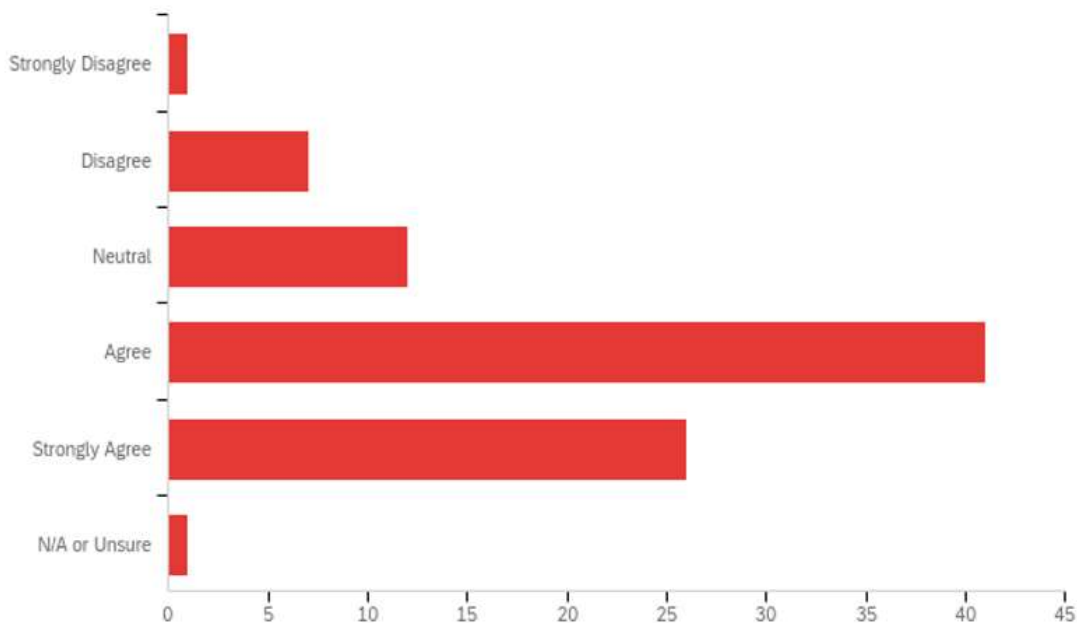
12

**Q30 - A harvest limit reduction would help to ensure the long-term viability of steelhead populations in Michigan.**

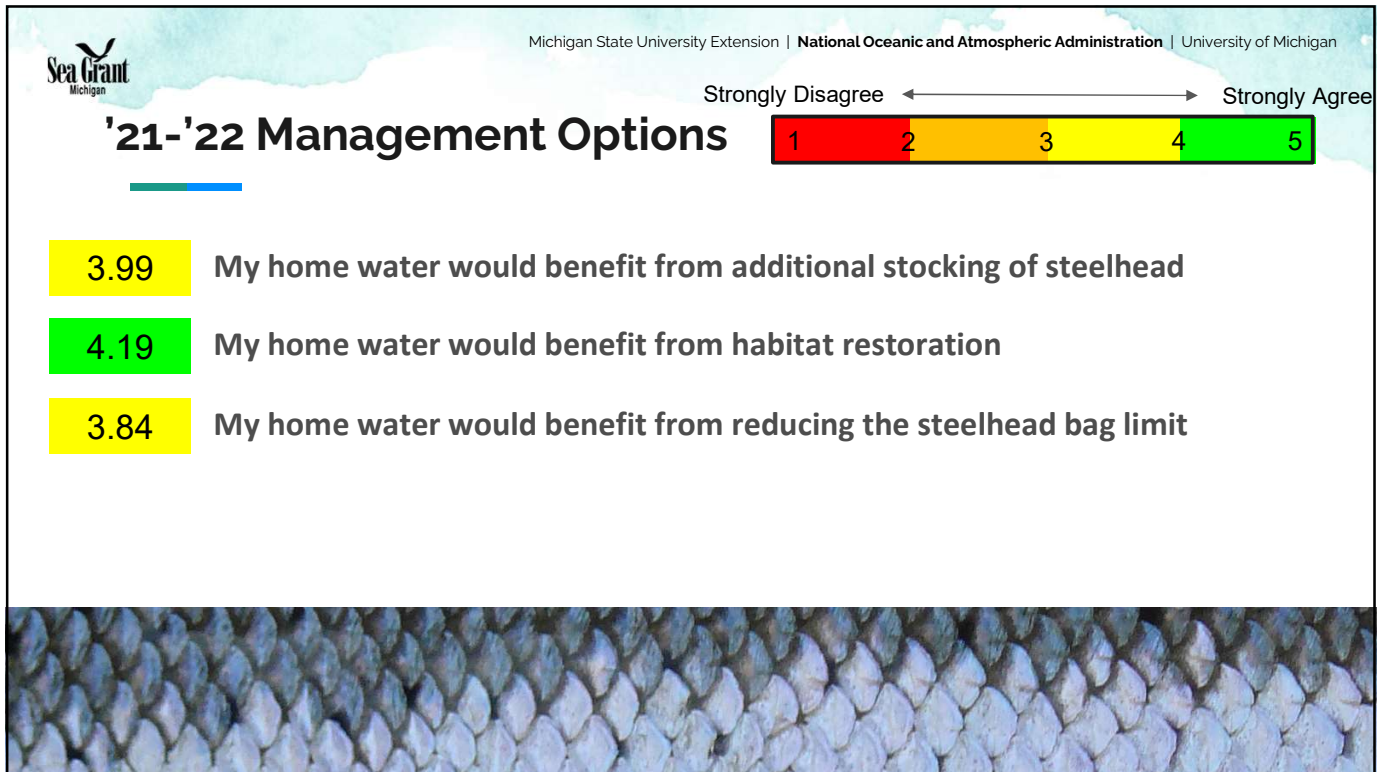


13

**Q31 - A harvest limit reduction would help to boost catch rates in rivers because released fish can be caught multiple times.**



14



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**Where were steelhead caught?**

Table shows steelhead over 15 inches long caught in each major watershed in each Great Lakes basin for the 2021-2022 season.

**Basin totals in bold.**

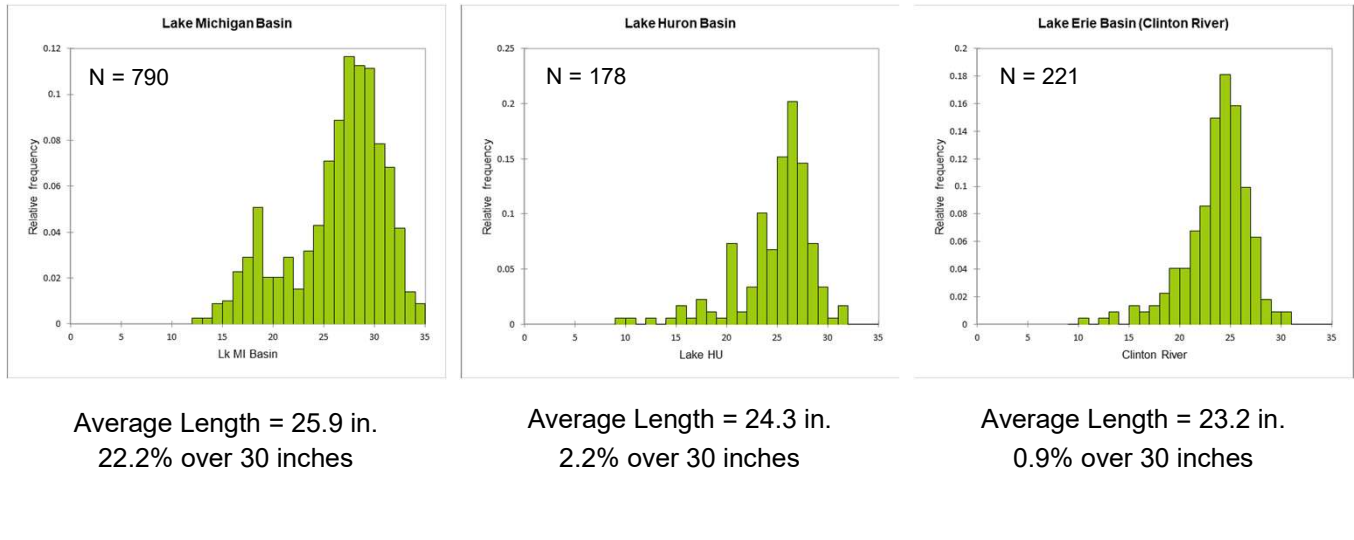
Bear	7	AuSable	5
Betsie	328	Ocqueoc	1
Boyne	14	Rifle	14
Grand	179	Thunder Bay	1
Kalamazoo	115	Other Lk. HU Trib	1
Manistee	1,157		
Muskegon	123	Lake Huron	2
Pentwater	2	<b>LAKE HURON BASIN</b>	<b>24</b>
Pere Marquette	572		
St. Joseph	83	Rock	21
White	40	Sucker	13
Other/Unknown	6		
Lake Michigan	26	Lake Superior	2
<b>LAKE MICHIGAN BASIN</b>	<b>2,652</b>	<b>LAKE SUPERIOR BASIN</b>	<b>36</b>
Clinton	82		
Huron	80		
<b>ST CLAIR/ERIE BASIN</b>	<b>162</b>		

