

Out-of-State Angler Participation in New York's Prominent Lake Erie Fisheries



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Executive Summary

The New York (NY) portion of Lake Erie and its tributaries represent one of the most utilized and economically important recreational fisheries in the state. Walleye, smallmouth bass, and yellow perch are the most popular sportfish in Lake Erie, while steelhead account for nearly all of the angling effort in NY's Lake Erie tributaries. The quality of these fisheries leads to an influx of out-of-state anglers each year. Out-of-state angler participation has the potential to have a disproportionate economic impact because of the additional expenditures incurred by traveling to fish. Therefore, quantifying the magnitude and distribution of out-of-state angler pressure and documenting potential shifts in out-of-state angler participation and species preferences are important for better understanding and managing NY's fisheries.

Study Objectives:

- 1. Quantify the overall and species-specific magnitude of out-of-state angler participation.
- 2. Identify areas of the country that contribute most to out-of-state angler participation.
- 3. Identify spatial and temporal trends in out-of-state angler participation.
- 4. Assess the impact of the spring bass season regulation on out-of-state angler participation.

Residency data were collected for anglers targeting walleye, smallmouth bass, and yellow perch during the 1988–1991 and 2018–2019 open lake angler surveys. Residency data were additionally collected from bass anglers during May and June 1994–1998 to assess changes in out-of-state participation associated with the opening of the spring bass season in 1994. Residency data for anglers targeting steelhead were collected during six periodic tributary angler surveys between 2003–2018.

New York's portion of Lake Erie exhibited a decline in overall angler effort in the open lake fishery between 1988–2019. However, during that time the proportional contribution of out-of-state effort increased from 10% to 13% due solely to increases in effort by non-resident bass anglers—the only angler group to increase participation over the last three decades (all others declined). The proportion of out-of-state bass anglers fishing during the spring bass season increased from 30% to 58% since the initiation of the early season in 1994. The proportion of out-of-state bass anglers fishing during the regular season also increased from 15% to 49% over the past 30 years, indicating the importance of this stakeholder group. Most out-of-state bass anglers came from states in the Appalachian region. Conversely, the proportional contribution of out-of-state walleye anglers declined from 11% to 6% between 1988–1991 and 2018–2019. The four nearest NY counties accounted for more than 80% of all interviewed walleye anglers. The yellow perch fishery in NY's portion of Lake Erie continues to be almost entirely supported by local New York anglers with the four nearest NY counties accounting for more than 89% of all interviewed yellow perch anglers. Out-of-state angler participation for steelhead ranged from 12–17% with forty-three states, provinces, and territories represented.

Major Conclusions:

- 1. Out-of-state bass anglers are the only group to exhibit an increase in effort over the last three decades. Nearly half of current smallmouth bass anglers are from out-of-state compared to 15% prior to the start of the spring season in 1994.
- 2. The walleye fishery is largely supported by NY anglers with decreasing contributions from outof-state.
- 3. The yellow perch fishery continues to be almost totally supported by NY anglers
- 4. The steelhead fishery attracts moderate numbers of out-of-state and foreign anglers

Introduction

The New York (NY) portion of Lake Erie and its tributaries represent one of the most utilized and economically important recreational fisheries in the state (Duda et al., 2019). Walleye, smallmouth bass, and yellow perch are the most popular sportfish in Lake Erie (Wilkins, 2022), while steelhead account for nearly all of the angling effort in NY's Lake Erie tributaries (Markham, 2019). The quality of these fisheries are known well beyond NY's borders, leading to an influx of out-of-state anglers each year (Duda et al., 2019). Out-of-state angler participation has the potential to have a disproportionate economic impact because of the additional expenditures (e.g., fuel, housing, food, increased cost of license, etc.) incurred by traveling to fish (Hushak et al., 1988). Therefore, quantifying the magnitude distribution of out-of-state angler pressure and documenting potential shifts in out-of-state angler participation and species preferences are important for better understanding and managing NY's fisheries. Regulatory changes (e.g., season dates and bag limits) may also affect out-of-state angler participation by altering the perceived fishing quality relative to the cost associated with traveling to fish. Documenting angler demographics may also allow better targeting of angler groups for stakeholder outreach and engagement.

