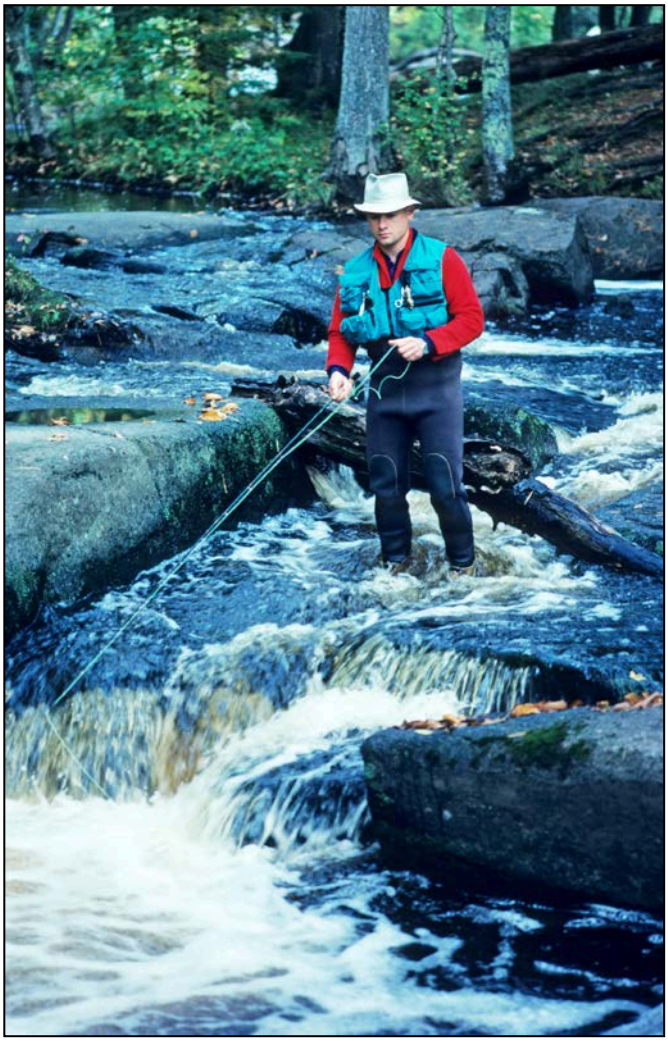
Public Input for Wisconsin's Inland Trout Program



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Summary: The Wisconsin Department of Natural Resources initiated a public participation process in 2011 to review the state's inland trout program. The first step in the process was a series of more than 30 public meetings held in March and April 2011, during which biologists presented trout stream monitoring results describing the past and current status of trout populations in Wisconsin waters. Meeting participants were given an opportunity to complete a questionnaire regarding trout fishing and Wisconsin's inland trout program. The questionnaire was made available online. Its availability was publicized at the public meetings, by multiple press releases, and by angling groups and the general public through word-of-mouth and online public forums. The public meeting and online questionnaire served to: help initiate discussions about the trout program, collect feedback on the trout program, and help focus efforts in developing a more extensive random mail survey. This report documents the results of these efforts.

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Cover Photograph: Man trout fishing at Goodman Park on the Pike River, Wisconsin DNR.

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Introduction

In 2011, the Wisconsin Department of Natural Resources (Wisconsin DNR) initiated a public participation process to review the state's inland trout program. The program was last reviewed in the early 1990s. The first step in the current review process was to hold a series of public meetings in March and April 2011, during which Wisconsin DNR biologists presented trout stream monitoring results describing the past and current status of trout populations in Wisconsin waters. Meeting participants were also asked to complete a questionnaire regarding Wisconsin trout fishing and the Wisconsin DNR's inland trout program. A paper copy of the questionnaire was available at the public meetings, and an online version of the form was also available for anyone who wanted to complete it, whether or not they attended a public meeting.

Methods

The public meeting and online questionnaire (hereafter referred to as the public meeting questionnaire) served a number of purposes:

1. to help initiate discussions about the trout program,

2. to collect feedback on the trout program from anyone who wanted to share their opinions, and

3. to help focus our efforts in developing a more extensive opinion survey mailed to a random subset of resident Wisconsin trout anglers in 2012.

The public meeting questionnaire was available to attendees of more than 30 public meetings held across Wisconsin. The public meeting questionnaire was also available online on the Wisconsin DNR trout regulation review website (http://dnr.wi.gov/topic/fishing/outreach/TroutRegReview.html). The availability of the questionnaire online was publicized at the public meetings, by multiple press releases, and by angling groups and the general public through word-of-mouth and online public forums.

Whereas a subsequent 2012 mail survey was designed to be representative of those Wisconsin residents who purchased a fishing license and inland trout stamp in 2011, the public meeting questionnaire, being open to all, cannot be considered representative of anyone not completing the form. Nevertheless, results from this questionnaire were considered instrumental in reviewing the trout program and in guiding Wisconsin DNR efforts to make trout fishing better. Please refer to Petchenik (2014) for survey results on angler behavior, program assessment, and regulation and season preferences that are considered representative of resident Wisconsin trout anglers who purchased a fishing license and inland trout stamp in 2011.

Results and Discussion

The public meeting questionnaire was completed by 1,905 individuals; 201 filled out the form at the public meetings and 1,704 completed the form online. About 72% of questionnaire respondents identified Wisconsin as their state of residence; about 15% were non-Wisconsin residents and about 12% did not identify their state of residence. Results are presented for all questionnaires combined, and all percentages were calculated based on the total number of questionnaire respondents (*n*=1,905). Percentages presented in the tables that follow may not total 100 because of rounding.

Results are organized as the questions appeared on the input form. Each question from the input form is presented in **bold font**. Tables and figures are numbered sequentially but also include an identifier that indicates the question to which the data in the table or figure refer. For example, Table 3 (Q4) refers to the third table in this report, which presents data from question number 4 on the public meeting questionnaire. Verbatim responses to one open-ended question (Question 25) are not presented here but are available from the authors upon request.

1. Which types of trout do you fish for? (Please check all that apply.)

□ **brook trout** □ **brown trout** □ **rainbow trout** □ **lake trout**

Of the 1,905 questionnaire respondents, 1,899 identified at least one species of trout they fish for. Anglers indicated they primarily fish for Brown Trout (96%, *n*=1,826) and Brook Trout (93%, *n*=1,775) and, to a lesser extent, Rainbow Trout (70%, *n*=1,330) and Lake Trout (12%, *n*=235). The low percentage for Lake Trout reflects the limited inland fishing opportunities for Lake Trout, which are currently available for fishing in 12 inland lakes. Table 1 (Q1) shows the number and percentage of questionnaire respondents who identified fishing for different combinations of trout species.

Table 1 (Q1). *Number (n) and percentage (%) of questionnaire respondents who fish for different combinations of trout species.*

Brook Trout	Brown Trout	Rainbow Trout	Lake Trout	*n*	%
x	x	x		1,036	54
x	x			465	24
x	x	x	x	210	11
	x			54	3
	x	x		53	3
x				49	3
x		x		13	0.7
	x	x	x	8	0.4
		x		6	0.3
		x	x	3	0.2
x		x	x	1	0.05
x			x	1	0.05
				6	0.3

2. How do you describe yourself as a trout angler?

□ **Beginner** □ **Experienced** □ **Expert** □ **Professional guide**

Most questionnaire respondents described themselves as trout anglers as "experienced" (63%) followed by "expert" (23%) (Table 2 (Q2)). The results of this self-assessment can be interpreted as an indication that most questionnaire respondents consider themselves knowledgeable about trout fishing and have a vested interest in how Wisconsin trout fisheries are managed.

Table 2 (Q2). *Respondents' self-assessment of their trout angling experience and skills.*

Beginner	Experienced	Expert	Professional guide	No response
9%	63%	23%	4%	0.6%
n=180	*n*=1,201	*n*=442	*n*=71	*n*=11

3. How many years have you been trout fishing in Wisconsin? If this is your first year, write "1" in the space provided.

I have been trout fishing in Wisconsin for ____ years.

