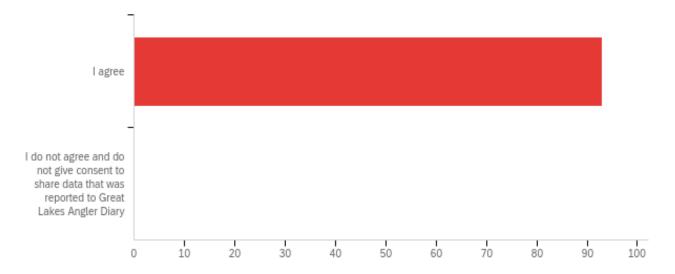
2021 Great Lakes Angler Diary Steelhead Survey

Daniel M. O'Keefe, Ph.D., Michigan Sea Grant, Michigan State University Extension September 17, 2021

On June 4, 2021 an electronic survey was sent to 196 anglers who had registered for the Great Lakes Angler Diary online reporting system. Of these, 85 completed at least a portion of the survey for a 43% response rate. An additional 3 participants indicated complete data sets in GL Angler Diary via e-mail but did not provide survey answers. The survey closed on June 14, 2021 after three reminder emails were sent. Personal identifying information was redacted from results to ensure confidentiality.

Q1 - Do you agree to the terms above?



#	Answer	%	Count
1	I agree	100.00%	93
2	I do not agree and do not give consent to share data that was reported to Great Lakes Angler Diary	0.00%	0
	Total	100%	93

Q2-3 – Enter your six-digit Volunteer Number (or name if you prefer):

Answers not shown to protect confidentiality.

Q4 - What is the name of the river (or port) you fished most often in 2020-2021. This is your "home water" that will be referenced in later questions.

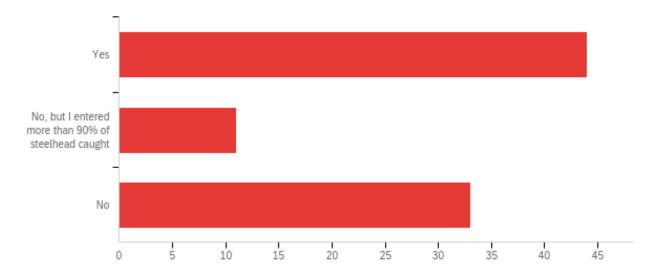
A total of 84 survey respondents answered this question, although not all of these provided complete data sets:

Lake Michigan (Big Lake) Betsie	11	Lake Huron (Big Lake) Au Sable	2
	7		
Black (Van Buren)	3	Rifle	1
Boyne	2		
Grand	10	LAKE HURON TOTAL	5
Kalamazoo	6		
Manistee	7	Lake Superior (Big Lake)	2
Muskegon	6	Chocolay	1
Pentwater	1		
Pere Marquette	9	LAKE ERIE/ST CLAIR TOTAL	3
St. Joseph	3		
White	3	Clinton	7
		Huron R, LP	1
LAKE MICHIGAN TOTAL	68		
		LAKE ERIE/ST CLAIR TOTAL	8

Home waters were assigned to Michigan counties, as appropriate. Three Wisconsin anglers also replied:

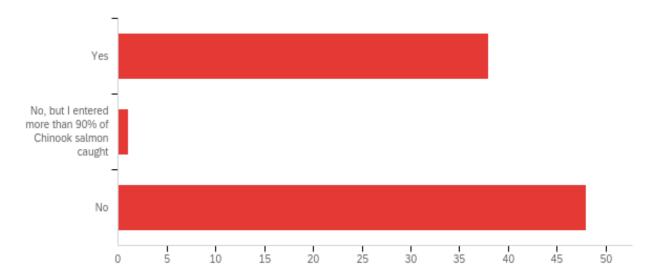
Allegan	6
Arenac	1
Benzie	7
Berrien	3
Charlevoix	2
Grand Traverse	2
Ionia	2
losco	2
Kent	6
Lake	8
Macomb	7
Manistee	8
Marquette	2
Mason	3
Monroe	1
Muskegon	9
Newaygo	1
Oceana	2
Ottawa	5
Presque Isle	2
Van Buren	3

Q5 - Did you enter each and every Steelhead caught from October 1, 2020 through May 31, 2021 (or since the time you registered if you signed up after October 1)? NOTE: This applies only to steelhead that spent at least one summer in the big lake. You are not required to enter data on each and every steelhead smolt.



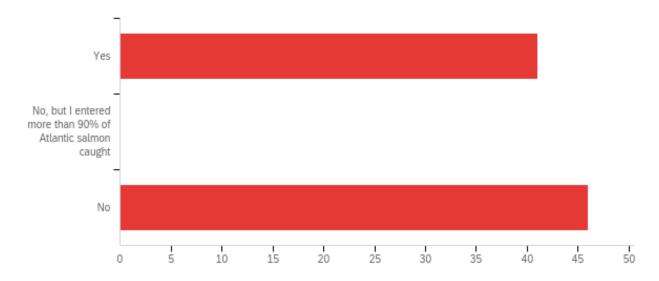
#	Answer	%	Count
1	Yes	50.00%	44
3	No, but I entered more than 90% of steelhead caught	12.50%	11
4	No	37.50%	33
	Total	100%	88

Q6 - Did you enter each and every Chinook Salmon caught from October 1, 2020 through May 31, 2021 (or since the time you registered if you signed up after October 1)?



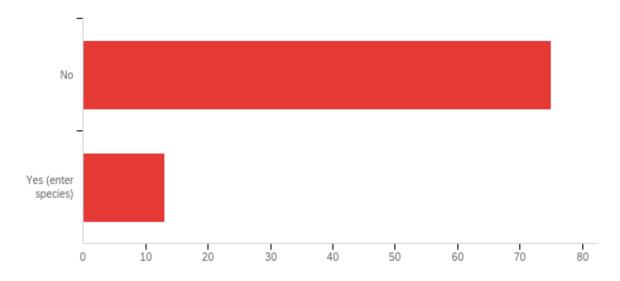
#	Answer	%	Count
1	Yes	43.68%	38
3	No, but I entered more than 90% of Chinook salmon caught	1.15%	1
4	No	55.17%	48
	Total	100%	87

Q7 - Did you enter each and every Atlantic Salmon caught from October 1, 2020 through May 31, 2021 (or since the time you registered if you signed up after October 1)?