Here we describe the contributions of out-of-state anglers to overall and species-specific fishing effort in NY's portion of Lake Erie and its tributaries, including spatiotemporal changes and the potential for participation shifts to be driven by regulatory changes. We specifically address the potential impact of the spring bass season on out-of-state angler participation. This regulation was

implemented in 1994 and allowed anglers to target bass prior to the opening of the regular bass season on the third Saturday in June (Einhouse et al., 2002; Jackson et al., 2015). The specific objectives of this assessment were to:

- 1. Quantify the overall and species-specific magnitude of out-of-state angler participation.
- 2. Identify areas of the country that contribute most to out-of-state angler participation by species.
- 3. Identify spatial and temporal trends in outof-state angler participation.
- 4. Assess the impact of the spring bass season regulation on out-of-state angler participation.

Methods

Study Area

New York's portion of Lake Erie covers 229 sq. km—6 percent of the lake's total surface area—and is situated in the southeastern area of the eastern basin (Wolfert, 1981; Fig. 1). The eastern basin has an average depth of 24.4 m (80 ft) and is the least productive and deepest portion of Lake Erie (Hartman, 1972). There are currently five major harbors used by boaters to access NY's portion of Lake Erie (Fig. 1). Interviews are conducted for the open lake angler survey at each of these access points. Additionally, Point Breeze Marina was included as an open lake survey site from 1988 to 1991 but was no longer surveyed in 2018 and 2019. This study also covered the eight major Lake Erie tributaries in NY stocked with steelhead and surveyed during the tributary salmonid angler survey (Fig. 1).

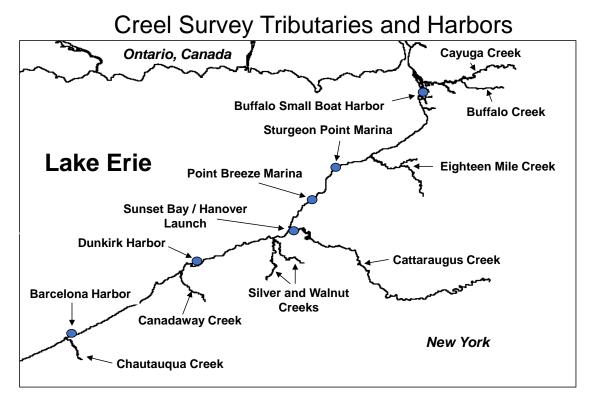


Figure 1. Map of New York waters of Lake Erie showing locations of harbors (blue circles) and tributaries sampled during open lake creel survey and tributary salmonid creel survey.

Angler survey

Residency data for anglers targeting walleye, smallmouth bass, and yellow perch in the open waters of Lake Erie were collected as part of an ongoing, annual, open lake angler survey that has been conducted from May through October since 1988. During the 1988–1991 and 2018–2019 angler surveys, residency data were collected for the entire six-month survey. From 1994–1998 residency data were collected only during May and June to assess changes in out-of-state participation associated with the opening of the early spring bass season. Residency data for anglers targeting steelhead were collected during the 2003–2004, 2004–2005, 2007–2008, 2011–2012, 2014–2015 and 2017–2018 Lake Erie tributary surveys.

For detailed open lake and tributary angler survey methodologies see Einhouse (2005) and Markham (2019), respectively. To assess angler residency during each interview, a representative angler from each fishing party was asked their state and county of residence. No effort was made to select a particular angler from a party, nor were any inquiries made about the other members of the party even if it was clear they were not from the same state as the person being interviewed. The interviewed angler was selected randomly or based on convenience (e.g., proximity).

Data Analysis

Changes in percent contribution of out-of-state anglers targeting walleye, smallmouth bass, and yellow perch in the open lake were examined for the two time intervals which encompassed the entire six month open lake angler survey (i.e., May–October, 1988–1991 and May–October, 2018–2019). The percent contribution of out-of-state angler effort for smallmouth bass was additionally examined during May and June from 1988–1991, 1994–1998, and 2018–2019. Z-tests were used to test for differences in proportional out-of-state angler participation between time periods. Interview data for the tributary surveys

were pooled, and out-of-state angler percent contribution was determined for anglers targeting steelhead.

Canadian provinces, US territories, and other countries are included in the analysis, however, only US states are included in the maps depicting out-of-state angler contribution. Maps were produced using Microsoft Excel. Angler interviews were used as a proxy for total effort for the purpose of this analysis.