Questionnaire respondents represented a broad range of experience in terms of years fishing for trout in Wisconsin (Figure 1 (Q3)). About 29% (*n*=548) have trout fished less than 10 years in Wisconsin, 22% trout fished for 10 to 19 years (*n*=412), 14% for 20 to 29 years (*n*=260), 13% for 30 to 39 years (*n*=255), and 21% have trout fished for 40 or more years in Wisconsin (*n*=406). Six questionnaire respondents (0.3%) had never fished for trout in Wisconsin. About 1% (*n*=18) did not answer this question. Not indicated by these results is the extent of an angler's fishing experience in terms of number of years trout fishing in other states.

4. How many different Wisconsin trout streams do you typically fish in a given year?

□ **0** □ **1** □ **2-5** □ **6-10** □ **11 or more**

Most questionnaire respondents (96%) identified themselves as typically fishing two or more trout streams in a given year, with 25% fishing more than ten different streams a year (Table 3 (Q4)).

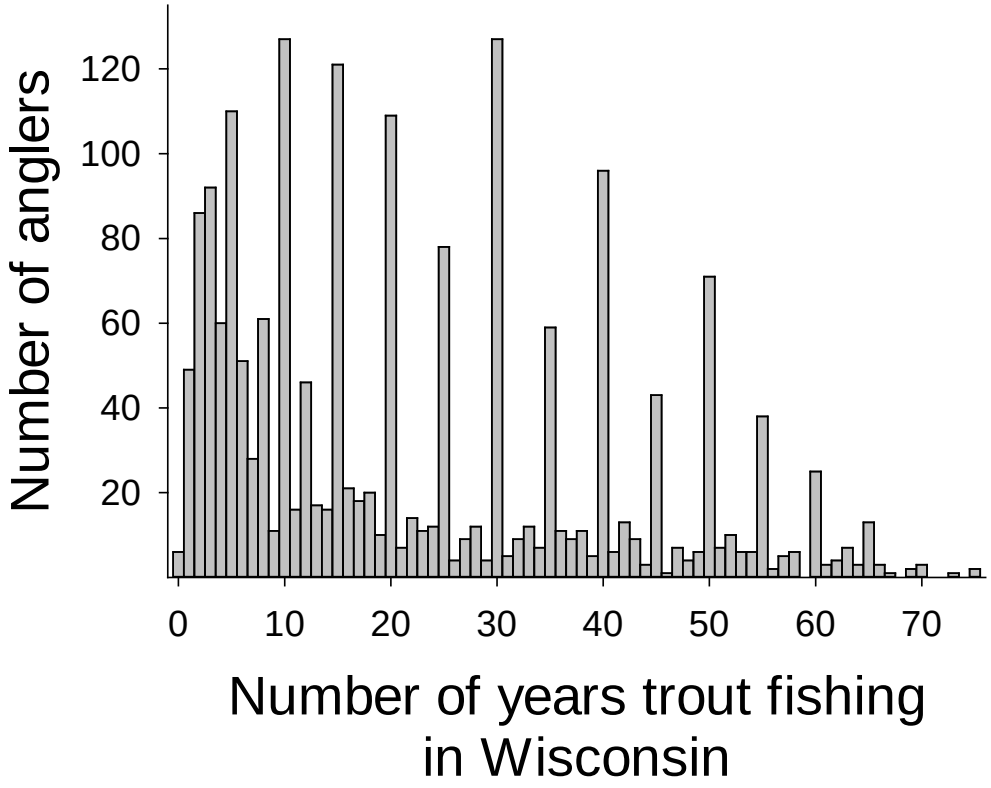

Figure 1 (Q3). *Number of years of trout fishing experience in Wisconsin.*

Table 3 (Q4). *Number of different trout streams fished by a questionnaire respondents in a typical year of trout fishing in Wisconsin.*

0	1	2-5	6-10	11 or more	No response
2%	0.3%	39%	32%	25%	2%
n=33	*n*=6	*n*=751	*n*=607	*n*=476	*n*=32

Table 4 (Q5). *Number of different inland lakes or spring ponds fished for trout by questionnaire respondents in a typical year of trout fishing in Wisconsin.*

0	1	2-5	6-10	11 or more	No response
2%	0.3%	33%	5%	2%	66%
n=42	*n*=6	*n*=614	*n*=101	*n*=37	*n*=755

5. How many different inland lakes or spring ponds in Wisconsin do you fish for trout in a given year?

□ 0 □ 1 □ 2-5 □ 6-10 □ 11 or more

Most questionnaire respondents (66%) did not respond to this question, which suggests that their primary interest in Wisconsin trout fishing is fishing in streams rather than inland lakes and ponds. For those respondents who do fish lakes and ponds, they typically fish from two to five different inland lakes or spring ponds in a given year (33% of questionnaire respondents; Table 4 (Q5)).

6. Please indicate how often you fish for trout using the following methods:

□ Bait fishing □ Fishing with spinners or artificial lures □ Fly fishing

Questionnaire respondents showed a clear preference to fly fishing for trout (Table 5 (Q6)). About 70% of respondents "frequently" or "always" used artificial flies to catch trout, whereas about 24% "frequently" or "always" used spinners and lures and about 17% "frequently" or "always" used bait. The 2012 mail survey of trout anglers, which is considered representative of resident Wisconsin trout anglers, suggests that the public meeting questionnaire was biased towards those who fly fish for trout. Petchenik (2014) found that mail survey respondents "often" or "always" used bait (55%) or spinners and lures (44%) as compared to artificial flies (27%).

Table 5 (Q6). *Frequency that questionnaire respondents fish for trout using bait, spinners or artificial lures, or flies.*

	Never	Rarely	Sometimes	Frequently	Always	No response
Bait fishing	46%	14%	10%	13%	4%	13%
	n=877	*n*=263	*n*=191	*n*=257	*n*=68	*n*=249
Fishing with spinners or artificial lures	31%	17%	17%	19%	5%	12%
	n=584	*n*=323	*n*=315	*n*=363	*n*=97	*n*=223
Fly fishing	10%	7%	9%	21%	49%	4%
	n=187	*n*=129	*n*=176	*n*=397	*n*=934	*n*=82

Petchenik (2014) reported that resident Wisconsin trout anglers were not technique specialists (such as those who exclusively fly fish), but rather used multiple approaches to fish for trout. Anglers who fly fish, for example, may also fish with bait, spinners, or artificial lures. Many public meeting questionnaire respondents also used multiple angling techniques with varying degrees of frequency (Table 5 (Q6)), but many were also exclusively fly

fishers. Of the 49% of public meeting questionnaire respondents who "always" fly fish (*n*=934), 59% said they "never" use bait, spinners, or artificial lures (*n*=554) and 19% did not provide any response in regards to bait, spinners, or artificial lures (*n*=173). Therefore, we can consider at least 29% (*n*=554) of public meeting questionnaire respondents to be exclusive in their use of artificial flies to catch trout. The exclusive use of artificial flies among mail survey participants is likely less than 13%, which is the percentage who indicated "always" fly fishing for trout (Petchenik 2014). Exclusivity among bait anglers was considerably less, with about 0.3% of public meeting questionnaire respondents indicating "always" using bait and "never" using spinners or artificial lures or flies to catch trout (*n*=5).

7. How long (in inches) must a trout be for you to consider it a quality-sized trout versus a trophy-sized trout in Wisconsin's streams and inland lakes and ponds?

Brook trout – quality size _____ **Brown trout – quality size** _____

Brook trout – trophy size _____ **Brown trout – trophy size** _____

We asked questionnaire respondents what they considered to be a quality-sized versus a trophy-sized Brook Trout or Brown Trout. Most respondents considered a 10-inch Brook Trout and a 12-inch Brown Trout to be of quality size and a 14-inch Brook Trout and a 20-inch Brown Trout to be of trophy size (Figure 2 (Q7)).

8. How often do you keep trophy-sized (as described in Question 7) brook trout or brown trout?

About 88% of questionnaire respondents "never" or "rarely" keep trophy-sized trout (as they defined trophy size in question 7) (Table 6 (Q8). However, the wording of the question confounds the percentage who catch a trophy trout and choose not to keep it with the percentage who have not caught a trophy trout but may have kept it if given the opportunity to do so. Nevertheless, the public meeting results suggest a trophy catch-and-release ethic exists among questionnaire respondents. When asked as a hypothetical question by Petchenik (2014), about 47% of anglers indicated they would keep a trophy Brook Trout or Brown Trout if they caught one. Question 9 asks about consumptive harvest practices, which may better describe questionnaire respondent attitudes towards harvest versus catch-and-release fishing.