#	Answer	%	Count
1	Yes	47.13%	41
3	No, but I entered more than 90% of Atlantic salmon caught	0.00%	0
4	No	52.87%	46
	Total	100%	87

Q8 - Did you enter complete data on any other species during the 2020-2021 steelhead season (or since the time you registered if you signed up after October 1)?



#	Answer	%	Count
1	No	85.23%	75
4	Yes (enter species)	14.77%	13
	Total	100%	88

NOTE: Many survey respondents answered "Yes" to complete data sets containing zero fish of a given species. The following table shows the number of complete (or >90% complete) data sets containing at least one fish. Also note that three participants did not respond to the survey but did indicate complete data sets and consent to share data:

COMPLETE DATA SETS					
Steelhead	49				
Chinook Salmon	6				
Coho Salmon	2				
Atlantic Salmon	4				
Brown Trout	5				
Lake Trout	2				

Q9 - How many trips did you take during the October 1, 2020 to May 31, 2021 steelhead season? NOTE: Only count trips that targeted trout and salmon species with a reasonable expectation of catching a steelhead. In other words, DO count Great Lakes trolling trips and river fishing trips that targeted a mix of anadromous salmon and trout, but DO NOT count inland bass or stream trout fishing trips that offered no chance of catching steelhead.

NOTE: Some respondents answered with a range of values (e.g., 20-30), in which case we assumed that the actual number of trips was an average of the high and low value. Many respondents who answered this question did not provide complete catch and trip results using Great Lakes Angler Diary.

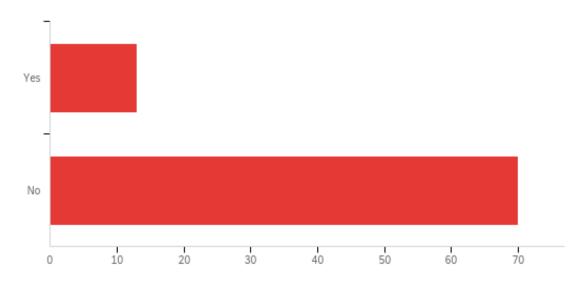
#	Field	Minimum	Maximum	Mean	Std Deviation	Count
1	Trips	0.0	110.0	22.8	24.5	79

Q10 - How many of these trips resulted in catching at least one steelhead? NOTE: These two questions will allow us to determine the number of skunk trips in case you did not enter data for trips with zero catch. It is important to make sure that you enter trip details for skunk trips in Great Lakes Angler Diary, and these questions will help us verify that information is complete for all trips including skunks.

#	Field	Minimum	Maximum	Mean	Std Deviation	Count
1	Non-Skunk Trips	0.0	90.0	13.1	19.1	77

For the 77 respondents who answered both Q9 and Q10, the number of non-skunk trips was subtracted from the total number of trips to calculate the average number of skunk trips. These 77 respondents averaged 10.2 skunk trips, 13.1 non-skunk trips, and 23.3 total trips for a 44% skunk rate.

Q11 - Head collection was entirely optional and not a required part of data entry for Great Lakes Angler Diary. Did you collect heads (or snouts) of adipose-fin clipped steelhead during the 2020-2021 season?



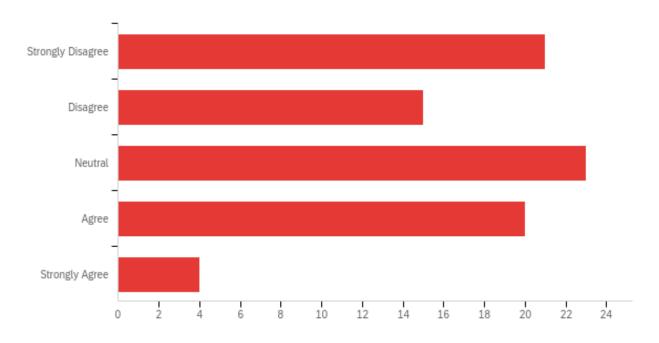
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Head collection was entirely optional and not a required part of data entry for Great Lakes Angler Diary . Did you collect heads (or snouts) of adipose-fin clipped steelhead during the 2020-2021 season?	1.00	2.00	1.84	0.36	0.13	83

#	Answer	%	Count
1	Yes	15.66%	13
2	No	84.34%	70
	Total	100%	83

Q12 - How many steelhead heads (or snouts) did you collect during the 2020-2021 season?

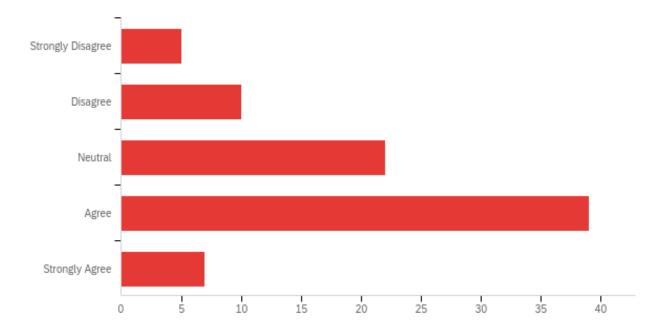
How many steelhead heads (or snouts) did you collect during the 2020-2021 season?
N/A
5
2
1
2
2
6
Not sure. Close to 10
4
2
about 3
One, I haven't turned yet
2

Q13 - I was satisfied with my steelhead catch rate on my home water during the past season.