16





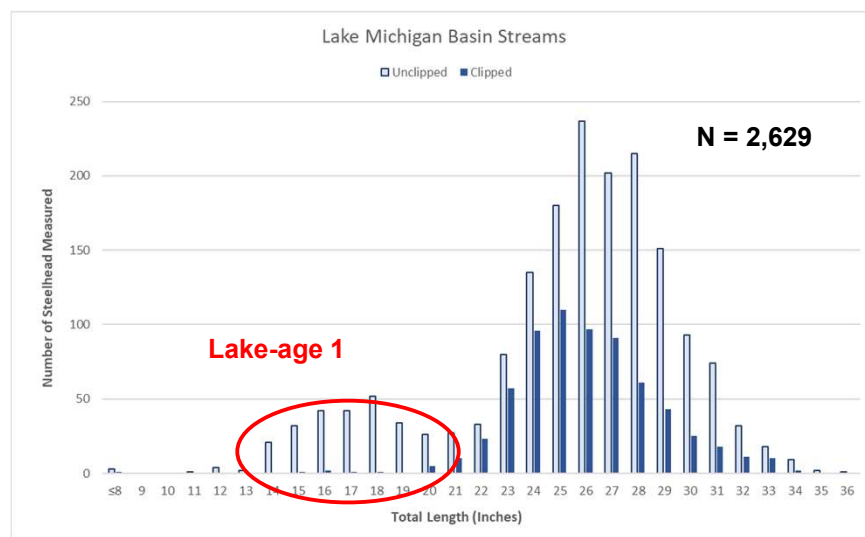
## Lengths by Great Lakes basin 2020-2021



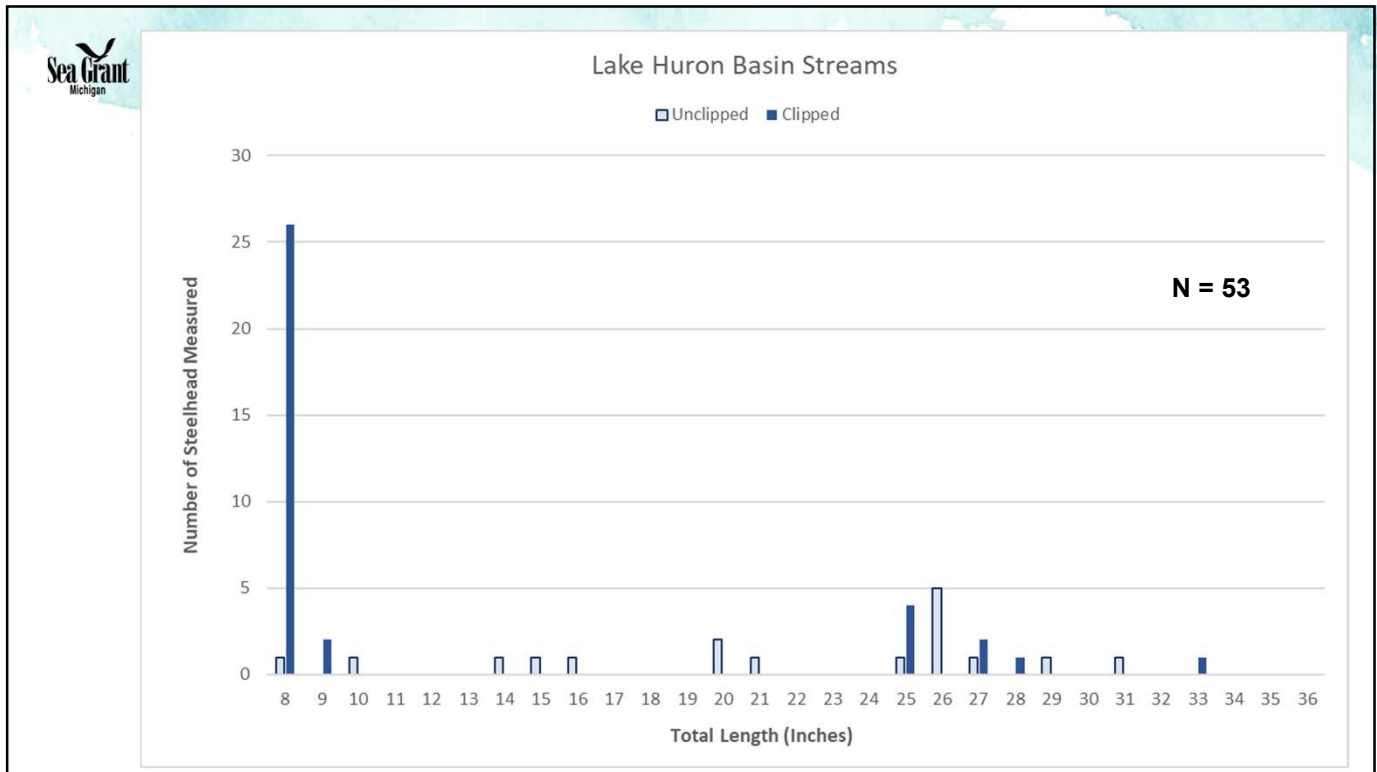
17



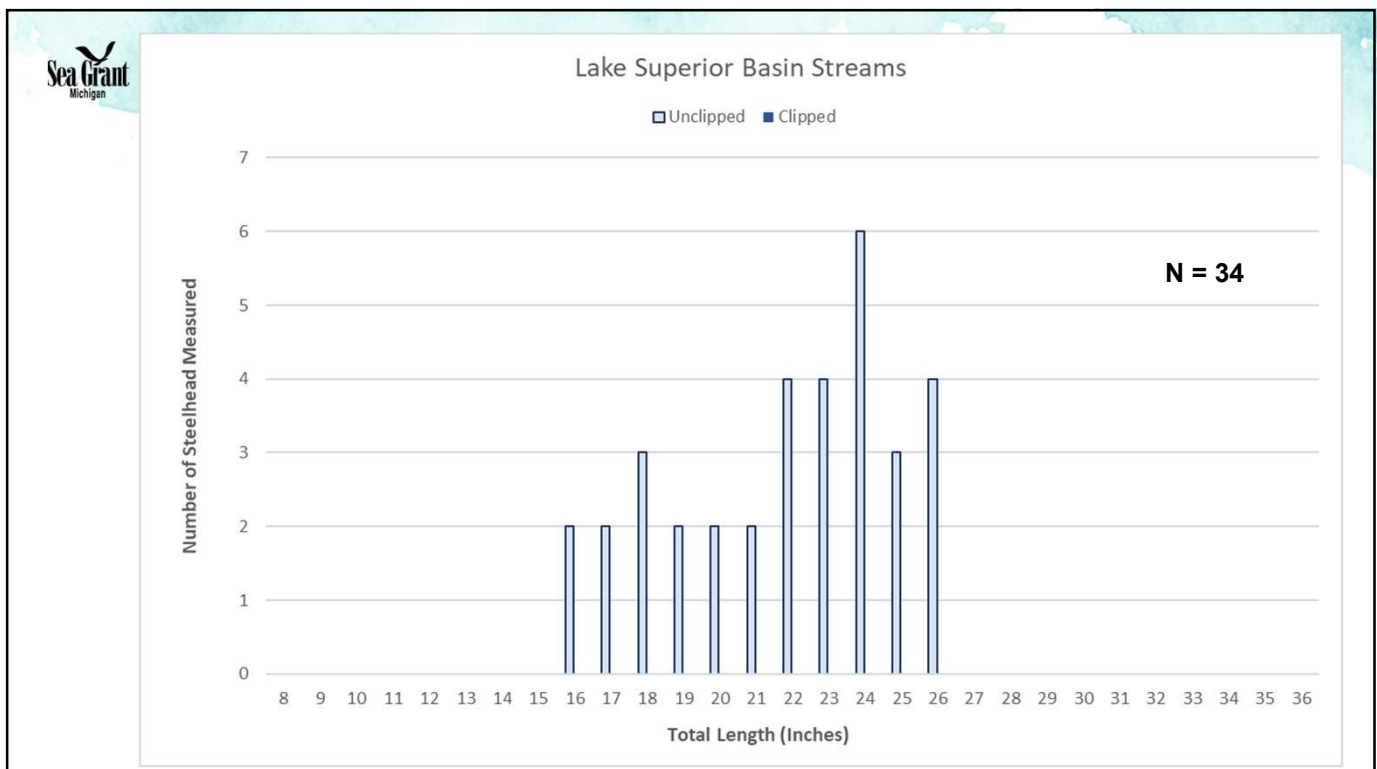
## Lengths by Great Lakes basin 2021-2022