Table 6 (Q8). *Frequency that questionnaire respondents keep trophy-sized Brook Trout or Brown Trout, as defined in Question 7.*

Never	Rarely	Sometimes	Frequently	Always	No response
66%	22%	7%	1%	2%	2%
n=1,255	*n*=411	*n*=135	*n*=28	*n*=39	*n*=37

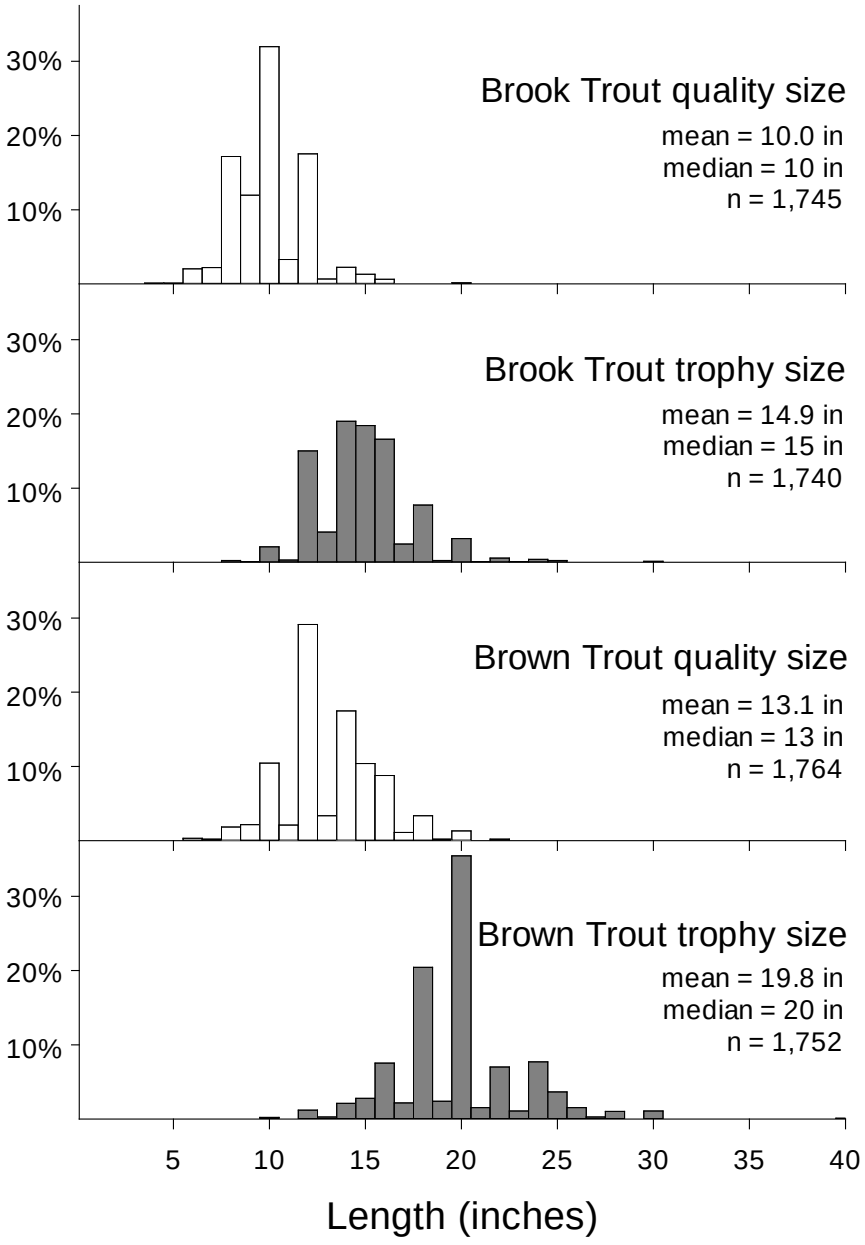

Figure 2 (Q7). *Questionnaire respondent perspectives on quality size (white bars) versus trophy size (gray bars) for Brook Trout and Brown Trout in Wisconsin's streams and inland lakes and ponds.*

9. How often do you keep trout caught from streams to eat?

About 59% of questionnaire respondents "never" or "rarely" keep trout caught from streams to eat (Table 7 (Q9)). About 17% "frequently" or "always" keep trout to eat. These results suggest a strong catch-and-release ethic among questionnaire respondents. This result is in contrast to the 2012 mail survey, in which anglers expressed a clear preference for consumptive angling versus catch-and-release angling. Mail survey respondents, when asked about their angling behavior in 2011, indicated that about 66% of Brook Trout and 55% of Brown Trout that were caught were kept for consumption (Petchenik 2014).

Table 7 (Q9). *Frequency that questionnaire respondents keep trout caught from streams to eat.*

Never	Rarely	Sometimes	Frequently	Always	No response
32%	27%	22%	12%	5%	2%
n=618	*n*=521	*n*=416	*n*=227	*n*=87	*n*=36

10. How often do you keep trout caught from inland lakes and ponds to eat?

Fewer questionnaire respondents keep trout to eat from inland lakes and ponds as compared to streams, with about 73% "never" or "rarely" and about 11% "frequently" or "always" doing so (Table 8 (Q10)). Similar to questionnaire respondents' expressed behavior towards harvesting trout from streams, this result is in contrast to the 2012 mail survey, in which anglers expressed a preference to harvesting trout from lakes and ponds (Petchenik 2014). About 71% of trout anglers who exclusively fished lakes and ponds and about 41% of trout anglers who also fish streams "frequently" or "always" kept trout (Petchenik 2014). These results suggest that the public meeting questionnaire was biased towards trout anglers who do not fish inland lakes and ponds and do not fish for consumptive purposes.

Table 8 (Q10). *Frequency that questionnaire respondents keep trout caught from inland lakes and ponds to eat.*

Never	Rarely	Sometimes	Frequently	Always	No response
55%	18%	13%	8%	3%	4%
n=1,040	*n*=346	*n*=242	*n*=146	*n*=60	*n*=71

11. What is the minimum size and the maximum size (in inches) a brook trout must be for you to keep it for eating? Please circle one response for the minimum size and a second response for the maximum size. (If you never keep brook trout for eating please check here ____.)

No minimum 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 No maximum

About 56% (*n*=1,058) of questionnaire respondents identified a minimum length for a Brook Trout to be acceptable for them to keep to eat, with most indicating that length to be 8 inches (31%, *n*=333) (Figure 3 (Q11)). About 45% (n=854) of questionnaire respondents also identified a maximum length, with most indicating that length to be 12 inches (26%, *n*=219). However, about 22% (*n*=191) indicated "no maximum length," which means they were willing to keep any Brook Trout greater than some minimum size. Nineteen questionnaire respondents (2%) were willing to keep a Brook Trout of any size ("no minimum") and about 42% indicated they never keep Brook Trout for eating (*n*=801).