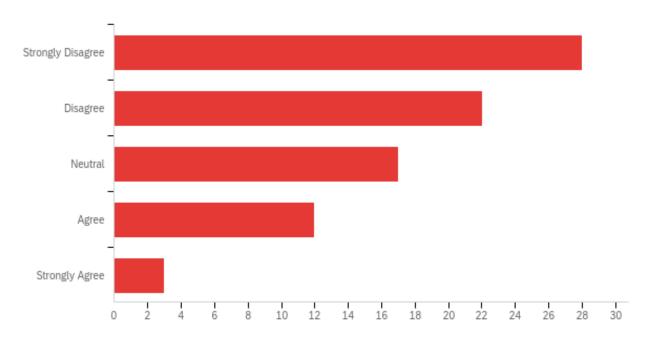
#	Answer	%	Count
1	Strongly Disagree	25.30%	21
2	Disagree	18.07%	15
3	Neutral	27.71%	23
4	Agree	24.10%	20
5	Strongly Agree	4.82%	4
	Total	100%	83

Q14 - I was satisfied with my fishing experiences overall.



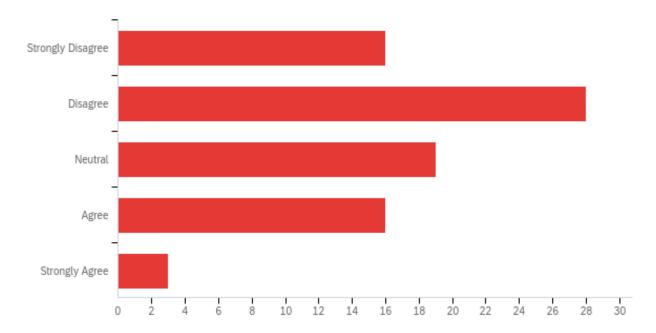
#	Answer	%	Count
1	Strongly Disagree	6.02%	5
2	Disagree	12.05%	10
3	Neutral	26.51%	22
4	Agree	46.99%	39
5	Strongly Agree	8.43%	7
	Total	100%	83

Q15 - Steelhead fishing was good this year relative to the past five years on my home water.



#	Answer	%	Count
1	Strongly Disagree	34.15%	28
2	Disagree	26.83%	22
3	Neutral	20.73%	17
4	Agree	14.63%	12
5	Strongly Agree	3.66%	3
	Total	100%	82

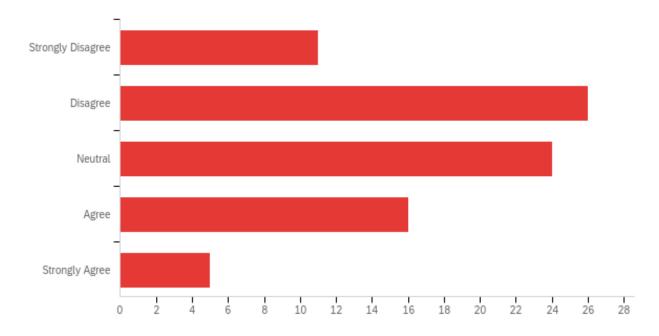
Q16 - Steelhead fishing was good this year relative to last year on my home water.



#	Answer	%	Count
1	Strongly Disagree	19.51%	16
2	Disagree	34.15%	28
3	Neutral	23.17%	19
4	Agree	19.51%	16
5	Strongly Agree	3.66%	3
	Total	100%	82

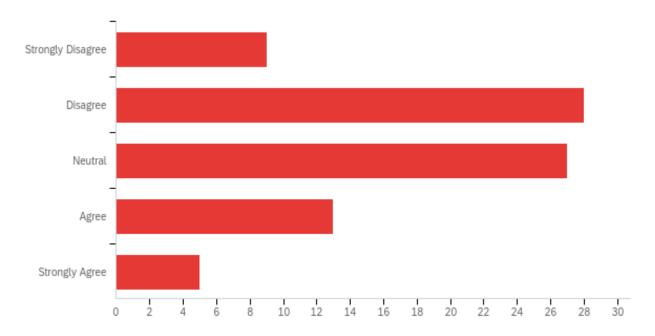
Average: 2.54

Q17 - Fishing for steelhead at my home water was good October-December.



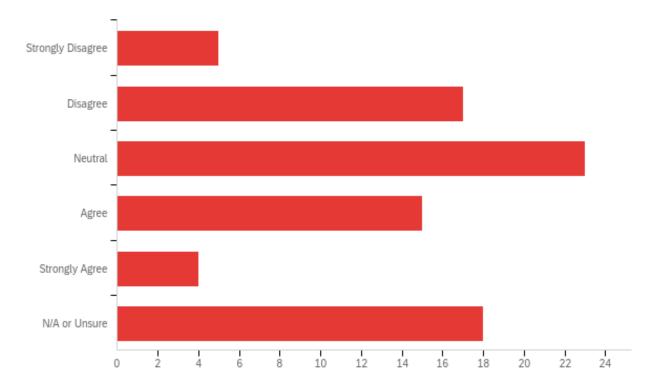
#	Answer	%	Count
1	Strongly Disagree	13.41%	11
2	Disagree	31.71%	26
3	Neutral	29.27%	24
4	Agree	19.51%	16
5	Strongly Agree	6.10%	5
	Total	100%	82

Q18 - Fishing for steelhead at my home water was good January-May.



#	Answer	%	Count
1	Strongly Disagree	10.98%	9
2	Disagree	34.15%	28
3	Neutral	32.93%	27
4	Agree	15.85%	13
5	Strongly Agree	6.10%	5
	Total	100%	82

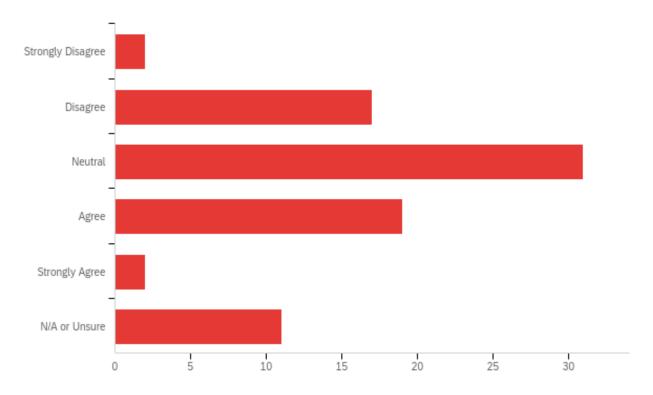
Q19 - I expect that steelhead fishing will be better next year at my home water.