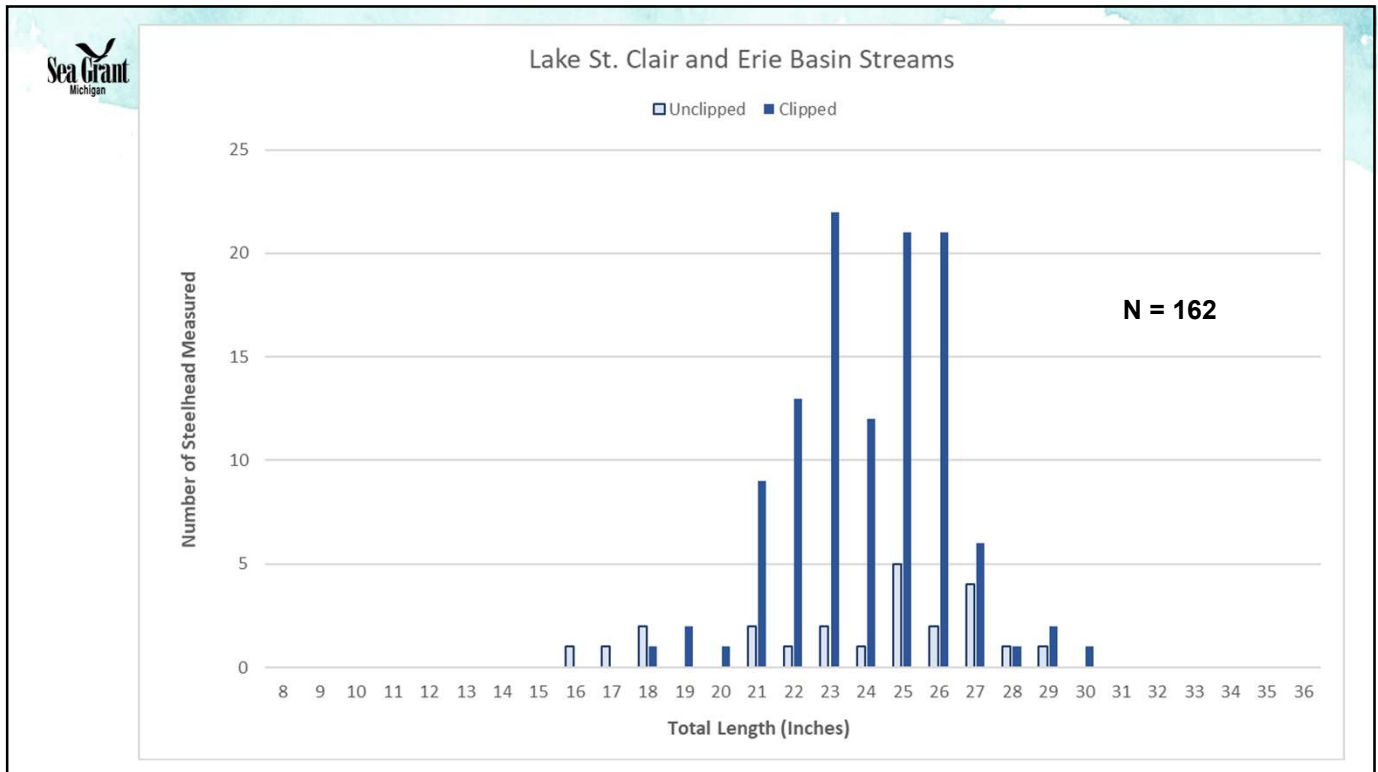
18



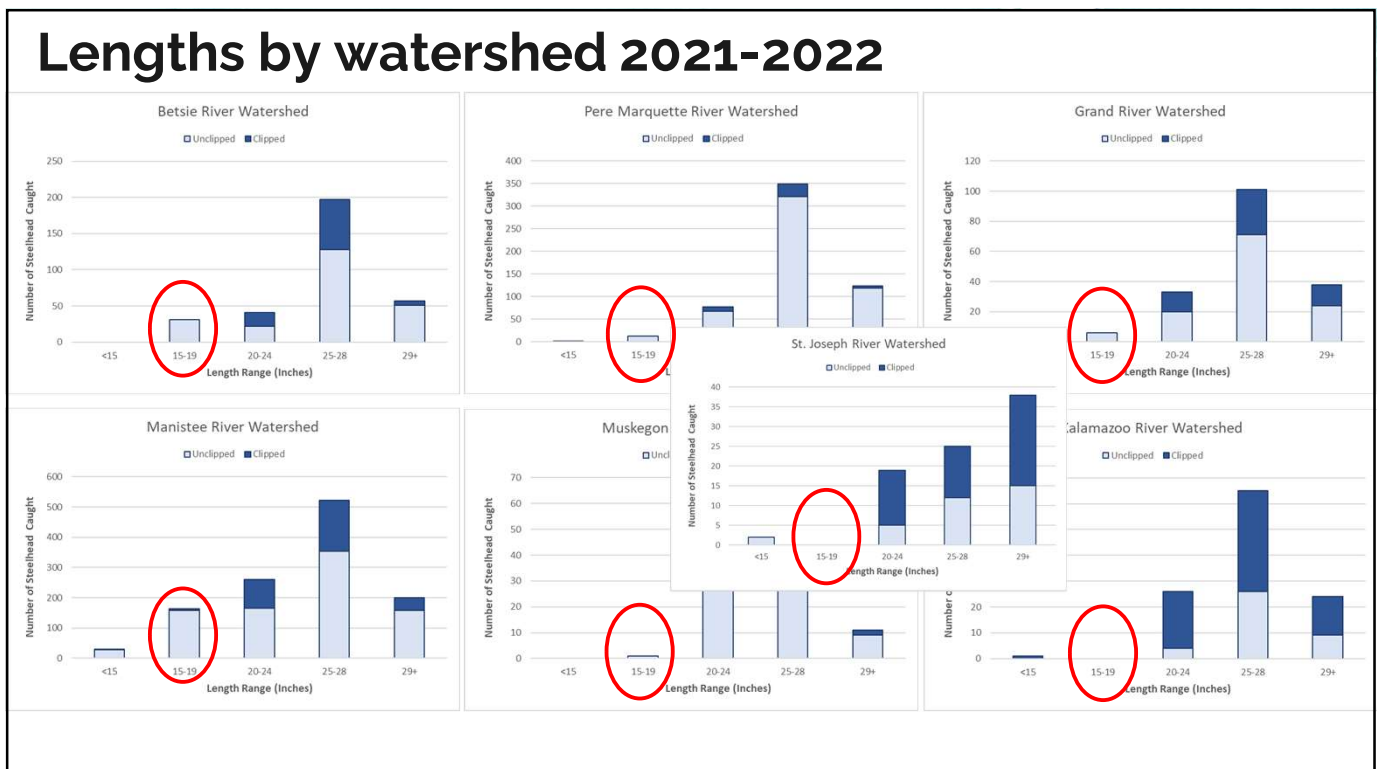
19



20



21



22



## Types of Marks

ADRV – 2018-19 Skamania stocked in Manistee

ADLM – 2018 Chambers Creek Strain  
Root and Kewaunee (WI) stocking

Also 6 pectoral fin clips noted, but no pec clips  
have been used for steelhead in recent years.




Location	Species	Total Length	Fate	Sex	Fin Clip
Huron River, LP	Steelhead	21	K - Kept	M - Male	ADLM - AD and L. Maxilla
Upper Manistee R	Steelhead	24	K - Kept	F - Female	ADRV - AD and R. Ventral