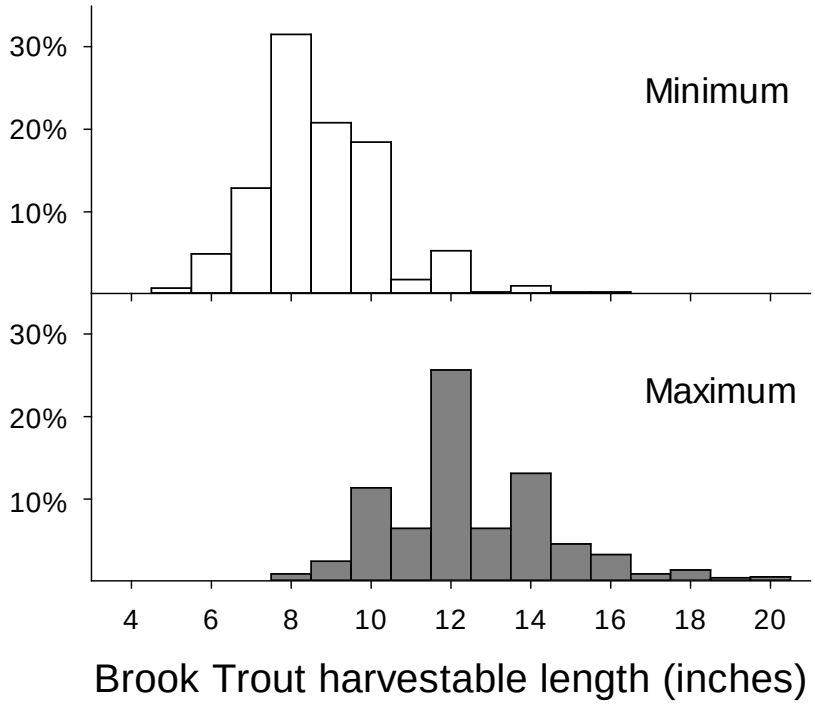

Figure 3 (Q11). *Minimum (n=1,058) and maximum (n=854) Brook Trout lengths considered harvestable by questionnaire respondents.*

12. What is the minimum size and the maximum size (in inches) a brown trout must be for you to keep it for eating? Please circle one response for the minimum size and a second response for the maximum size. (If you never keep brown trout for eating please check here ____.)

No minimum 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 No maximum

About 59% (*n*=1,120) of questionnaire respondents identified a minimum length for a Brown Trout to be acceptable for them to keep to eat, with most indicating that length to be 10 inches (25%, *n*=285) (Figure 4 (Q12)). About 48% (n=906) of questionnaire respondents also identified a maximum length, with most indicating that length to be 14 inches (17%, *n*=153). However, more questionnaire respondents indicated there was "no maximum length" (25%, *n*=225), which means they were willing to keep any Brown Trout greater than some minimum size. Sixteen respondents (1%) were willing to keep a Brown Trout of any size ("no minimum") and about 39% indicated they never keep Brown Trout for eating (*n*=734).

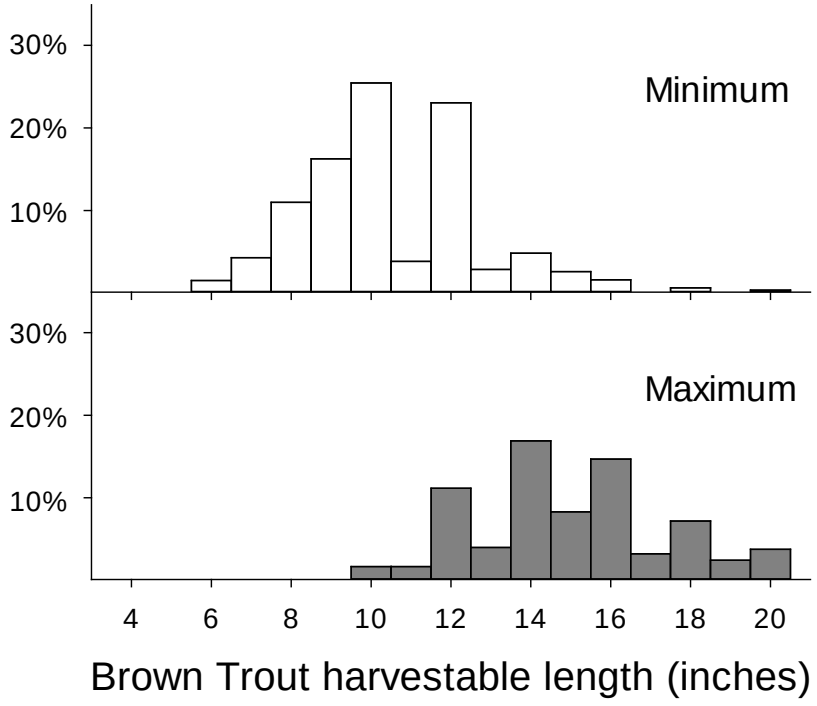

Figure 4 (Q12). *Minimum (n=1,120) and maximum (n=906) Brown Trout lengths considered harvestable by questionnaire respondents.*

13. Listed below are different factors that characterize our trout streams. Please check the appropriate box that best describes the effect each factor has on whether or not you will fish a trout stream. If you are unsure or unfamiliar with any factor, please check the "Unsure" box in the last column.

This question posed a series of characteristics of trout streams to determine their importance to the trout angler. Questionnaire respondents showed a clear preference for fishing in streams that support wild trout (70%) (Table 9 (Q13)). If streams are stocked with trout, respondents preferred to fish for "wild strain" trout (31%) versus "domestic strain" trout (9%), with 24% preferring not to fish streams stocked with "domestic strain" trout. Wild strain trout are raised from eggs collected and fertilized by wild trout and have been found to exhibit behavioral characteristics more like wild trout than like domestic trout and to survive at rates 2-4 times greater than stocked domestic trout (Mitro 2004). Questionnaire respondents preferred to fish streams that provided a chance to catch Brook Trout (61%) and to catch Brown Trout (52%), and to catch a trophy trout (52%) and to catch many trout (50%). However, about twice as many respondents indicated that the chance to catch a trout they could eat was not of concern (38%) versus a preference (21%).

14. Listed below are different factors that characterize or are related to trout stream access. Please check the appropriate box that best describes the effect this factor has on whether or not you will fish a trout stream. If you are unsure or unfamiliar with any factor, please check the "Unsure" box in the last column.

This question asked respondents about their preferences regarding stream access. Questionnaire respondents expressed a clear preference for the availability of public access to streams (65%) (Table 10 (Q14)). However, while 44% sometimes fish streams requiring landowner permission for access, 26% prefer not to fish such streams. A similar pattern of preference about stream accessibility was found in the 2012 mail survey. Anglers preferred to fish streams with public access (57%) and preferred not to fish streams requiring landowner permission (42%) (Petchenik 2014). Therefore, stream accessibility preferences may not necessarily be unique to any particular type of trout angler.

15. Listed below are different factors that characterize trout stream habitat. Please check the appropriate box that best describes the effect this factor has on whether or not you will fish a trout stream. If you are unsure or unfamiliar with any factor, please check the "Unsure" box in the last column.

Most questionnaire respondents were non-preferential concerning riparian vegetation or lack thereof, with 39% to 49% indicating they sometimes fish streams with or without riparian grasses, brush, or trees (Table 11 (Q15)). And preferences to fish a particular type of stream (e.g., banks overgrown with brush or reed canary grass, 17%) were generally balanced by preferences not to fish such a stream (16%). Questionnaire respondents did, however, show a preference to fish forested stream banks (35%) with about 5% preferring not to fish such streams.

Table 9 (Q13). *Questionnaire respondents' preferences toward trout stream characteristics.*

	I will only fish this type of stream	I prefer to fish this type of stream	Sometimes I fish this type of stream	I prefer not to fish this type of stream	I will never fish this type of stream	This factor does not concern me	Unsure or don't know	No response
Presence of wild trout	4%	70%	9%	0.2%	0.2%	8%	1%	7%
	n=83	*n*=1,338	*n*=174	*n*=4	*n*=4	*n*=151	*n*=22	*n*=129
Presence of stocked "wild strain" trout	1%	31%	40%	3%	0.3%	14%	3%	7%
	n=23	*n*=581	*n*=756	*n*=66	*n*=6	*n*=269	*n*=63	*n*=141
Presence of stocked "domestic strain" trout	0.7%	9%	37%	24%	3%	15%	3%	8%
	n=14	*n*=173	*n*=706	*n*=452	*n*=54	*n*=285	*n*=66	*n*=155
Chance to catch a brook trout	4%	56%	24%	0.5%	0.1%	8%	0.7%	7%
	n=68	*n*=1,069	*n*=464	*n*=10	*n*=2	*n*=145	*n*=13	*n*=134
Chance to catch a brown trout	3%	61%	20%	0.6%	0.2%	7%	0.8%	8%
	n=55	*n*=1,158	*n*=375	*n*=11	*n*=3	*n*=142	*n*=15	*n*=146
Chance to catch a trophy trout	3%	52%	26%	0.3%	0.3%	11%	0.8%	8%
	n=66	*n*=981	*n*=485	*n*=5	*n*=5	*n*=201	*n*=15	*n*=147
Chance to catch many trout	3%	50%	28%	1%	0.4%	9%	0.6%	7%
	n=57	*n*=960	*n*=524	*n*=28	*n*=7	*n*=178	*n*=11	*n*=140
Chance to catch a trout I can keep to eat	3%	21%	21%	4%	3%	38%	2%	7%
	n=62	*n*=405	*n*=400	*n*=71	*n*=58	*n*=731	*n*=36	*n*=142