#	Answer	%	Count
1	Strongly Disagree	6.10%	5
2	Disagree	20.73%	17
3	Neutral	28.05%	23
4	Agree	18.29%	15
5	Strongly Agree	4.88%	4
6	N/A or Unsure	21.95%	18
	Total	100%	82

Average without sixes (N/A or Unsure): 2.94

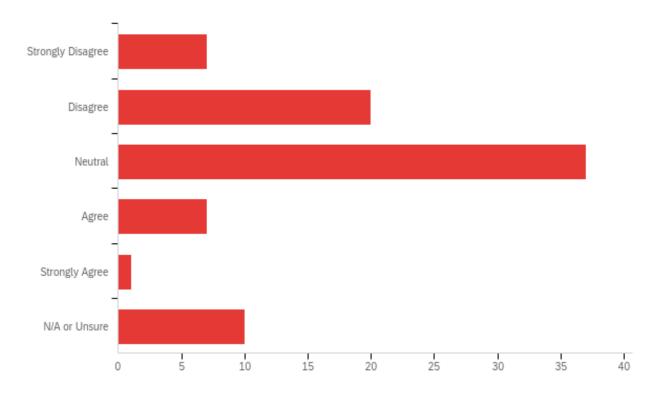
Q20 - I was surprised that the percentage of clipped steelhead in my catch was so low.



#	Answer	%	Count
1	Strongly Disagree	2.44%	2
2	Disagree	20.73%	17
3	Neutral	37.80%	31
4	Agree	23.17%	19
5	Strongly Agree	2.44%	2
6	N/A or Unsure	13.41%	11
	Total	100%	82

Average without sixes (N/A or Unsure): 3.03

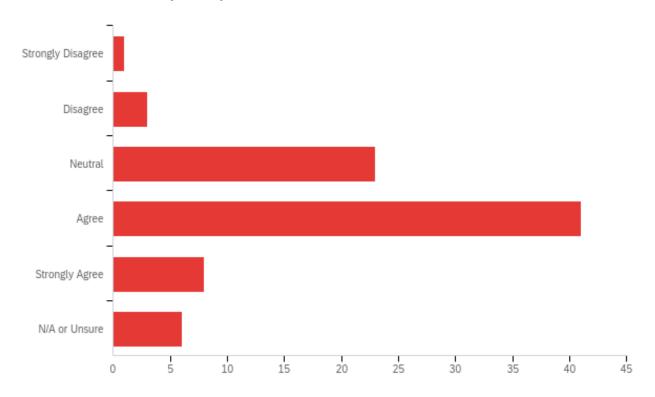
Q21 - I was surprised that the percentage of clipped steelhead in my catch was so high.



#	Answer	%	Count
1	Strongly Disagree	8.54%	7
2	Disagree	24.39%	20
3	Neutral	45.12%	37
4	Agree	8.54%	7
5	Strongly Agree	1.22%	1
6	N/A or Unsure	12.20%	10
	Total	100%	82

Average without sixes (N/A or Unsure): 2.65

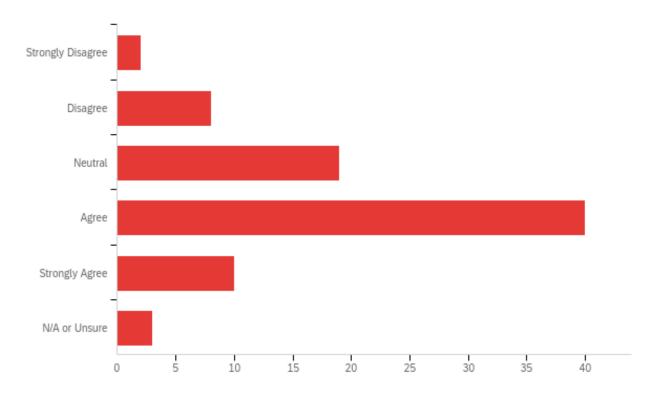
Q22 - I have a better understanding of how stocked and wild steelhead contribute to fisheries as a result of participation.



#	Answer	%	Count
1	Strongly Disagree	1.22%	1
2	Disagree	3.66%	3
3	Neutral	28.05%	23
4	Agree	50.00%	41
5	Strongly Agree	9.76%	8
6	N/A or Unsure	7.32%	6
	Total	100%	82

Average without sixes (N/A or Unsure): 3.68

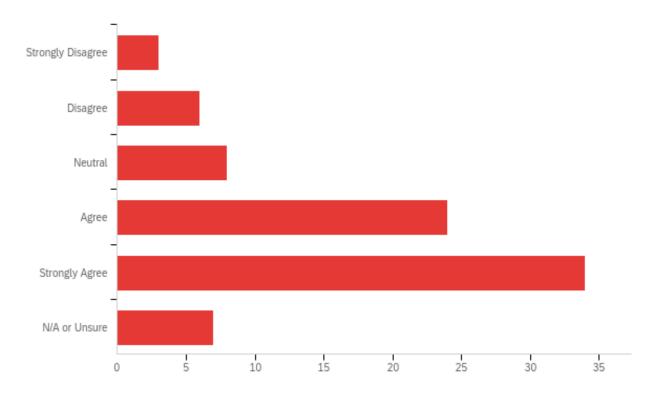
Q23 - Through participating in this program, I gained a better understanding of fisheries management policies (for example, harvest limits, habitat restoration, or stocking programs).