23



24



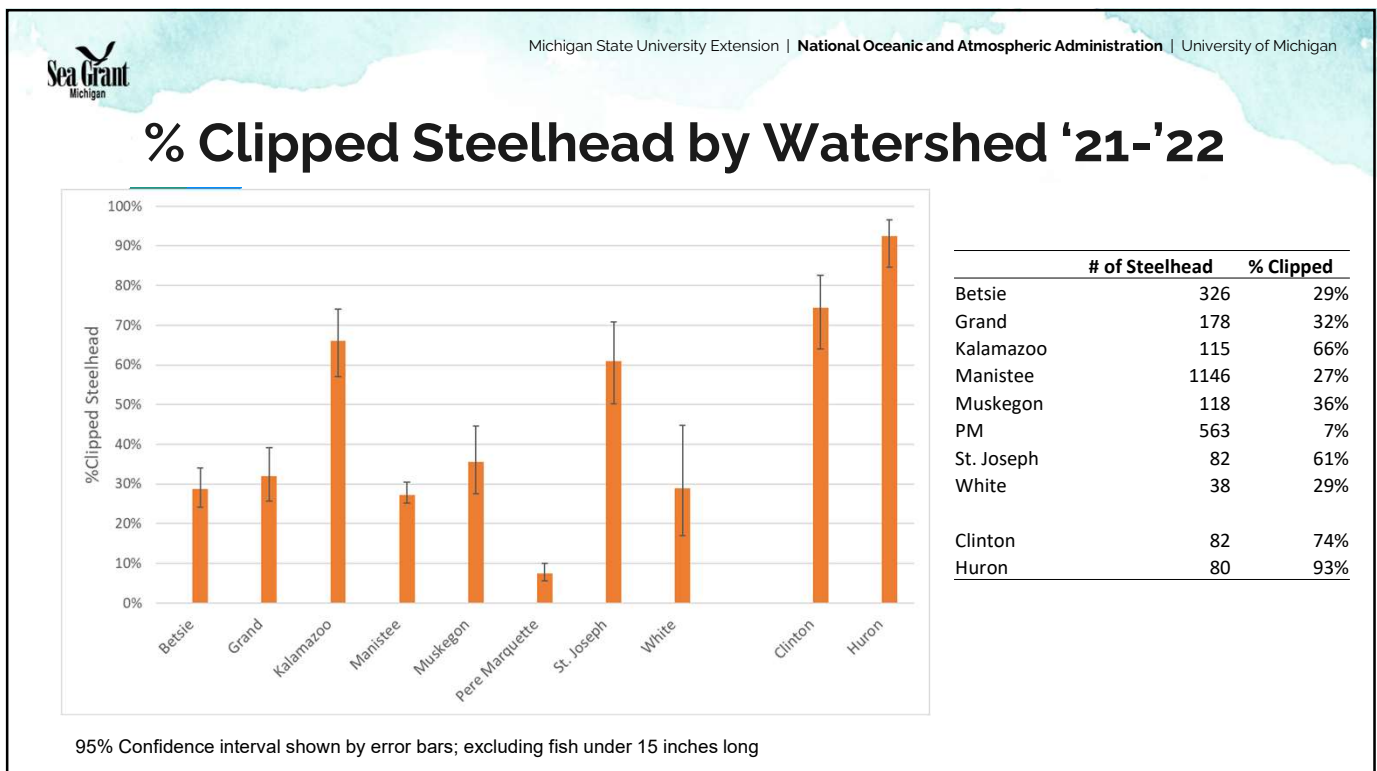
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Water Body	Site Name	Town	Range	Section	Species	Strain	Date	Number	Avg. Length	Operation	Fin Clips, Marks, Tags
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/16/2015 0:00	26263	7.15	State Plant	right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/20/2016 0:00	27958	7.44	State Plant	right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/19/2017 0:00	34329	6.93	State Plant	right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/20/2018 0:00	30972	7.44	State Plant	adipose, coded wire tag, right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/18/2019 0:00	34000	7.09	State Plant	adipose, coded wire tag, right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/20/2021 0:00	49063	7.13	State Plant	right ventral clip
Manistee River	TIPPY DAM	22N	13W	31	Rainbow trout	Skamania	4/20/2022 0:00	35733	7.28	State Plant	adipose, right ventral, coded wire tag