Table 10 (Q14). *Questionnaire respondents' preferences toward trout stream access and size.*

	I will only fish this type of stream	I prefer to fish this type of stream	Sometimes I fish this type of stream	I prefer not to fish this type of stream	I will never fish this type of stream	This factor does not concern me	Unsure or don't know	No response
Public access to the stream is available	13%	65%	11%	0.7%	0.2%	3%	0.3%	7%
	n=255	*n*=1,233	*n*=206	*n*=14	*n*=4	*n*=53	*n*=6	*n*=134
Landowner permission is required to access stream	0.7%	9%	44%	26%	6%	5%	3%	7%
	n=13	*n*=174	*n*=831	*n*=491	*n*=114	*n*=94	*n*=48	*n*=140
Stream size is small (less than 10 feet wide)	0.6%	22%	50%	8%	0.5%	11%	0.5%	7%
	n=12	*n*=426	*n*=944	*n*=159	*n*=9	*n*=205	*n*=10	*n*=140
Stream size is medium (10-30 feet wide)	1%	47%	32%	1%	0.2%	10%	0.4%	7%
	n=20	*n*=904	*n*=611	*n*=22	*n*=4	*n*=198	*n*=8	*n*=138
Stream size is large (greater than 30 feet wide)	0.9%	23%	43%	11%	1%	12%	1%	7%
	n=17	*n*=430	*n*=828	*n*=213	*n*=19	*n*=233	*n*=25	*n*=140

Table 11 (Q15). *Questionnaire respondents' preferences toward trout stream habitat.*

	I will only fish this type of stream	I prefer to fish this type of stream	Sometimes I fish this type of stream	I prefer not to fish this type of stream	I will never fish this type of stream	This factor does not concern me	Unsure or don't know	No response
Pastured or mowed stream banks	0.4% *n*=8	20% *n*=388	43% *n*=826	16% *n*=302	2% *n*=35	10% *n*=181	1% *n*=20	8% *n*=145
Stream banks overgrown with brush or reed canary grass	0.7% *n*=13	17% *n*=333	49% *n*=934	16% *n*=300	0.8% *n*=15	8% *n*=145	0.7% *n*=14	8% *n*=151
Forested stream banks	0.9% *n*=17	35% *n*=658	43% *n*=823	5% *n*=87	0.3% *n*=6	7% *n*=130	0.9% *n*=17	9% *n*=167
Trees have been removed along stream banks	0.1% *n*=2	15% *n*=293	39% *n*=745	23% *n*=429	3% *n*=50	9% *n*=178	2% *n*=41	9% *n*=167
Stream habitat has been restored	2% *n*=29	54% *n*=1,023	30% *n*=578	1% *n*=22	0.5% *n*=9	4% *n*=84	0.6% *n*=12	8% *n*=148
Stream restored with LUNKER structures	1% *n*=19	38% *n*=721	34% *n*=650	5% *n*=88	0.6% *n*=12	9% *n*=179	5% *n*=87	8% *n*=149
Stream restored without LUNKER structures	0.5% *n*=10	22% *n*=419	48% *n*=909	3% *n*=57	0.6% *n*=11	12% *n*=238	5% *n*=100	8% *n*=161
Stream has not been restored and is degraded (eroded banks, wide shallow channel, etc.)	0.3% *n*=5	3% *n*=50	19% *n*=369	51% *n*=971	13% *n*=247	4% *n*=85	1% *n*=28	8% *n*=150
Beaver dams are present	0.4% *n*=7	4% *n*=73	36% *n*=683	31% *n*=593	5% *n*=87	12% *n*=221	5% *n*=93	8% *n*=148
Beaver dams have been removed	0.5% *n*=10	22% *n*=428	40% *n*=764	6% *n*=116	0.9% *n*=17	15% *n*=278	7% *n*=141	8% *n*=151

Table 12 (Q16). *Questionnaire respondent preferences toward trout stream regulations.*

	I will only fish this type of stream	I prefer to fish this type of stream	Sometimes I fish this type of stream	I prefer not to fish this type of stream	I will never fish this type of stream	This factor does not concern me	Unsure or don't know	No response
Regulations allow harvest of trout	6%	24%	34%	9%	0.6%	17%	0.7%	8%
	n=106	*n*=465	*n*=649	*n*=180	*n*=11	*n*=329	*n*=13	*n*=152
Regulations allow catch and release only	2%	42%	27%	9%	5%	7%	0.5%	8%
	n=36	*n*=795	*n*=508	*n*=172	*n*=97	*n*=136	*n*=10	*n*=151
Regulations allow artificial lures only	3%	42%	26%	9%	4%	7%	1%	8%
	n=51	*n*=806	*n*=497	*n*=166	*n*=73	*n*=137	*n*=21	*n*=154
Regulations allow fly fishing only	3%	38%	17%	11%	10%	10%	2%	8%
	n=53	*n*=732	*n*=331	*n*=213	*n*=200	*n*=181	*n*=34	*n*=161
Regulations allow bait fishing on catch & release streams	0.5%	6%	22%	35%	14%	11%	3%	8%
	n=10	*n*=108	*n*=421	*n*=665	*n*=268	*n*=217	*n*=64	*n*=152
Regulations with no size limits	0.3%	6%	18%	38%	13%	13%	4%	8%
	n=6	*n*=111	*n*=345	*n*=716	*n*=244	*n*=257	*n*=69	*n*=157
Regulations with high bag limits	0.3%	6%	18%	38%	13%	14%	3%	8%
	n=6	*n*=119	*n*=346	*n*=721	*n*=240	*n*=262	*n*=56	*n*=155

Table 12 (Q16) continues on next page.

Table 12 (Q16), Continued. *Questionnaire respondent preferences toward trout stream regulations.*

	I will only fish this type of stream	I prefer to fish this type of stream	Sometimes I fish this type of stream	I prefer not to fish this type of stream	I will never fish this type of stream	This factor does not concern me	Unsure or don't know	No response
Regulations with a moderate size limit and a low bag limit	0.4% *n*=8	25% *n*=468	38% *n*=716	11% *n*=216	2% *n*=47	13% *n*=244	2% *n*=42	9% *n*=164
Regulations with a high size limit and bag limit of one	0.5% *n*=9	22% *n*=417	33% *n*=620	17% *n*=321	4% *n*=75	13% *n*=252	3% *n*=48	9% *n*=163
Regulations with a high size limit and bag limit of one	0.5% *n*=9	22% *n*=417	33% *n*=620	17% *n*=321	4% *n*=75	13% *n*=252	3% *n*=48	9% *n*=163
Regulations with a high size limit and bag limit of one	0.5% *n*=9	22% *n*=417	33% *n*=620	17% *n*=321	4% *n*=75	13% *n*=252	3% *n*=48	9% *n*=163
Regulations allow harvest of trout below some maximum size (such as 12 or 13 in)	0.7% *n*=13	17% *n*=322	38% *n*=721	15% *n*=288	3% *n*=52	14% *n*=259	5% *n*=88	9% *n*=162
Uniform regulations on the entire length of stream	2% *n*=31	30% *n*=572	23% *n*=444	9% *n*=172	3% *n*=56	21% *n*=408	4% *n*=67	8% *n*=155
Different regulations on different sections of the same stream	1% *n*=21	19% *n*=357	30% *n*=569	17% *n*=331	4% *n*=70	19% *n*=360	2% *n*=46	8% *n*=151
Nearby streams have the same regulations (uniform regulations in a geographic area)	0.8% *n*=16	22% *n*=428	24% *n*=465	9% *n*=163	2% *n*=42	29% *n*=558	4% *n*=83	8% *n*=150

Questionnaire respondents also preferred to fish streams in which habitat has been restored (54%) and preferred not to fish degraded streams that had not been restored (51%) (Table 11 (Q15)). Lunker structures are sometimes used in stream habitat restoration projects to create overhead cover for trout by mimicking undercut banks. About 38% of respondents preferred to fish streams with lunker structures versus about 34% who had no preference one way or the other; about 48% sometimes fished streams restored without lunker structures, with no preference one way or the other.