#	Answer	%	Count
1	Strongly Disagree	2.44%	2
2	Disagree	9.76%	8
3	Neutral	23.17%	19
4	Agree	48.78%	40
5	Strongly Agree	12.20%	10
6	N/A or Unsure	3.66%	3
	Total	100%	82

Average without sixes (N/A or Unsure): 3.61

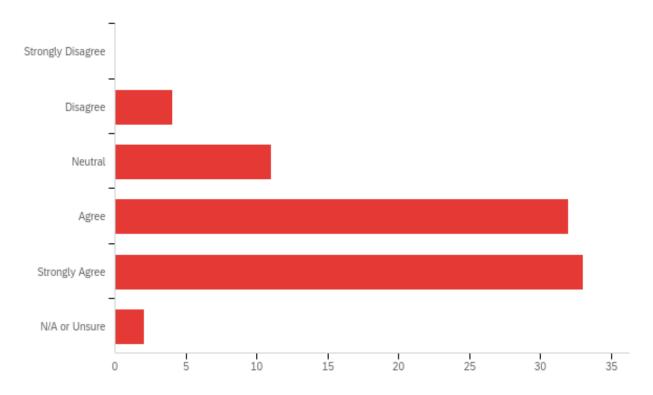
Q24 - My home water would benefit from additional stocking of steelhead.



#	Answer	%	Count
1	Strongly Disagree	3.66%	3
2	Disagree	7.32%	6
3	Neutral	9.76%	8
4	Agree	29.27%	24
5	Strongly Agree	41.46%	34
6	N/A or Unsure	8.54%	7
	Total	100%	82

Average without sixes (N/A or Unsure): 4.07

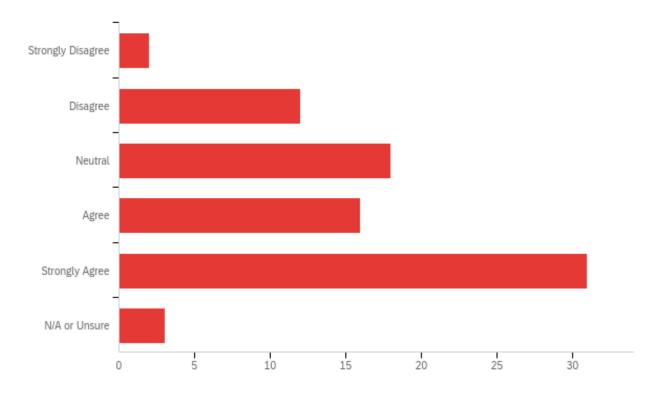
Q25 - My home water would benefit from habitat restoration.



#	Answer	%	Count
1	Strongly Disagree	0.00%	0
2	Disagree	4.88%	4
3	Neutral	13.41%	11
4	Agree	39.02%	32
5	Strongly Agree	40.24%	33
6	N/A or Unsure	2.44%	2
	Total	100%	82

Average without sixes (N/A or Unsure): 4.18

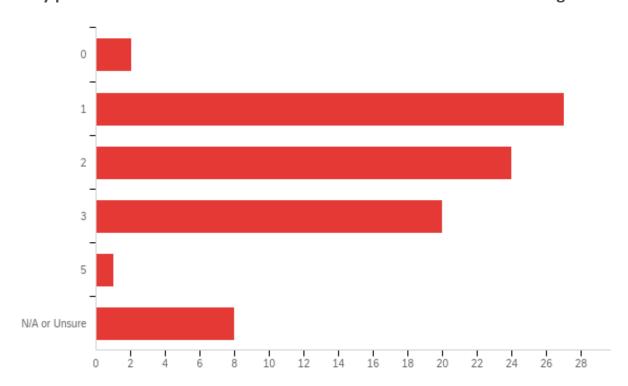
Q26 - My home water would benefit from reducing the steelhead bag limit.



#	Answer	%	Count
1	Strongly Disagree	2.44%	2
2	Disagree	14.63%	12
3	Neutral	21.95%	18
4	Agree	19.51%	16
5	Strongly Agree	37.80%	31
6	N/A or Unsure	3.66%	3
	Total	100%	82

Average without sixes (N/A or Unsure): 3.78

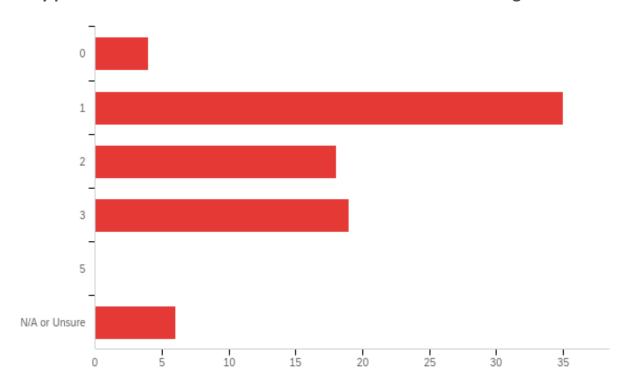
Q27 - My preferred steelhead harvest limit for Great Lakes waters in Michigan is:



#	Answer	%	Count
1	0	2.44%	2
2	1	32.93%	27
3	2	29.27%	24
4	3	24.39%	20
5	5	1.22%	1
6	N/A or Unsure	9.76%	8
	Total	100%	82

Average without sixes (N/A or Unsure): 1.89

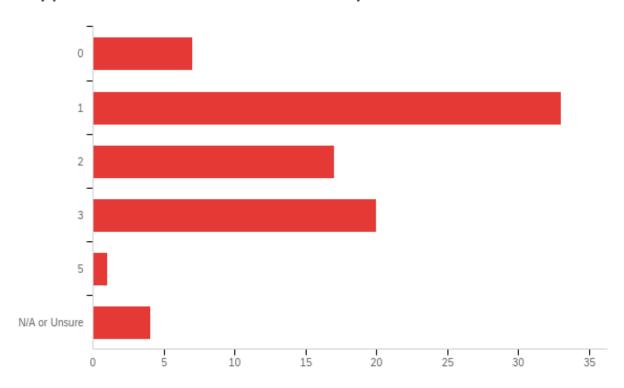
Q28 - My preferred steelhead harvest limit for most streams in Michigan is:



#	Answer	%	Count
1	0	4.88%	4
2	1	42.68%	35
3	2	21.95%	18
4	3	23.17%	19
5	5	0.00%	0
6	N/A or Unsure	7.32%	6
	Total	100%	82

Average without sixes (N/A or Unsure): 1.68

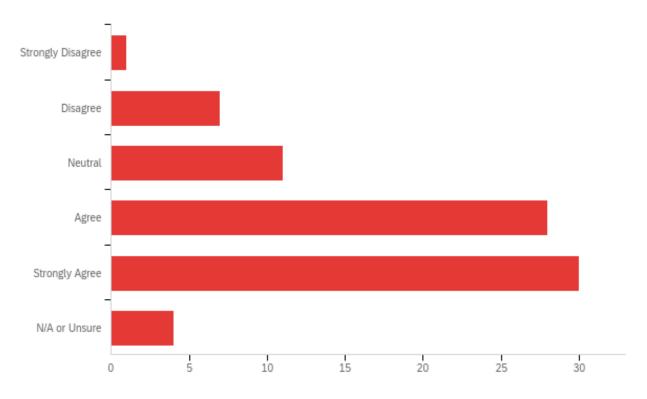
Q29 - My preferred steelhead harvest limit for my home water is:



#	Answer	%	Count
1	0	8.54%	7
2	1	40.24%	33
3	2	20.73%	17
4	3	24.39%	20
5	5	1.22%	1
6	N/A or Unsure	4.88%	4
	Total	100%	82

Average without sixes (N/A or Unsure): 1.69

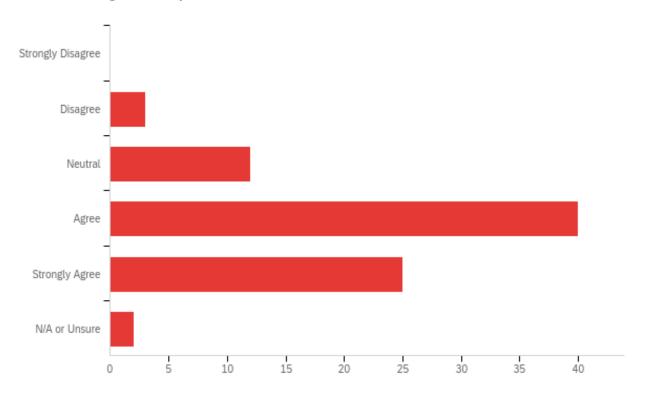
Q30 - A harvest limit reduction would help to ensure the long-term viability of steelhead populations in Michigan.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	A harvest limit reduction would help to ensure the long-term viability of steelhead populations in Michigan.	1.00	6.00	4.12	1.07	1.15	81

#	Answer	%	Count
1	Strongly Disagree	1.23%	1
2	Disagree	8.64%	7
3	Neutral	13.58%	11
4	Agree	34.57%	28
5	Strongly Agree	37.04%	30
6	N/A or Unsure	4.94%	4
	Total	100%	81

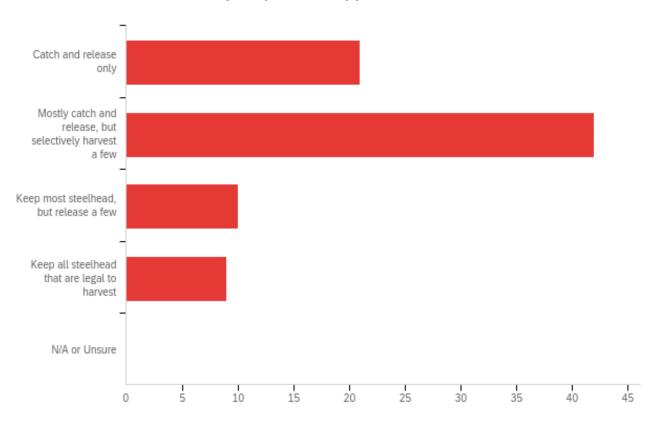
Q31 - A harvest limit reduction would help to boost catch rates in rivers because released fish can be caught multiple times.



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	A harvest limit reduction would help to boost catch rates in rivers because released fish can be caught multiple times.	2.00	6.00	4.13	0.82	0.68	82

#	Answer	%	Count
1	Strongly Disagree	0.00%	0
2	Disagree	3.66%	3
3	Neutral	14.63%	12
4	Agree	48.78%	40
5	Strongly Agree	30.49%	25
6	N/A or Unsure	2.44%	2
	Total	100%	82

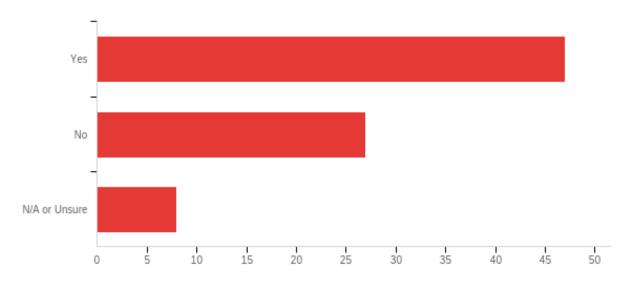
Q32 - Which best describes your personal approach to steelhead harvest?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Which best describes your personal approach to steelhead harvest?	1.00	4.00	2.09	0.90	0.81	82

#	Answer	%	Count
1	Catch and release only	25.61%	21
2	Mostly catch and release, but selectively harvest a few	51.22%	42
3	Keep most steelhead, but release a few	12.20%	10
4	Keep all steelhead that are legal to harvest	10.98%	9
6	N/A or Unsure	0.00%	0
	Total	100%	82

Q33 - Do you believe that releasing wild (unclipped) steelhead as opposed to stocked (generally clipped) steelhead will lead to increased fitness and improved steelhead populations?