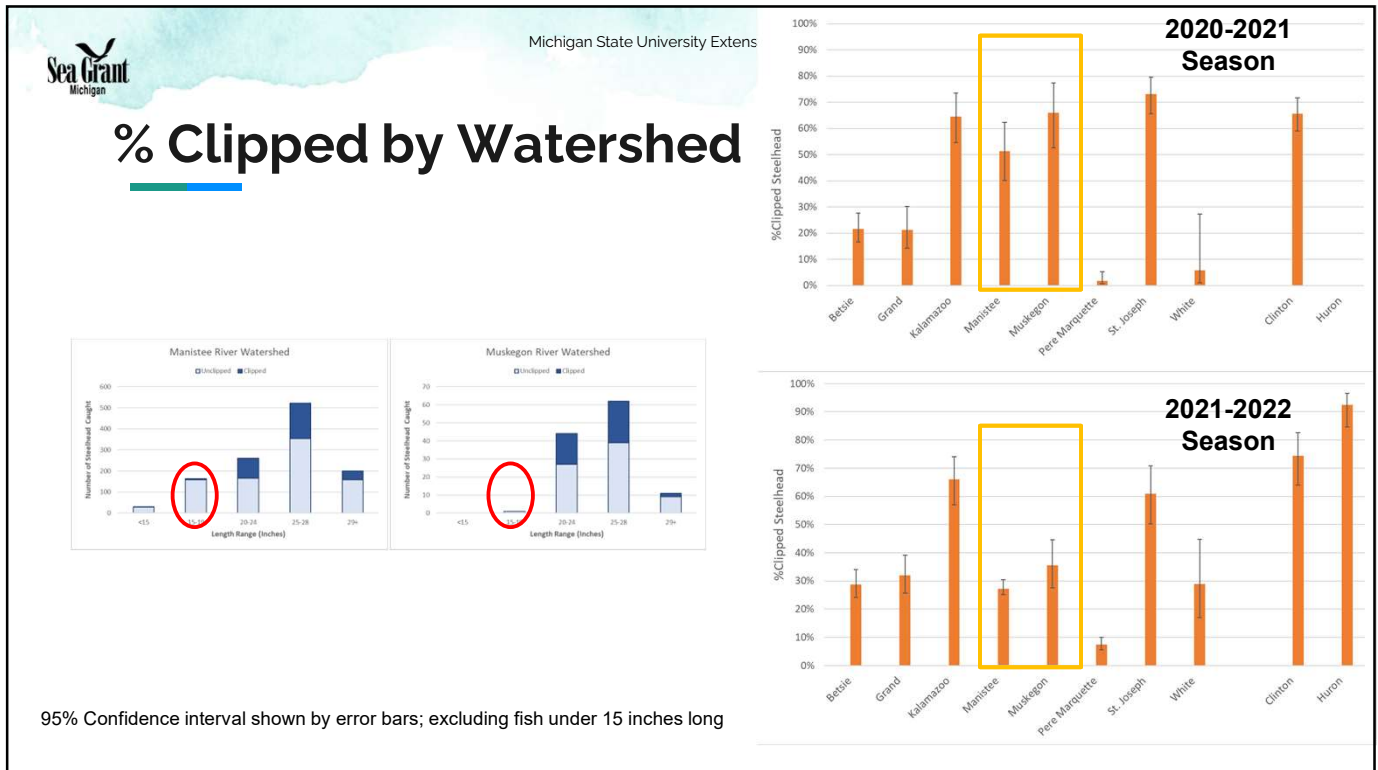
From MI DNR Fish Stocking Database

25

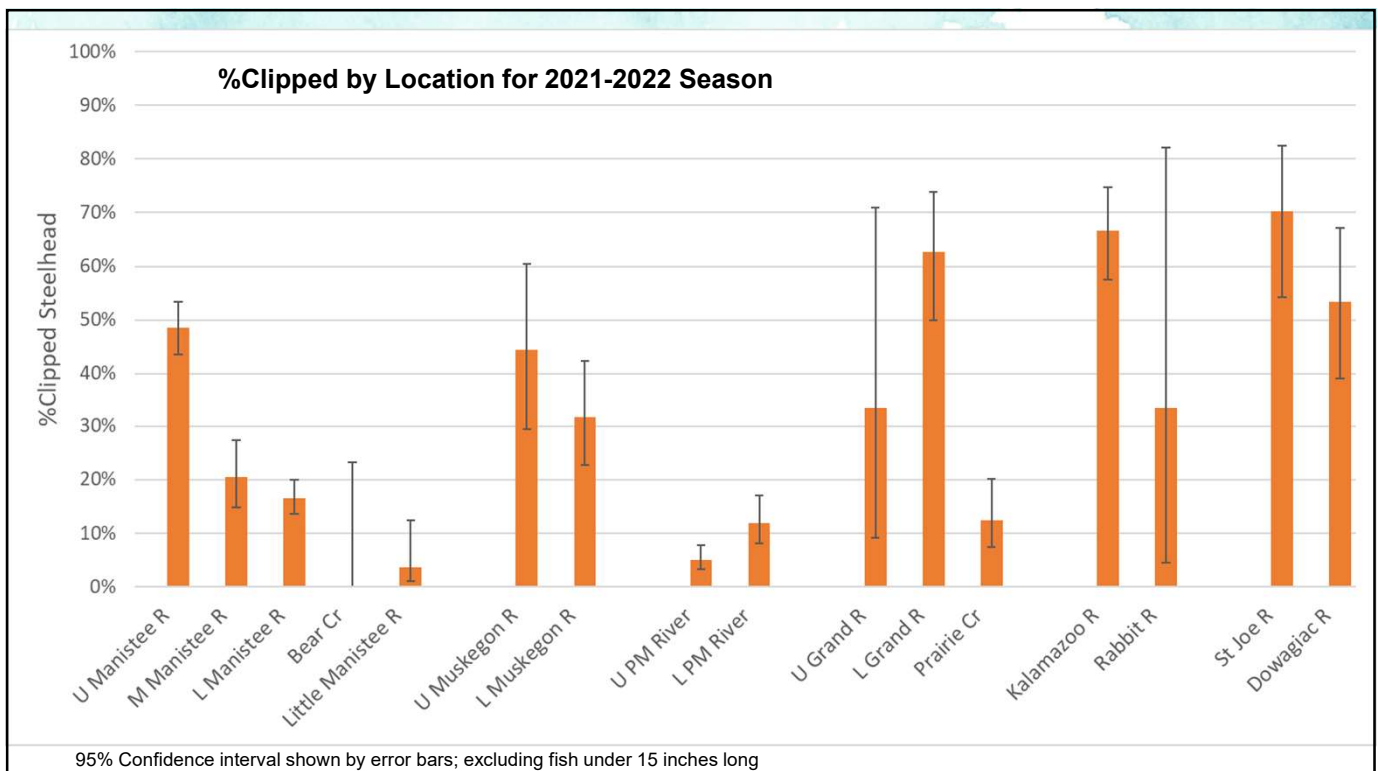


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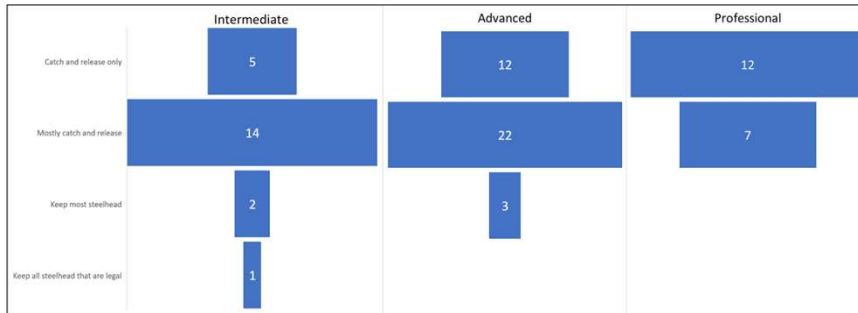


28



## Does expertise influence release rate?

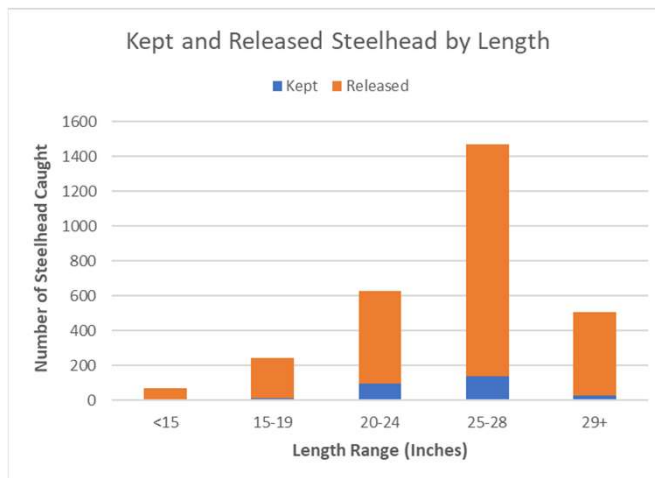
	Kept	Released	Total	% Released
Intermediate	27	35	62	56%
Advanced	71	740	811	91%
Professional	19	1054	1073	98%



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## Do people selectively harvest based on size?

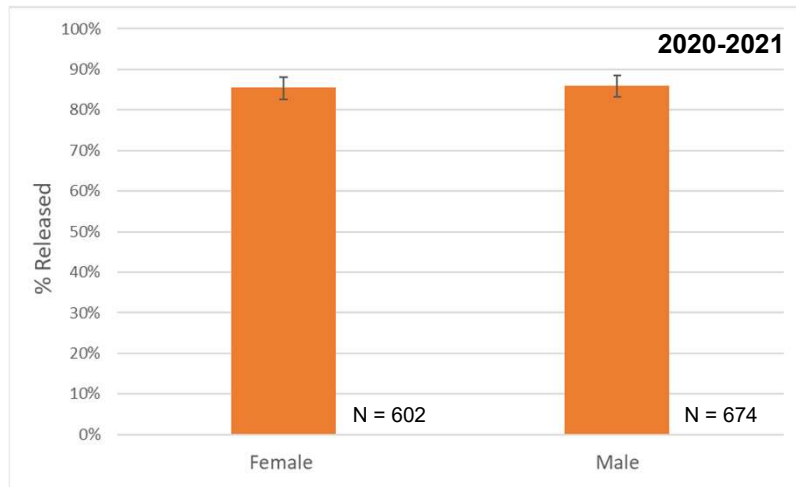


	Kept	Released	%Harvested
<15	1	67	1%
15-19	11	231	5%
20-24	95	531	15%
25-28	136	1335	9%
29+	29	476	6%

30



## Do people selectively harvest females?

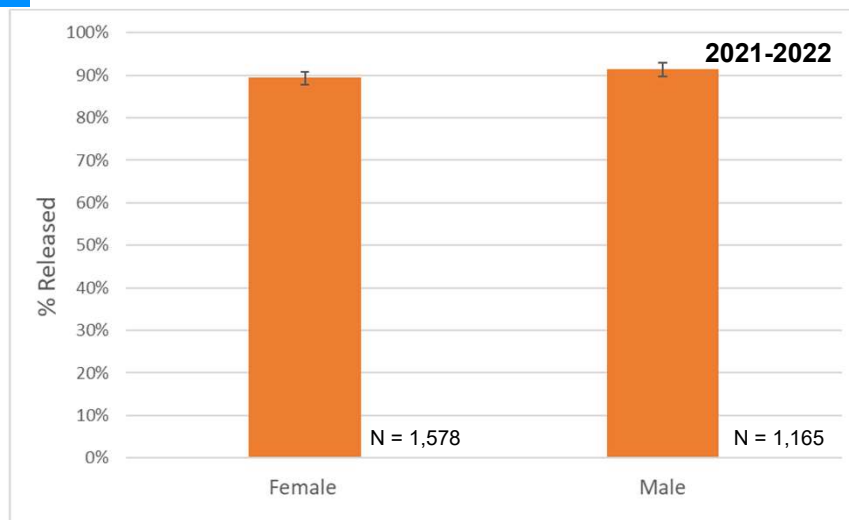


NOTE: Data for river steelhead >15" shown.

31



## Do people selectively harvest females?



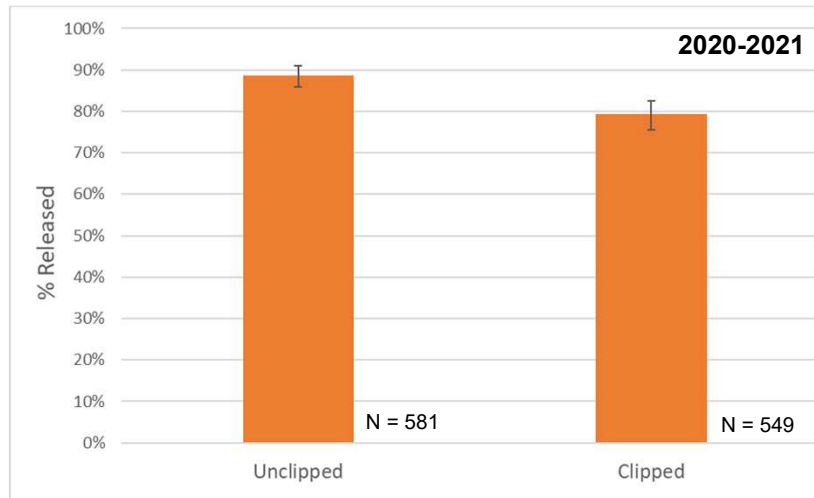
NOTE: Data for river steelhead >15" shown.

32



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## Do people selectively harvest stocked fish?



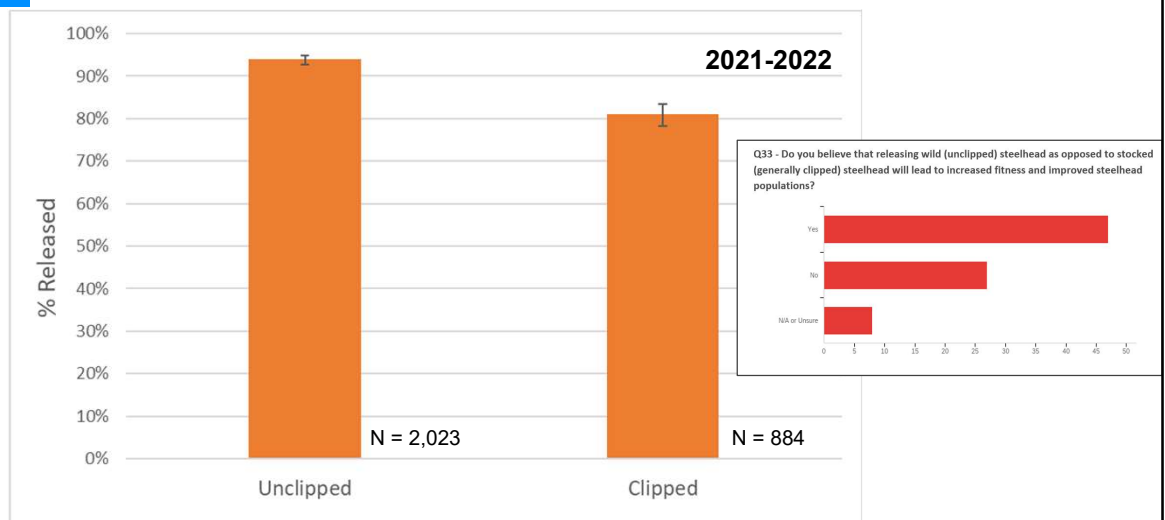
NOTE: Data for river steelhead >15" shown.