Questionnaire respondents were also generally non-preferential regarding the presence (36%) or removal (40%) of beaver dams on trout streams. Beaver dams are sometimes removed to maintain free-flowing conditions in trout streams. Those with preferences, however, tended to favor not to fish streams with beaver dams present (31%), with about 22% preferring to fish streams from which beaver dams have been removed (Table 11 (Q15)).

16. Listed below are different factors that characterize <u>trout stream regulations</u>. Please check the appropriate box that best describes the effect this factor has on whether or not you will fish a trout stream. If you are unsure or unfamiliar with any factor, please check the "Unsure" box in the last column.

This question was written to elicit respondent preferences concerning trout stream regulations. Questionnaire respondents showed a greater preference for regulations that allow catch-and-release only (42%) compared to regulations that allow harvest (24%) (Table 12 (Q16)). These results are consistent with respondents' attitudes towards harvesting trout as captured in questions 8-10. These results, however, are contrary to those from the 2012 mail survey, in which 76% of stream anglers expressed support for regulations allowing trout harvest and 61% expressed opposition to catch-and-release-only regulations on the streams they fished (Petchenik 2014).

Consistent with the preference of questionnaire respondents for regulations that allow catch-and-release only, respondents also preferred to fish streams with regulations that allow artificial lures only (42%) and fly fishing only (38%) and preferred not to fish catch-and-release streams that have regulations allowing bait fishing (35%) (Table 12 (Q16)). Despite research that shows bait fishing can be compatible with catch-and-release trout angling regulations (Schill 1996), a perception persists among anglers that bait fishing and catch-and-release fishing are incompatible. About 42% of Wisconsin resident trout anglers oppose regulations that allow bait fishing on catch-and-release streams, compared to 29% who support such regulations (Petchenik 2014).

Although questionnaire respondents were unwilling to keep trout below a certain minimum size (Figures 3 (Q11) and 4 (Q12)), there was a clear preference not to fish streams that had no minimum size limit (38%) (Table 12 (Q16)). This result suggests respondents perceive a value in protecting small trout and in ensuring that others are regulated in their angling behavior to protect those trout. Questionnaire respondents also opposed high bag limits. About 38% preferred not to fish streams with regulations allowing high bag limits. "High bag limit" was not defined, but the response to this question can be interpreted as a perception of the questionnaire respondent that harvest regulation is necessary to protect a desired fishery. As such, most respondents indicated they sometimes fish streams with low bag limits and moderate to high size limits, with a slight preference to fish such streams (Table 12 (Q16)).

Questionnaire respondents were mixed in their opinions concerning uniform versus different regulations among sections of a stream. About 20% were not concerned with this factor, and 1% to 4% felt strongly enough that they would "always" or "never" fish a stream based on this factor (Table 12 (Q16)). About 30% preferred uniform regulations along a stream (versus 9% who preferred not to fish this type of stream), but about equal percentages preferred (19%) versus not preferred (17%) different regulations along a stream. Questionnaire respondents were mixed in opinion on uniformity in regulations among nearby streams. About 29% were not concerned with this factor and about 24% would sometimes fish such streams, but 22% preferred such uniformity versus 9% who preferred not to fish such streams.

17. For each item in the list below, please check the one box that best indicates how you feel it has changed over time. If you are unsure or unfamiliar with any item in the list, please check the "Unsure" box in the last column.

This question asked whether different characteristics of trout fisheries have become better or worse over time. Respondents generally thought trout fishing opportunities in streams have become "somewhat" or "much" better versus worse by a ratio of about 5 to 1 and that trout size and numbers had become better versus worse by a ratio of about 3 to 1 (but by about 3 to 2 for number of trophy-sized trout) (Table 13 (Q17)). About half of the questionnaire respondents were unsure or didn't know if inland lake and pond trout fisheries had changed over time, and of those who did have an opinion, most thought they had stayed the same (Table 13 (Q17)).

Most questionnaire respondents thought that landowner attitudes towards anglers had remained the same (25%) and that the following had become "somewhat better": agricultural runoff (27%), groundwater protection (29%), and water quality in streams (35%) (Table 13 (Q17)). However, 22% to 34% of respondents were unsure, did not know, or did not respond.

18. Please indicate your opinion on the fishing seasons in the following list. If you are unsure or unfamiliar with any item in the list, please check the "Unsure" box in the last column.

This question asked respondents to describe their support or lack thereof for trout fishing seasons. Most questionnaire respondents "strongly support" the current regular open season for trout streams (38%) and the current early catch-and-release season for trout streams (44%). Support in general for the current regular open season (59%) was less than the 75% level of support among anglers identified by the 2012 mail survey (Petchenik 2014). In contrast, while 62% of questionnaire respondents supported the current early catch-and-release season, only 34% of anglers support the early season according to the 2012 mail survey (Petchenik 2014).

There was no clear consensus of opinion towards any changes to the current season structure. There was some strong support for extending the catch-and-release season to include autumn fishing (35% and 32%) and to start prior to the current March opening (27%), but questionnaire respondents overall were of mixed opinion (Table 14 (Q18)). The support for increasing seasonal catch-and-release fishing opportunities was consistent with support for catch-and-release as a regulation option as identified in Table 12 (Q16).

However, 40% to 48% of anglers, according to the 2012 mail survey, opposed increasing catch-and-release opportunities by extending seasons (Petchenik 2014).

There was little support or opposition for seasons pertaining to fishing inland lakes, with about 30% of questionnaire respondents neutral and another 30% unsure or not knowing. However, as identified earlier (Tables 3 (Q4) and 4 (Q5)), respondents were more interested in fishing streams than lakes.

19. How satisfied are you with each of the following aspects of Wisconsin inland trout fishing? If you are unsure or unfamiliar with any item in the list, please check the "Unsure" box in the last column.

Questionnaire respondents were generally satisfied with the category regulation system and season structure for fishing trout streams in Wisconsin. About 63% were satisfied with the regulations and about 60% were satisfied with the seasons (Table 15 (Q19)). These results are consistent with results from the 2012 mail survey, in which anglers were generally satisfied with regulations (49%) and seasons (62%) (Petchenik 2014). In regards to inland lakes and ponds, about 47% of respondents were unsure, didn't know, or did not respond, and those who did respond were largely neutral (21-22%).

Questionnaire respondents were also generally satisfied with the quality of fishing opportunities (65%), the stream access program (63%), the stream habitat restoration program (69%), and overall Wisconsin DNR management of trout fisheries (67%) (Table 15 (Q19)). Questionnaire respondents were largely neutral (26%) or "somewhat" satisfied (25%), however, with the beaver control program. More respondents were unsure or did not know how they felt about the beaver control program (16%) as compared to the stream access (3%) and stream habitat restoration (2%) programs. The 2012 mail survey found that anglers familiar with these programs were also satisfied with them, but also with more uncertainty concerning the beaver control program (Petchenik 2014).

Table 13 (Q17). *Questionnaire respondents' perceptions on how different characteristics of trout fisheries may or may not have changed over time.*

	Become much better	Become somewhat better	Stayed the same	Become somewhat worse	Become much worse	Unsure or don't know	No response
Trout fishing opportunities in streams	26%	33%	11%	8%	3%	8%	12%
	n=504	*n*=621	*n*=211	*n*=151	*n*=51	*n*=146	*n*=221
Size of trout in streams	13%	31%	19%	13%	3%	10%	12%
	n=254	*n*=591	*n*=356	*n*=244	*n*=56	*n*=181	*n*=223
Number of trout in streams	21%	29%	15%	11%	3%	9%	12%
	n=395	*n*=561	*n*=283	*n*=205	*n*=64	*n*=172	*n*=225
Number of quality-sized trout in streams	15%	29%	16%	13%	5%	10%	12%
	n=288	*n*=554	*n*=313	*n*=250	*n*=87	*n*=191	*n*=222
Number of trophy-sized trout in streams	10%	22%	19%	15%	7%	15%	12%
	n=183	*n*=423	*n*=371	*n*=280	*n*=127	*n*=295	*n*=226
Trout fishing opportunities in inland lakes and ponds	3%	11%	16%	5%	2%	51%	12%
	n=59	*n*=213	*n*=297	*n*=97	*n*=33	*n*=975	*n*=231
Size of trout in inland lakes and ponds	2%	8%	16%	6%	1%	55%	12%
	n=37	*n*=154	*n*=309	*n*=107	*n*=25	*n*=1,049	*n*=224

Table 13 (Q17) continues on next page.