Results and Discussion

State and county residency data were collected from 4,475 interviewed open-lake anglers from 1988 to 1991 (May–Oct.) and from 3,947 interviewed anglers from 2018 to 2019 (May–Oct.). From 1994 to 1998 residency information was collected from 719 smallmouth bass anglers during May and June. The tributary angler surveys in 2003–2004, 2004–2005, 2007–2008, 2011–2012, 2014–2015 and 2017–2018 collected residency data from 10,489 interviewed anglers.

Open Lake Fishery

New York's portion of Lake Erie exhibited a general decline in overall angler effort in the open lake fishery between 1988–1991 and 2018–2019 (Fig. 2), however the overall proportion of interviewed anglers who were out-of-state

residents significantly increased from 10% of the overall effort from 1988-1991 to 13% during the 2018-2019 survey period (Table 1; Z = 3.632, P = 0.003). The rise in the proportional contribution of out-of-state anglers was due solely to a significant increase in the proportion of out-of-state bass anglers over that time (Table 1; Z = 11.318, P < 0.0001). Conversely, the proportional contribution of out-of-state walleye anglers significantly declined between the two survey periods (Table 1; Z = -7.297, P < 0.0001). Out-of-state yellow perch angler effort was low for both time periods, with only three out-of-state yellow perch anglers interviewed from 1988 to 1991 and just ten from 2018 to 2019, which did not meet the minimum number of interviews required to conduct a Z-test.

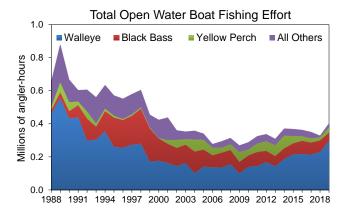


Figure 2. Open water sport fishing angler effort in New York waters of Lake Erie for walleye, bass, yellow perch and all other species, May–October, 1988–2019.

Table 1. Proportional out-of-state angler participation, 1988–1991 and 2018–2019, for all interviewed anglers targeting walleye, smallmouth bass, and yellow perch. N (interviews), Z-statistic, P-value, and average out-of-state and in-state angler hours are provided for each species group. A Z-test was not performed for yellow perch due to low sample size.

						Out-of-State	NY State
Species	Period	Out-of-state	N	Z	P	Ang. Hrs.	Ang. Hrs.
All Species	1988-1991	0.10	4,475	3.632	0.0003	72,231	630,453
	2018-2019	0.13	3,947			46,960	319,345
Walleye	1988-1991	0.11	3,047	-7.297	< 0.0001	52,104	420,396
	2018-2019	0.06	2,741			15,168	247,976
Smallmouth Bass	1988-1991	0.15	243	11.318	< 0.0001	6,370	36,630
	2018-2019	0.49	673			29,241	30,939
Yellow Perch	1988–1991	0.01	225			528	39,075
	2018-2019	0.03	359			754	23,847

Walleye

Walleye were the primary species targeted by anglers in both time periods, contributing 67% of the overall effort from 1988 to 1991 and 72% of the overall effort from 2018 to 2019 (Fig. 2). However, the walleye fishery in NY's portion of Lake Erie continues to be supported mostly by NY anglers, with out-of-state participation declining from 11% to 6% over the past three decades. This decline was driven by a decrease in percent participation of Pennsylvania anglers, which fell from 10% of all 1988–1991 walleye angler interviews to 4% of all 2018–2019 walleye

interviews (Fig. 3; Appendix 1). The four nearest NY counties to Lake Erie (Erie, Chautauqua, Niagara, and Cattaraugus) accounted for more than 80% of all interviewed anglers for both time periods (Fig. 4). The number of states and provinces represented in the survey increased from 14 to 20, mostly due to participation by anglers in several western states (Fig. 3). Recent exceptional walleye fishing in Lake Erie, with the six best walleye catch rates in NY's 34-year open lake survey occurring within the last eight years (Wilkins, 2022), may present an opportunity to attract more anglers from outside New York.