33



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## Do people selectively harvest stocked fish?



NOTE: Data for river steelhead >15" shown.

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## Conclusions relevant to one-fish limit

Most participants were in favor of one-fish limit

Advanced and pro anglers tend to practice C&R and support restrictive limits

Our program does not yet represent beginning & intermediate anglers

Although some anglers perceive benefit, harvest did not drop Mar 15 – May 15



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## Other Conclusions

Selective harvest of mid-sized and clipped fish could influence creel and biotech data

15-19" skippers were nearly all wild due to lack of stocking in 2021

St. Joe, Kalamazoo, and Muskegon had few 15-19" wild steelhead

Higher prevalence of stocked fish in Spring vs. Fall (33% vs. 17% for Lk. MI tribs)



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<https://MichiganSeaGrant.org/GLAD>

## GREAT LAKES ANGLER DIARY

# New Today!

- 2022 GL Angler Diary Results (PDF)



### RESOURCE PAGE

Record your catches with Great Lakes Angler Diary and help biologists learn how stocked and wild fish contribute to the Great Lakes and their tributary streams.

#### Michigan River Steelhead Program

Did you ever wonder if steelhead in your favorite river are mostly stocked or mostly wild?

Now you can contribute catch info to Michigan Sea Grant to help us find out. All you need to do is:

- REGISTER at [GLAnglerDiary.org](http://GLAnglerDiary.org) or download the iOS app
- RECORD every river steelhead trip taken October-May
- MEASURE each and every steelhead caught
- CHECK for fin clips and other marks

At the end of the season you will be asked to take a short survey and verify that your information is complete.

This video provides a quick overview of the program and instructions for data entry on Apple devices.

#### Big Lake Salmon and Steelhead Program

This program replaces the Salmon Ambassadors program, which enlisted anglers to collect data on over 10,000 stocked and wild Chinook salmon from 2013-2020. Many stocked Chinook salmon present in the Great Lakes are still marked with an adipose fin clip, but those from the 2020 year-class were not marked.

Although interpretation of fin clips is no longer as straightforward as it once was, we still welcome big lake data for all salmon and trout species, with special emphasis on steelhead and Chinook salmon. To participate:

- REGISTER at [GLAnglerDiary.org](http://GLAnglerDiary.org) or download the iOS app
- RECORD every big lake fishing trip taken May-September
- MEASURE each and every steelhead and Chinook salmon caught
- CHECK for fin clips and other marks

Printed data sheets will no longer be accepted by mail, but you can print the

This video provides a quick overview of the program and instructions for data entry on Apple devices:



Catches can also be entered on other mobile devices and computers, as described in this tutorial:



Volunteers will have the chance to connect with biologists and other steelhead anglers on periodic Zoom meetings. By registering for this program you will also sign up for meeting notifications, updated results, and other educational resources like these:

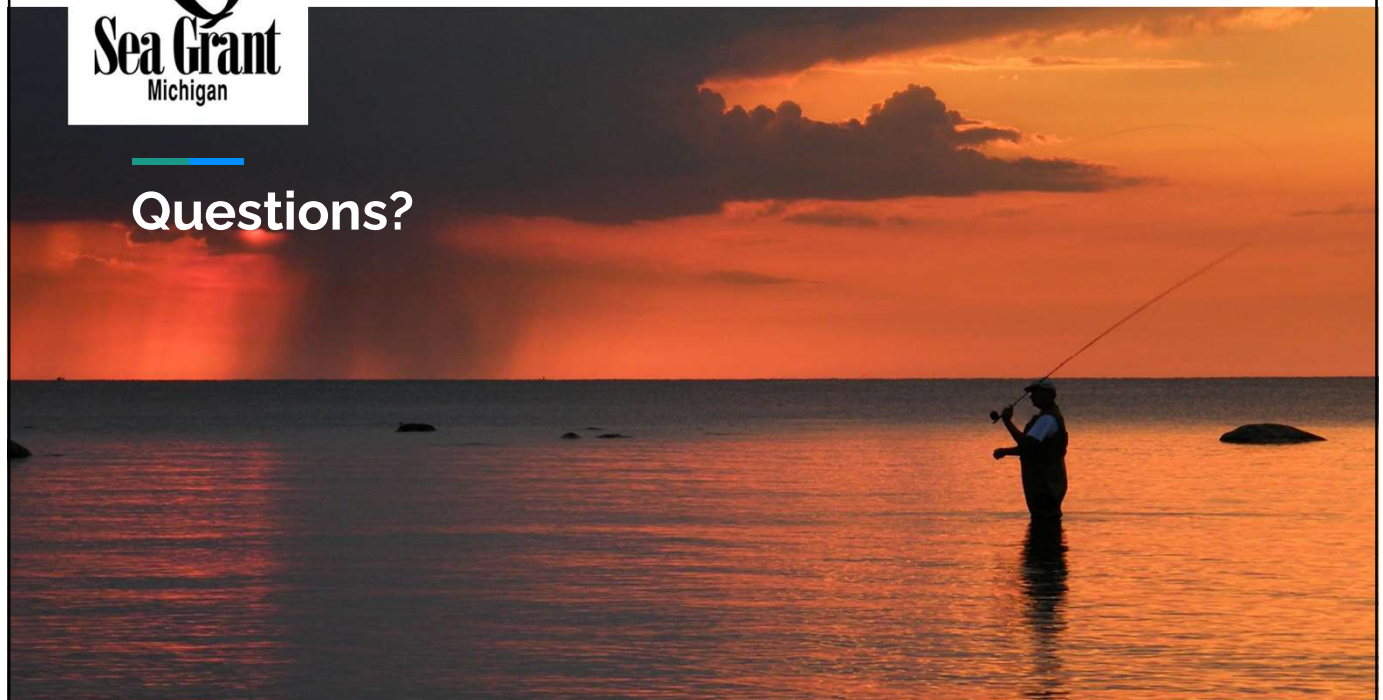
- How to Interpret Steelhead Marks
- Salmon and Trout ID Resources

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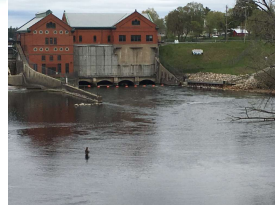
# Questions?



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## River Teams



Agency Partner – Local DNR biologist

Team Leader – Knowledgeable and well-connected local angler

Both help promote project and participate on Zoom calls 3-4 times per year



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### Grand River

Agency Partner: Brian Gunderman (MDNR)  
Team Leader: Jim Bedford (Trout Unlimited)

### Kalamazoo River

Agency Partner: Jay Wesley (MDNR)

### St. Joseph River

Agency Partner: Brian Gunderman (MDNR)  
Team Leader: Jay Anglin (Anglin Outdoors)

### Lake Superior Tributaries

Agency Partner: Cory Kovacs (MDNR)  
Team Leader: Roger Greil (LSSU)

### Huron River and Clinton River

Agency Partner: Cleyo Harris/John Buszkiewicz (MDNR)  
Team Leader: Eric Lemaux

### Lake Huron Tributaries

Agency Partner: April Simmons (MDNR)  
Team Leader: Randy Terrian

### Betsie River

Agency Partner: Heather Hettinger (MDNR)  
Team Leader: Fritz Heller

### Manistee River

Agency Partner: Mark Tonello (MDNR)  
Team Leader: John Ray (Mangled Fly)

### Muskegon River

Agency Partner: Mark Tonello (MDNR)  
Team Leader: Jeff Bacon (West Michigan Fly Fishing)

### Pere Marquette River

Agency Partner: Mark Tonello (MDNR)  
Team Leader: Jim Bos (PM Watershed Council)