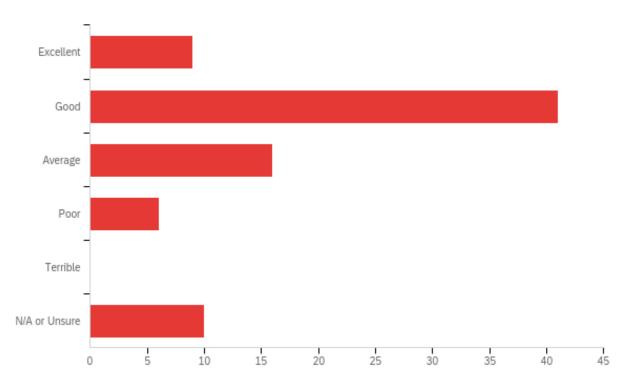
#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Do you believe that releasing wild (unclipped) steelhead as opposed to stocked (generally clipped) steelhead will lead to increased fitness and improved steelhead populations?	1.00	6.00	1.82	1.45	2.10	82

#	Answer	%	Count
1	Yes	57.32%	47
2	No	32.93%	27
6	N/A or Unsure	9.76%	8
	Total	100%	82

Q34 - Would you support a lower harvest limit for wild (unclipped) steelhead than for stocked (generally clipped) steelhead?

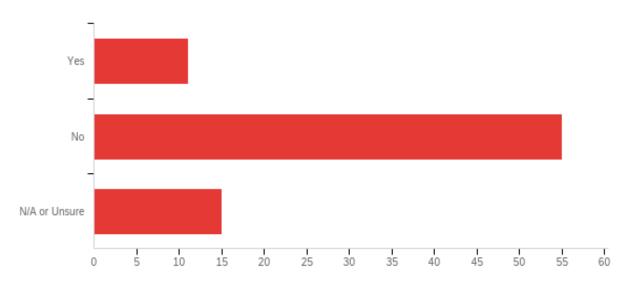
Data for this question are not available due to a survey software error.

Q35 - Overall, how would you rate the current web-based version of the Great Lakes Angler Diary app at GLanglerdiary.org?



#	Answer	%	Count
1	Excellent	10.98%	9
2	Good	50.00%	41
3	Average	19.51%	16
4	Poor	7.32%	6
5	Terrible	0.00%	0
6	N/A or Unsure	12.20%	10
	Total	100%	82

Q36 - Are there any problems with the app that prevented you from entering accurate or complete data ?



#	Answer	%	Count
1	Yes	13.58%	11
2	No	67.90%	55
3	N/A or Unsure	18.52%	15
	Total	100%	81

Q37 - Please provide any additional comments or suggestions below:

Thanks for your work in obtaining info from stakeholders

I would love to see the limits on steelhead adjusted. 4 fish per person per day seems ridic.

Similar to regulations for bass, walleye, etc., harvest limit for steelhead should be zero on all Michigan streams during peak spawning period of mid March to end of April.

Sorry but just too busy to enter good catch data. I know it is important to give you good data and will make every effort to provide data. I have fished the western rivers and the Bois Brule in Wisconsin. The western rivers have a variety of keep hatchery fish only and the Brule has a one-fish limit. All received considerable pushback from the meat fishermen. Catch and release is a significant step to ensure a viable steelhead fishery on the Muskegon. Look at the return rates in the Pere Marquette in the Flies Only Water. Stop the guides on the Muskegon from double-limit catches. Some guides will take a limit per person in the morning and again in the afternoon. Make it a boat limit of one fish.

I joined late and did not record my catches accurately. However, I now have over 350 video posts on YouTube since I retired in 2011. I started to recover the information so I could enter it, but the task was overwhelming. I didn't have the detail that was requested. I plan to be more intentional this coming season. My videos can be viewed by going to YouTube.com and searching for I love this sport! I have taken 150 different individuals fishing in my Rivermaster river boat since 2011. I mainly plug fish. I am blessed to have friends and to live in Pure Michigan. Thank you for all you do to make this wonderful fishery possible!

I only logged from Oct. - Jan.

The Android version is going to help with compliance. Of the people I know entering data, only one has an iPhone and they are using a web server, or waiting to get home and the desktop version. Compliance and accuracy will be much better. Also, I wish the diary would index the river that is being fished most of the time. I don't know if that's possible, but having the ability to choose a river once and keep it as the primary river so it auto populates would be awesome...then we can chose other streams if necessary. It's a little wonky but totally understandable. When the time comes for guides to enter daily rates it'd be really cool if we had a grid style data entry available where we simply tap a few boxes and hit enter. It'd be quick and easy so guys would do it in the truck after getting off the river. Wet, cold fingers using little drop down menus and having to type is awful. Indiana is still using a ridiculous paper system. Perhaps both states can cooperate and a better system:)

Sorry, I forgot to start entering data for the fish we caught, but I did log data for every trip and how many fish we caught. I can try to start logging data for every fish this year. Interesting study! Would love to see this for Brown Trout too.

I did not enter skunk trips, of which there were many this year, so I apologize. I didn't fish my home water during Oct-Nov as I was Deer hunting. Dec-Mar we had low water and hardly any fish, although I hooked a few I didn't bring any to hand during this period. Later March through the rest of the spring was quite good.

Lower limits should be considered for Great Lakes steelhead harvest as well.

posting pictures

Please continue to sustain the steelhead population in Michigan. I understand the challenges with Pacific Salmon and the alewife population. I would like to see Atlantics stocked in more waters.