Walleye Interviews by State

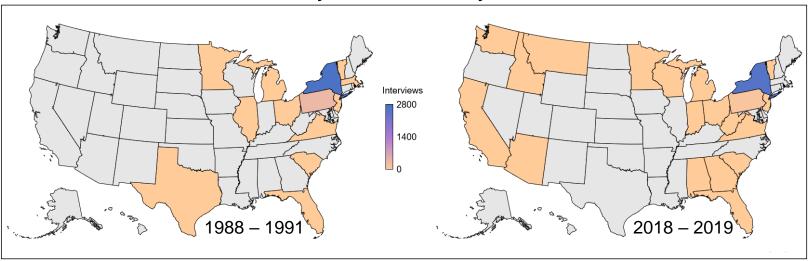


Figure 3. Targeted walleye interviews by state from May–October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Walleye Interviews by County

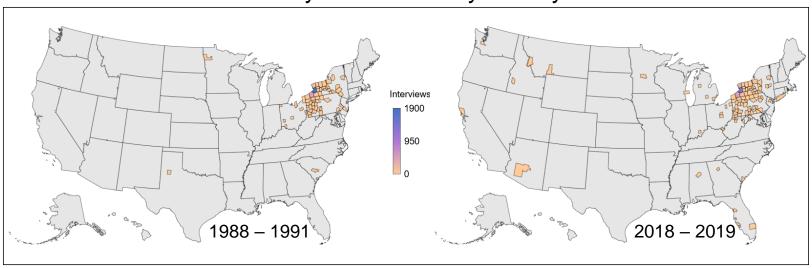


Figure 4. Targeted walleye interviews by county from May–October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Smallmouth Bass

The current bass fishery in NY's portion of Lake Erie likely has a disproportionately high economic impact in western NY due to high participation by out-of-state anglers. Out-of-state angler participation increased from 15% of the total bass effort during the 1988–1991 period to 49% of the total effort during the 2018–2019 period. The spatial distribution of residency for bass anglers also changed over the 30 year span, expanding from 6 states and provinces represented to 27 (Table 1; Fig. 5). Participation from states in the Appalachian region, especially WV, OH, PA, VA, TN, KY, and NC, accounted for most of the increase (Appendix 2). Effort associated with Canadian anglers was also important but likely underestimated because most Canadian anglers access the lake via Canadian harbors.

The four nearest counties (Erie, Chautauqua, Niagara, and Cattaraugus) comprised 83% of all 1988–1991 bass angler interviews but just 42% of the interviewed anglers for the 2018–2019 survey period (Fig. 6). Erie County, New York had the largest decline, dropping from 70% of all 1988–1991 bass angler interviews to 32% for the 2018–2019 survey period. Three counties from West Virginia (Marion, 5th; Harrison, 6th; Preston, 7th) and one from Tennessee (Washington County, 10th) were in the top ten based on angler interviews from 2018–2019 (Fig. 6).

Out-of-state bass angler participation did not differ between May–June and July–October prior to the implementation of the spring season (Fig. 7; Z=0.064, P=0.398). Therefore, data were pooled (May–October) for all comparisons of proportional out-of-state participation from 1988 to 1991.

Initiation of the spring bass season in 1994 attracted many out-of-state anglers, doubling the proportion of out-of-state bass anglers compared to the 1988–1991 timeframe (Table 2; Z=5.44, P<0.0001). The proportion of out-of-state bass anglers doubled again between the 1994–1998 and 2018–2019 spring seasons, with out-of-state anglers accounting for 58% of the total interviews during the 2018–2019 spring bass seasons (Table 2; Z=13.33, P<0.0001). The spring bass season has become a signature part of the bass fishery on Lake Erie, accounting for over 50% of the total bass angler effort and catch in

recent years (Wilkins, 2022), largely driven by the increase in out-of-state angler participation. The proportion of out-of-state bass anglers fishing during the regular season also significantly increased over the past 30 years (Table 2; Z=3.20, P=0.0014), indicating that out-of-state anglers have become a more important stakeholder group for both the spring and regular bass seasons. Future outreach planning regarding potential changes to the bass fishery should include these out-of-state stakeholders.