40



## Betsie River

**328** Steelhead Caught

**29%** Clipped Overall

**18%** Clipped Fall

**33%** Clipped Spring

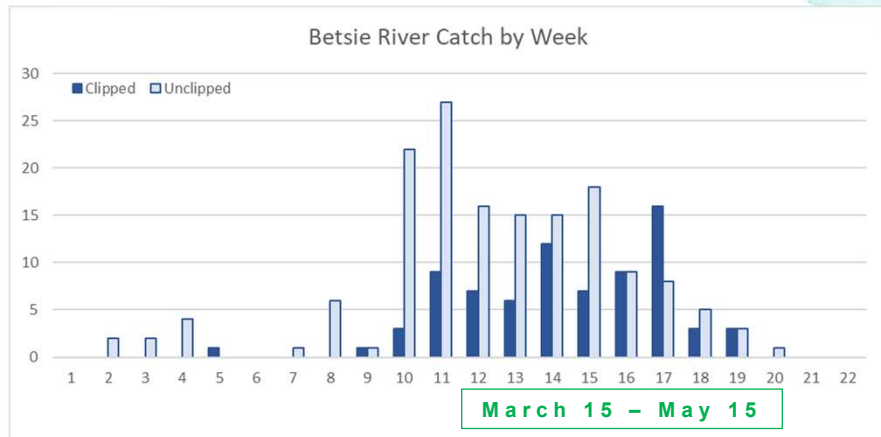
**17%** 29" and Above

**26.0** Average Length (in.)

**10** Anglers Reporting

**3.0** Hours to Catch

**0.33** Avg. Catch Rate  
(Fish/Angler-Hr)



*Preliminary Results Shown*

41



## Manistee River

**1,089** Steelhead Caught

**28%** Clipped Overall

**12%** Clipped Fall

**42%** Clipped Spring

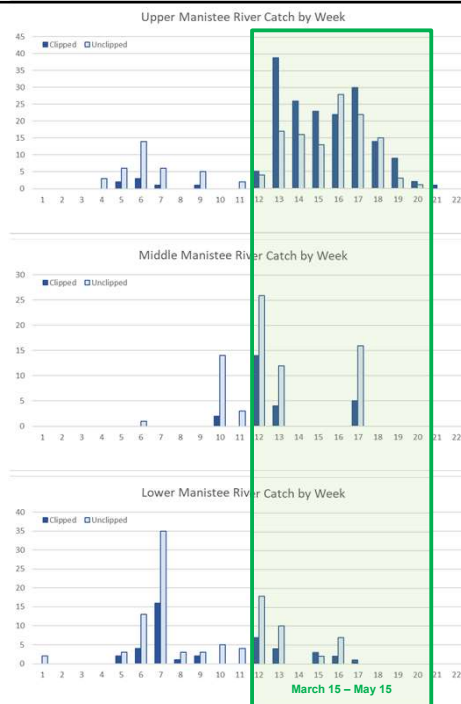
**18%** 29" and Above

**25.4** Average Length (in.)

**26** Anglers Reporting

**5.3** Hours to Catch

**0.19** Avg. Catch Rate  
(Fish/Angler-Hr)



### Upper – Tippy to Pine Cr

**395** Steelhead Caught

**18%** Clipped Fall

**53%** Clipped Spring

**0.19** Avg. Catch Rate  
(Fish/Angler-Hr)

### Middle - Pine Cr to Bear Cr

**159** Steelhead Caught

**12%** Clipped Fall

**26%** Clipped Spring

**0.27** Avg. Catch Rate  
(Fish/Angler-Hr)

### Lower - Bear Cr to Mouth

**535** Steelhead Caught

**12%** Clipped Fall

**29%** Clipped Spring

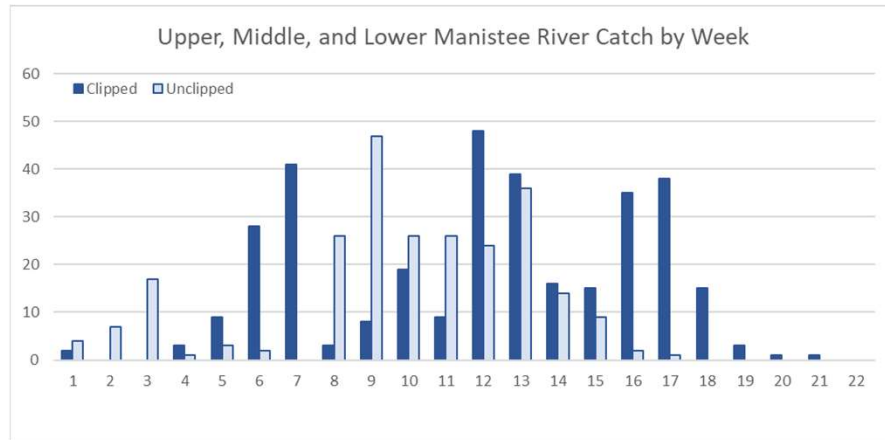
**0.16** Avg. Catch Rate  
(Fish/Angler-Hr)

*Preliminary Results Shown*

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## Manistee River – All Reaches Combined



*Preliminary Results Shown*

43



## Pere Marquette River

**572** Steelhead Caught

**7%** Clipped Overall

**8%** Clipped Fall

**7%** Clipped Spring

**22%** 29" and Above

**26.9** Average Length (in.)

**17** Anglers Reporting

**1.8** Hours to Catch

**0.57** Avg. Catch Rate  
(Fish/Angler-Hr)



### Upper – Above Indian Bridge

**369** Steelhead Caught

**5%** Clipped Fall

**5%** Clipped Spring

**0.57** Avg. Catch Rate  
(Fish/Angler-Hr)

### Lower – Indian Br. to Mouth

**202** Steelhead Caught

**9%** Clipped Fall

**15%** Clipped Spring

**0.53** Avg. Catch Rate  
(Fish/Angler-Hr)

*Preliminary Results Shown*

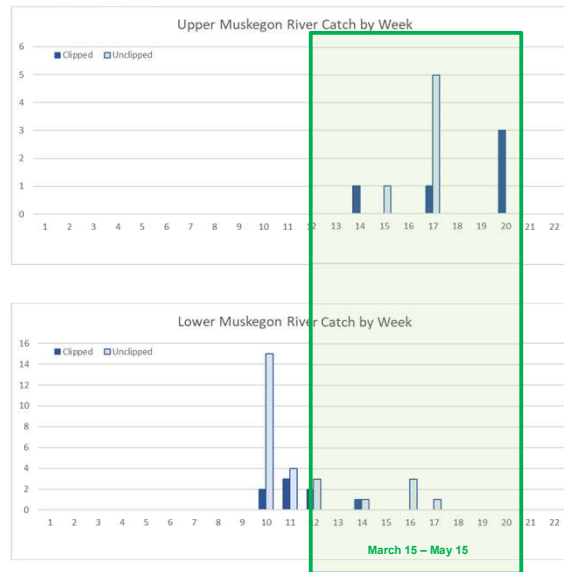
44





## Muskegon River

**123** Steelhead Caught  
**36%** Clipped Overall  
**39%** Clipped Fall  
**31%** Clipped Spring  
**9%** 29" and Above  
**25.2** Average Length (in.)  
**8** Anglers Reporting  
**1.9** Hours to Catch  
**0.52** Avg. Catch Rate  
 (Fish/Angler-Hr)



### Upper – Croton to Newaygo

**38** Steelhead Caught  
**39%** Clipped Fall  
**47%** Clipped Spring  
**0.73** Avg. Catch Rate  
 (Fish/Angler-Hr)

### Lower – Newaygo to Mouth

**85** Steelhead Caught  
**38%** Clipped Fall  
**23%** Clipped Spring  
**0.44** Avg. Catch Rate  
 (Fish/Angler-Hr)

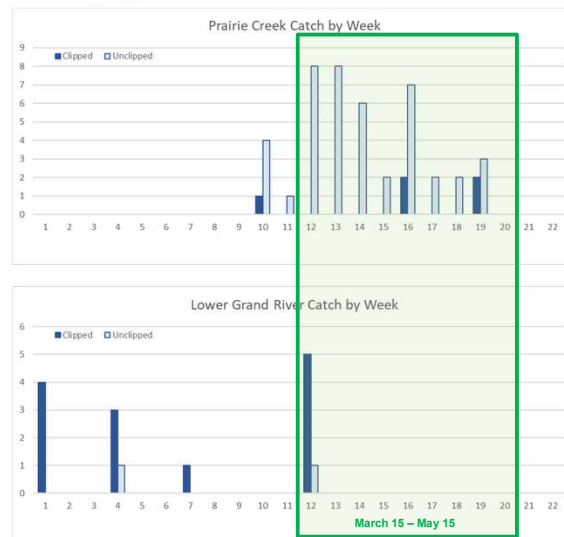
*Preliminary Results Shown*

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## Grand Watershed

**179** Steelhead Caught  
**32%** Clipped Overall  
**29%** Clipped Fall  
**32%** Clipped Spring  
**21%** 29" and Above  
**26.4** Average Length (in.)  
**12** Anglers Reporting  
**1.4** Hours to Catch  
**0.71** Avg. Catch Rate  
 (Fish/Angler-Hr)