I am not an Iphone or Apple user, so did not have an app offered for me to use. The web based version was cumbersome and did not work well. I have become skeptical of the DNR's methods and intentions as of the last few years, whereas I used to be a huge proponent of the MIDNR. There are many different reasons for this and my input has fell on deaf ears, so I have withdrawn quite a bit from the process. There are many avid steelhead anglers that run in my circle who feel the same way. While I think this diary or "log" could be useful, I just have

very little faith in the MIDNR anymore and that's just me being honest. Take that for whatever it's worth, I am sure it will make very little difference to anyone reading this.

android app please

I was unable to connect because of my phone. Do you want me to turn in the 2 heads I collected and if so where do I deposit them?

As you can see by my answers, I did not catch a steelhead during the 2020 season in my home waters of GT Bays.

Since I did not river fish for steelhead, the answers I provided to other questions should probably not be used. First year since I started I did not get out, sad season. Had motor problems on my river boat.

Great idea to collect data from a variety of ports and rivers. I think we have a wonderful fishery and anything we can to continue that is worth the effort. Thank you for your work in maintaining a great outdoor tradition.

Getting rid of the dam downtown Grand Rapids will only help this fishery. Let the fish move. People will not take as many fish when they are not all corralled up

Can't upload pictures from my android pho e

App works easy and is really user friendly, I happened to get that app towards the end of the season, maybe an easier way to learn about that app would be more useful. Seminars or a dnr driven email.

I did not use the app so I cannot comment.

Android ap would be greatly appreciated and i know it is in the works, it's clunky to enter your fish every day.

Thank you for letting me participate. I believe low water from lack of rain had a huge impact on the fishery accross the state this year

Keep up the good work!

Please put coded tags in Erie management fish. I'd consider keeping a good amount for f my clipped catches.

I have a limited history of SH fishing in Michigan. I moved to Michigan from NJ in late 2018 and do not have the long-term historical perspective of the fishery as others have. Nevertheless, I was pleased with my fishing experience during the 2020-2021 season but believe limit reductions are in order.

This is first year I regularly fished for Steelies in the Black River in South Haven. Never caught one. But, "regulars" have told me that this year's catch rate was a lot worse than past winters. Thanks

Just wanted to mention the quadruple if not more amount of angler pressure on the clinton river this season. It was a good year for many im sure even more will be back next season.

Tough season but I would attribute it to weather and water levels.

I have yet to explore the diary. I plan to do so

Seeing how I just signed up for the program last week. The information I have given will not be of much help. I have not kept a log in the past but will with the new app. I do fish a lot around the UP both Lake Superior and Michigan and did notice a lot of clipped fish in the Michigan tribs and none in the Chocolay. Thanks

The dial for selecting your fishing location is a pain. An easier/quicker way to select a location would help. Also, the fish details screens (length, sex, etc. need titles). It's not immediately apparent what info is being asked.

It is nice to see Michigan State University, showing interest in the future of the Fish Population, and ask fishermen for their views. Thank You And Good Luck

My app crashed and when I reinstalled it all my trips recorded were not there anymore.

Guide numbers need regulating on my home waters. Eliminate power boats from my home water. This would be an inconvenience to me also, but for erosion (the accelerated aging of the river), noise, and quality of experience, this should be done.

App will not allow me to login. I receive an error saying "no internet connection". I can login though the web no problem.

I have been fishing the Great Lakes rivers for 29 years now. I like to think I have improved as an angler over the years. This year, seemed the absolute hardest in memory to find fish. Hardly participated due to both personal affairs and lack of motivation due to reports from friends and my observations. I do support a harvest reduction. Too many full ropes at dams on rivers with natural reproduction.... however, it should be managed by river system. For instance, the st joe hits about boiling point in the summer. I suspect natural reproduction anywhere above the dowagiac is non-existent. So for the st joe, I'd love 1 fish harvest below the Dow, full 3 fish limit upstream of the dow. 1 fish harvest in the Dow. The Manistee needs to be studied at one more level. Add in a third section. I suspect from pine creek up, you will find a lot of stocked percentage, more natural mixed in between bear and pine, and yet even more natural mixed in below bear. Right now we are not capturing what pine is doing for the big river regarding stocker vs natural. Concerning retention on the Manistee, 1 fish, main river or bear creek, period. Whether it's a clipped spawner or a natural, it's offspring can actually survive unlike the joe mentioned above. These are two rivers that are good examples of polar opposites, and it would be great to see the popular rivers of the state managed with the same mind set. The grand vs the bestie would be another good example with similar contrasts of the joe and the Manistee. In short, where natural reproduction can happen, let's help it. Where survival of fry through the summer is unlikely, let's leave it as is. As for Lake retention of steelhead, I don't enjoy trolling and don't partake. I may fish the pier/beach once every couple of years. But I would lean towards the biologists' perspective of survival when released after handling out there. If mortality is high odds, why waste the fish? This is speaking purely handling of the fish, in the summer, in the boat. Beach anglers may be able to release the fish with higher odds of survival? Pier anglers? Good luck figuring out the political view of "lake retention"!

It seems there are very few winter fish in the white river over the past several years. Things used to be much better. Planting properly to enhance this winter season fishery would be appreciated.

The only issue I had using the web based portal, was when I went to review my trips, I had a few duplicate trips. I guess there was some confusion on my end when creating trips.

It would be helpful if it kept a running total of trips, fish caught, hours fished

Great job creating this.

I was just made aware of the diary very late in the season. I will participate this fall. I think it would be useful for tackle shops and local dnr offices to get the word out about the program through promotional materials.

Well, I wanted to like the app but I had so many issues with it that I didn't end up here entering any catches.

<u>Michigan Sea Grant</u> helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through education, research and outreach. A collaborative effort of the <u>University of Michigan</u> and <u>Michigan State University</u> and its <u>MSU Extension</u>, Michigan Sea Grant is part of the <u>NOAA-National</u> Sea Grant network of 34 university-based programs.

This survey report was prepared by Michigan Sea Grant Extension Educator Daniel O'Keefe under award NA180AR4170102 from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce through the Regents of the University of Michigan. The statement, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the National Oceanic and Atmospheric Administration, the Department of Commerce, or the Regents of the University of Michigan.