Table 13 (Q17), Continued. *Questionnaire respondents' perceptions on how different characteristics of trout fisheries may or may not have changed over time.*

	Become much better	Become somewhat better	Stayed the same	Become somewhat worse	Become much worse	Unsure or don't know	No response
Number of trout in inland lakes and ponds	2%	8%	14%	7%	2%	55%	12%
	n=44	*n*=151	*n*=268	*n*=126	*n*=34	*n*=1,045	*n*=237
Landowner attitudes towards trout anglers	5%	18%	25%	13%	6%	22%	12%
	n=94	*n*=346	*n*=470	*n*=244	*n*=106	*n*=417	*n*=228
Agricultural runoff	5%	27%	15%	17%	8%	16%	12%
	n=103	*n*=509	*n*=279	*n*=327	*n*=151	*n*=307	*n*=229
Groundwater protection	6%	29%	17%	12%	5%	18%	12%
	n=118	*n*=553	*n*=321	*n*=238	*n*=100	*n*=347	*n*=228
Water quality in trout streams	13%	35%	16%	11%	2%	10%	12%
	n=256	*n*=675	*n*=299	*n*=203	*n*=38	*n*=199	*n*=235

Table 14 (Q18). *Questionnaire respondents' opinions on trout angling season structure for fishing streams and inland lakes.*

	Strongly support	Somewhat support	Neutral	Somewhat oppose	Strongly oppose	Unsure or don't know	No response
Current regular open season for streams (first Saturday in May through September 30)	38%	21%	14%	9%	4%	1%	13%
	n=725	*n*=402	*n*=262	*n*=163	*n*=84	*n*=17	*n*=252
Current early catch & release season for streams (beginning on the first Saturday in March)	44%	18%	12%	6%	6%	1%	12%
	n=846	*n*=344	*n*=227	*n*=108	*n*=120	*n*=26	*n*=234
Start catch & release season earlier	27%	13%	24%	9%	13%	2%	12%
	n=509	*n*=253	*n*=450	*n*=176	*n*=241	*n*=40	*n*=236
Start regular open season earlier	14%	13%	23%	16%	20%	1%	12%
	n=265	*n*=248	*n*=430	*n*=313	*n*=385	*n*=28	*n*=236
End regular open season later	23%	22%	13%	12%	16%	2%	13%
	n=436	*n*=410	*n*=247	*n*=225	*n*=304	*n*=29	*n*=254
Add catch & release season after regular open season ends	35%	18%	10%	8%	15%	2%	12%
	n=674	*n*=339	*n*=181	*n*=156	*n*=292	*n*=33	*n*=230
Extend the catch & release season to begin October 1, thereby allowing for year-round trout fishing (except for closure during deer season)	32%	16%	8%	10%	20%	2%	12%
	n=606	*n*=305	*n*=161	*n*=193	*n*=379	*n*=38	*n*=223
Current inland lake season (beginning on the first Saturday in May; closing date varies by lake)	7%	12%	30%	3%	2%	33%	12%
	n=135	*n*=236	*n*=564	*n*=61	*n*=47	*n*=624	*n*=238
Extend the inland lake season to the first Saturday in March	8%	11%	28%	4%	4%	33%	12%
	n=152	*n*=215	*n*=527	*n*=79	*n*=76	*n*=624	*n*=232

Table 15 (Q19). *Questionnaire respondents' satisfaction with inland trout fishing in Wisconsin.*

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied	Unsure or don't know	No response
Category regulation system for streams	27%	36%	11%	8%	4%	3%	12%
	n=514	*n*=680	*n*=204	*n*=149	*n*=69	*n*=60	*n*=229
Category regulation system for inland lakes and ponds	11%	18%	21%	3%	2%	34%	13%
	n=206	*n*=336	*n*=394	*n*=53	*n*=29	*n*=645	*n*=242
Trout fishing seasons for streams	22%	38%	7%	15%	5%	1%	13%
	n=410	*n*=724	*n*=133	*n*=280	*n*=91	*n*=26	*n*=241
Trout fishing seasons for inland lakes and ponds	9%	17%	22%	5%	1%	34%	13%
	n=173	*n*=331	*n*=416	*n*=88	*n*=16	*n*=639	*n*=242
Quality fishing opportunities	26%	39%	9%	9%	3%	1%	13%
	n=500	*n*=747	*n*=170	*n*=172	*n*=51	*n*=25	*n*=240
Stream access program	25%	38%	11%	9%	2%	3%	13%
	n=474	*n*=726	*n*=208	*n*=162	*n*=35	*n*=58	*n*=242
Stream habitat restoration program	31%	38%	8%	6%	2%	2%	13%
	n=594	*n*=716	*n*=157	*n*=118	*n*=37	*n*=44	*n*=239
Beaver control program	9%	25%	26%	8%	3%	16%	13%
	n=174	*n*=475	*n*=494	*n*=155	*n*=58	*n*=309	*n*=240
Overall DNR management of trout fisheries	27%	40%	9%	7%	3%	2%	12%
	n=518	*n*=768	*n*=168	*n*=124	*n*=58	*n*=32	*n*=237

20. What three trout streams in Wisconsin do you consider to be the best for brook trout fishing and for brown trout fishing?

Brook Trout Streams	Brown Trout Streams
1	1
2	2
3	3

Anglers responded to this question with about 2,100 responses naming streams for Brook Trout and about 2,500 responses naming streams for Brown Trout, with many streams named by multiple respondents.

Some of the more popular Brook Trout streams included the following (in alphabetical order, county indicated in parentheses): Ash (Richland), Big Spring (Grant and Iowa), Bois Brule (Douglas), Cady (Dunn, Pierce and St. Croix), East Branch Eau Claire (Langlade), Flume (Marathon, Portage and Waupaca), Kinnickinnic (Pierce and St. Croix), Lawrence (Adams and Marquette), Little Wolf (Marathon and Portage), Lost (Pierce), Oconto (Oconto), Pine (Waushara), Plum (Crawford), Prairie (Langlade and Lincoln), Rush (Pierce and St. Croix), Tainter (Crawford and Vernon), and West Fork Kickapoo (Vernon).

Some of the more popular Brown Trout streams included the following (in alphabetical order, county indicated in parentheses): Bad Axe (Vernon), Big Green (Grant), Black Earth Creek (Dane), Blue (Grant and Iowa), Bois Brule (Douglas), Camp (Richland), Castle Rock (Grant), Elk (Richland and Vernon), Kickapoo (Crawford, Richland and Vernon), Kinnickinnic (Pierce and St. Croix), Mecan (Waushara), Namekagon (Bayfield and Sawyer), Oconto (Oconto), Pine (Waushara), Rush (Pierce and St. Croix), Tainter (Crawford and Vernon), Timber Coulee (Vernon), Tomorrow (Portage), West Fork Kickapoo (Vernon), White (Ashland and Bayfield), Willow (Waushara0, and Wolf (Langlade).

21. Have you stopped fishing any trout streams in Wisconsin that you used to fish in the past?

Yes ____ → go to question 22 **No ____ → skip to question 23**

About 39% of questionnaire respondents checked "yes" (n=745), indicating that they did stop fishing one or more trout streams in Wisconsin that they used to fish in the past. About 49% checked "no" (n=934) and 12% gave no response (n=226).

22. For any streams that you used to fish but now choose not to fish, please indicate the reason why by checking all appropriate boxes below. You may write the names of such streams under the reason why you no longer fish them. (If this does not apply to you, please check here ___.)

About 65% (*n*=1,243) of questionnaire respondents did not select any of the eight listed reasons for why they may have chosen to no longer fish a particular stream (Table 16 (Q22)). Of the 35% who did select one or more reason why they no longer fish a particular stream, 10% selected one reason (*n*=196), 13% selected two (*n*=248), 8% selected three (*n*=144), 3% selected four (*n*=48), 1% selected five (*n*=21), 0.2% selected six (*n*=3), and 0.1% selected seven reasons (*n*=2).