Smallmouth Bass Interviews by State

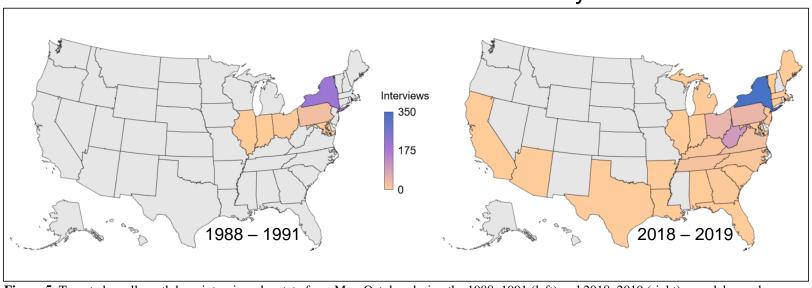


Figure 5. Targeted smallmouth bass interviews by state from May-October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Smallmouth Bass Interviews by County

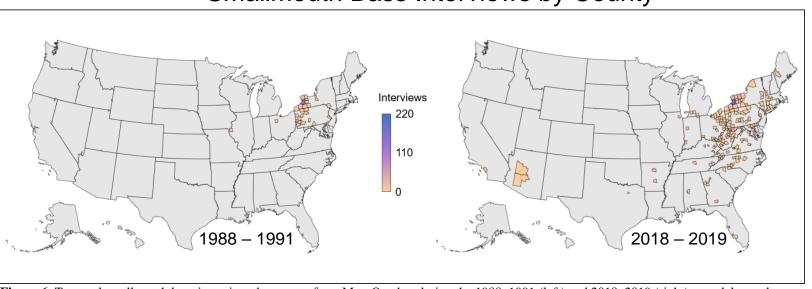


Figure 6. Targeted smallmouth bass interviews by county from May-October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Table 2. Proportional out-of-state angler participation for smallmouth bass, with N (interviews), Z-statistic, and P-value for May–June and July–October, from 1988–1991, 1994–1998, and 2018–2019. Each timeframe is compared to the pooled 1988–1991 (May–October) timeframe.

Period	Out-of-state	N	Z	P
1988–1991 (May–October)	0.15	243		
1994–1998 (May–June)	0.30	719	5.44	< 0.0001
2018–2019 (May–June)	0.58	471	13.33	< 0.0001
2018–2019 (July–October)	0.27	202	3.20	0.0014

Figure 7. Proportional out-of-state bass angler participation during May–June (blue) and July–October (orange) from 1988 to 1991, 1994 to 1998, and 2018 to 2019. Data in each time period are pooled. Only May–June data are available during the 1994 to 1998 period. Error bars represent two standard errors.

Yellow Perch

The yellow perch fishery in NY's portion of Lake Erie continues to be almost entirely supported by New York anglers. Participation by out-of-state anglers in both time periods was minimal (1–3%; Table 1). The number of states represented in the survey increased from two to seven (Fig. 8; Appendix 3), but the increase was likely insignificant from an economic impact standpoint given the low level of out-of-state participation. The four nearest NY counties (Erie, Chautauqua, Niagara, and Cattaraugus) comprised 98% of all 1988–1991 yellow perch angler interviews and 89% of the interviewed anglers for the 2018–2019 survey period (Fig. 9). It is unlikely that the yellow perch fishery will attract appreciable numbers of out-of-state anglers in the foreseeable future despite above average catch rates in recent years.

Yellow Perch Interviews by State

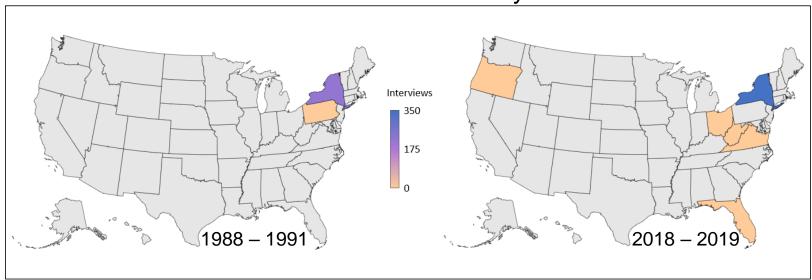


Figure 8. Targeted yellow perch interviews from May-October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Yellow Perch Interviews by County

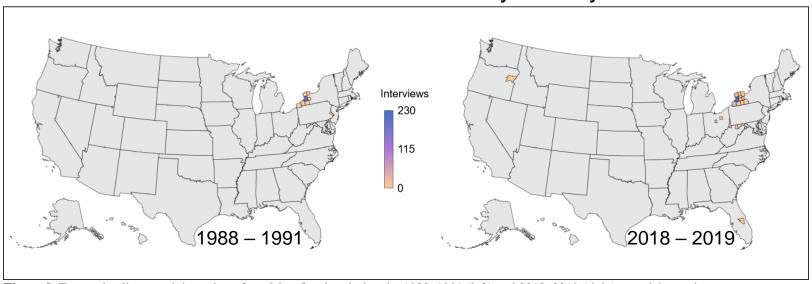


Figure 9. Targeted yellow perch interviews from May-October during the 1988–1991 (left) and 2018–2019 (right) open lake angler survey.