### Prairie Creek

**105** Steelhead Caught  
**8%** Clipped Fall  
**10%** Clipped Spring  
**0.77** Avg. Catch Rate  
 (Fish/Angler-Hr)

### Lower – Gr Rapids to Mouth

**60** Steelhead Caught  
**55%** Clipped Fall  
**87%** Clipped Spring  
**0.46** Avg. Catch Rate  
 (Fish/Angler-Hr)

*Preliminary Results Shown*

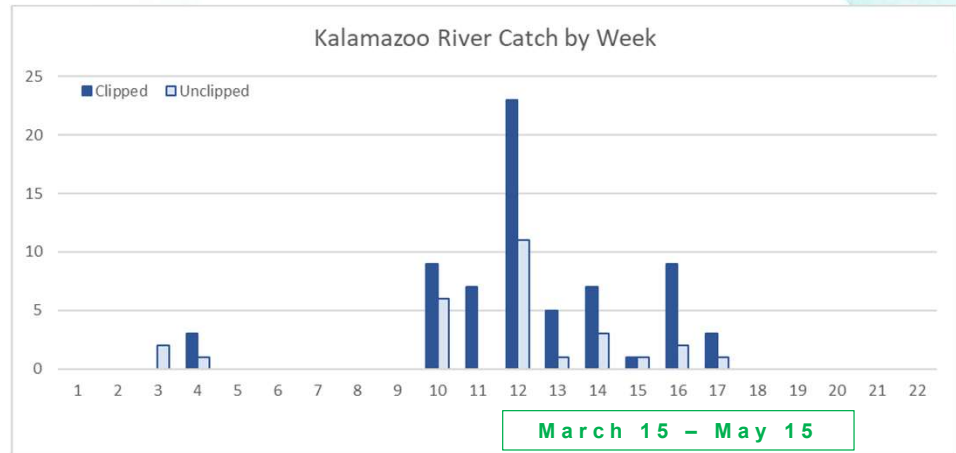
46





## Kalamazoo River

**111** Steelhead Caught  
**67%** Clipped Overall  
**45%** Clipped Fall  
**71%** Clipped Spring  
**21%** 29" and Above  
**26.7** Average Length (in.)  
**7** Anglers Reporting  
**4.0** Hours to Catch  
**0.25** Avg. Catch Rate  
 (Fish/Angler-Hr)

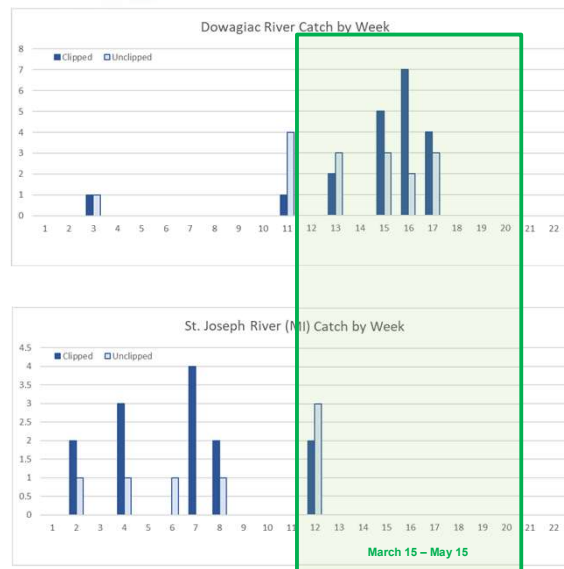


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## St. Joseph Watershed

**83** Steelhead Caught  
**61%** Clipped Overall  
**65%** Clipped Fall  
**59%** Clipped Spring  
**46%** 29" and Above  
**28.0** Average Length (in.)  
**4** Anglers Reporting  
**3.4** Hours to Catch  
**0.29** Avg. Catch Rate  
 (Fish/Angler-Hr)



### Dowagiac River

**38** Steelhead Caught  
**39%** Clipped Fall  
**47%** Clipped Spring  
**0.73** Avg. Catch Rate  
 (Fish/Angler-Hr)

### St. Joseph River, MI

**85** Steelhead Caught  
**38%** Clipped Fall  
**23%** Clipped Spring  
**0.44** Avg. Catch Rate  
 (Fish/Angler-Hr)

*Preliminary Results Shown*

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**Grand River**  
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Team Leader: Jim Bedford (Trout Unlimited)

**Kalamazoo River**  
Agency Partner: Jay Wesley (MDNR)

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Team Leader: Fritz Heller

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Agency Partner: Mark Tonello (MDNR)  
Team Leader: John Ray (Mangled Fly)

**Muskegon River**  
Agency Partner: Mark Tonello (MDNR)  
Team Leader: Jeff Bacon (West Michigan Fly Fishing)

**Pere Marquette River**  
Agency Partner: Mark Tonello (MDNR)  
Team Leader: Jim Bos (PM Watershed Council)

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## Lk. Superior Streams



**34** Steelhead Caught

**0%** Clipped Overall

**0%** Clipped Fall

**0%** Clipped Spring

**0%** 29" and Above

**22.1** Average Length (in.)

**4** Anglers Reporting

**NA** Hours to Catch

**NA** Avg. Catch Rate  
(Fish/Angler-Hr)

**Lake Superior Tributaries Catch by Week**



March 15 – May 15

*Preliminary Results Shown*

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## Lk. Huron Streams

**22** Steelhead Caught

**36%** Clipped Overall

**14%** Clipped Fall

**47%** Clipped Spring

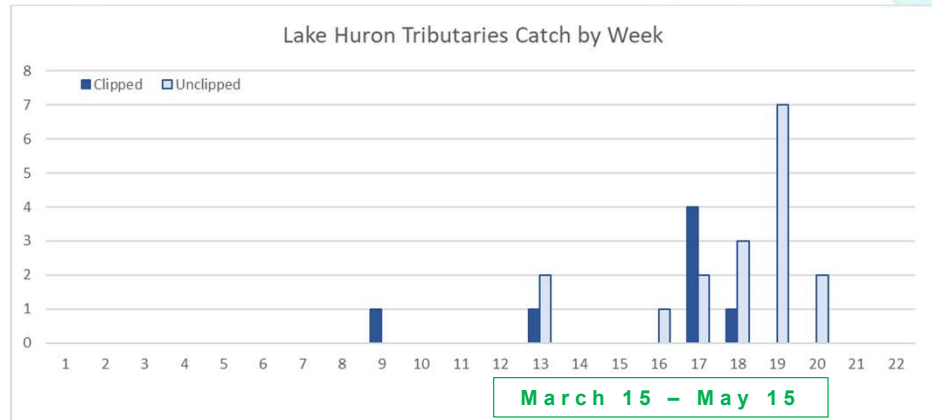
**14%** 29" and Above

**25.1** Average Length (in.)

**7** Anglers Reporting

**6.3** Hours to Catch

**0.16** Avg. Catch Rate  
(Fish/Angler-Hr)



*Preliminary Results Shown*

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## Clinton River / Huron River

**82** Steelhead Caught **80**

**74%** Clipped Overall **93%**

**70%** Clipped Fall **96%**

**76%** Clipped Spring **91%**

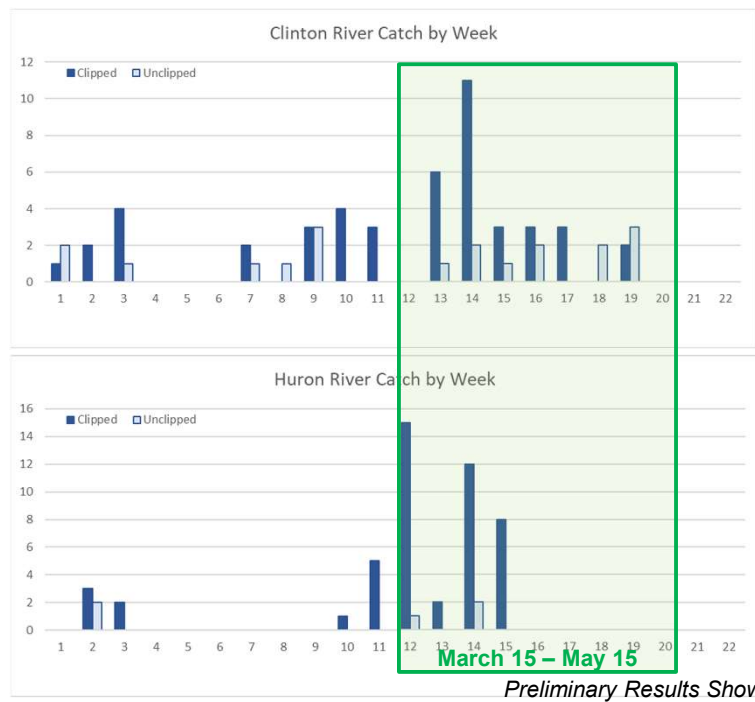
**2%** 29" and Above **3%**

**24.2** Average Length (in.) **24.2**

**7** Anglers Reporting **6**

**7.1** Hours to Catch **3.6**

**0.14** Avg. Catch Rate **0.28**  
(Fish/Angler-Hr)



*Preliminary Results Shown*

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