Table 16 (Q22). *Reasons respondents indicated for why they no longer fish a particular stream.*

25% (*n*=474)	Trout numbers have decreased
16% (*n*=299)	Trout size has decreased
13% (*n*=240)	Access has become difficult (landowner posted)
10% (*n*=184)	Access has become difficult because of overgrown stream banks
4% (*n*=68)	Regulations are difficult to understand
4% (*n*=72)	I don't like the regulations
3% (*n*=51)	Regulations no longer allow me to keep a trout
3% (*n*=65)	I no longer have the youth and stamina to get from my car to my favorite fishing spot

23. In which Wisconsin county is your primary residence located?
_____ county

If Wisconsin is not your primary residence, in what state do you live in?

Wisconsin residents submitted 1,373 questionnaires (72%) and represented 69 counties. Most respondents came from the greater-Madison, Green Bay, and Milwaukee areas (Figure 5 (Q23)). There were 13 counties with each having more than 25 questionnaire respondents. There were 25 or fewer respondents from 57 counties and no respondents from 3 counties (Lafayette, Marquette, and Menominee).

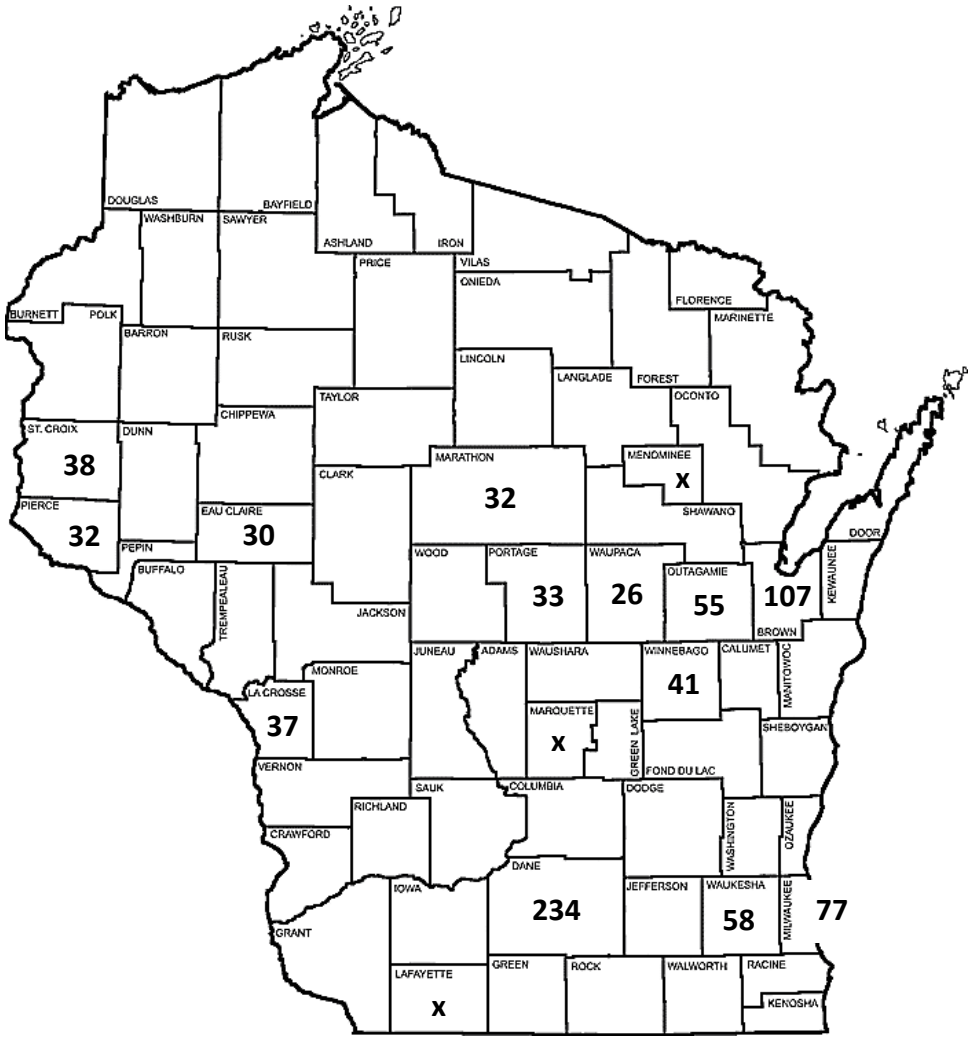

Figure 5 (Q23). *Questionnaire respondents' counties of residence. Counties with more than 25 respondents show the actual number of completed questionnaires from the county. Blank counties were represented by 25 or fewer respondents. No respondents resided in Lafayette, Marquette, or Menominee counties (identified by "x").*

Non-Wisconsin residents submitted 291 questionnaires (15%) and represented 24 states (Figure 6 (Q23)). Most non-Wisconsin residents identified Illinois (118) or Minnesota (117) as their state of primary residence.

A county or state of residence was not identified by 241 questionnaire respondents (13%).

Figure 6 (Q23). *Twenty-four states represented by questionnaire respondents (identified by the dots). Number of questionnaire respondents from Illinois and Minnesota are represented by numbers on the map.*

24. What is your age? I am ____ years old.

The age of questionnaire respondents ranged from 6 to 86 years old, with most between the ages of 23 and 70 (Figure 6 (Q24)). The mean age was 48 years old and about 52% were 50 years old or younger. These statistics were similar to those reported by Petchenik (2014) in the 2012 mail-based survey of Wisconsin resident purchasers of the 2011 Wisconsin inland trout stamp, in which the mean age was 49 years old and about 50% were 50 years old or younger.

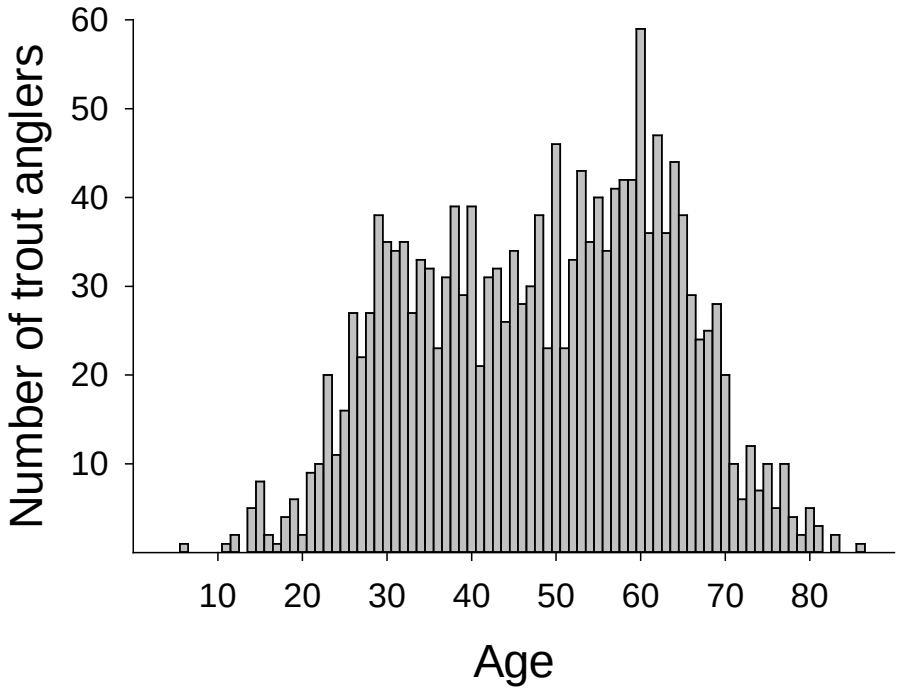

Figure 7 (Q24). *Number of questionnaire respondents by age.*

25. Are there any comments or suggestions you would like to add? Are there any questions you would like to see added to our survey?

Many questionnaire respondents both at the public meetings and online provided written comments and suggestions about the trout management program in Wisconsin. These comments have been compiled and are available from the authors upon request.

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