Tributary fishery

The steelhead fishery in NY's Lake Erie tributaries attracts a significant number of out-of-state anglers and may have the highest potential to attract anglers due to easier access to the fishery. Participation by out-of-state anglers comprised 14% (range: 12–17%) of the total steelhead effort over the six surveys (Appendix 4). Forty-three states, provinces, districts, and territories were represented (Fig. 10), the most of any of NY's Lake Erie fisheries. Most out-of-state steelhead anglers traveled from PA or the province of Ontario, Canada, although some traveled from as far away as Thailand, Hawaii, and Puerto Rico. Though not represented in Figure 10, Canadian anglers accounted for 3.4% of angler participation. The four nearest NY counties (Erie, Chautauqua, Niagara, and Cattaraugus) comprised 80% of all steelhead angler interviews.

Steelhead Interviews by State

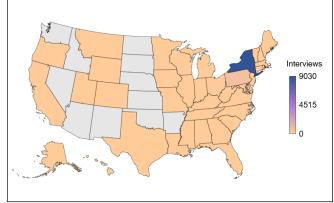


Figure 10. Targeted steelhead interviews from September–May during the 2003–2004, 2004–2005, 2007–2008, 2011–2012. 2014–2015, and 2017–2018 tributary creel surveys.

Management Conclusions

Continuing to periodically quantify the magnitude and distribution of out-of-state angler participation and species preferences is important for better understanding and managing NY's fisheries. We recommend repeating the residency assessment every 5 years for the open lake survey and every 3 years for the tributary survey. Doing so will help put the economic impact of these fisheries in context and will allow better targeting of angler groups for stakeholder outreach and engagement especially surrounding potential management changes. Additionally, performing this assessment before and after planned regulatory changes will help assess the impacts of those changes on resident and non-resident participation.

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Appendix Appendix 1. Proportional angler participation for walleye, with N (interviews), for 1988–1991 and 2018–2019.

-	Sampling Period						
	1988-19		2018-2019				
State	Proportion N		Proportion	N			
Alabama	•	•	0.00	1			
Arizona			0.00	1			
California			0.00	2			
Florida	0.00	1	0.00	5			
Georgia			0.00	1			
Idaho			0.00	1			
Illinois	0.00	1					
Indiana			0.00	1			
Massachusetts	0.00	1					
Michigan	0.00	1	0.00	3			
Minnesota	0.00	1	0.00	2			
Montana			0.00	3			
New Jersey	0.00	1	0.00	3			
New York	0.89	2,711	0.94	2,577			
Ohio	0.00	14	0.00	6			
Ontario, CA	0.00	2	0.00	4			
Pennsylvania	0.10	310	0.04	112			
South Carolina	0.00	1	0.00	1			
Texas	0.00	1					
Vermont	0.00	1	0.00	1			
Virginia	0.00	1	0.00	2			
Washington			0.00	1			
West Virginia			0.00	13			
Wisconsin			0.00	1			
Out-of-State Total	0.11	336	0.06	164			
Overall		3,047		2,741			

Appendix 2. Proportional angler participation for smallmouth bass, with N (interviews), for 1988–1991, 1994-1998, and 2018–2019.

•	•		Sampling F	Period		
	1988-19	91	1994-1998		2018-20	19
State	Proportion	N	Proportion	N	Proportion	N
Alabama	·				0.00	1
Arizona					0.00	2
Arkansas					0.00	2
California			0.00	1	0.00	1
Canada			0.03	19		
Connecticut					0.01	5
Florida			0.00	2	0.00	1
Georgia					0.01	6
Illinois	0.00	1	0.00	1	0.00	1
Indiana	0.00	1			0.00	3
Kentucky			0.00	3	0.02	13
Louisiana			0.00	3	0.00	1
Maine					0.00	1
Maryland	0.00	1	0.01	4	0.01	7
Massachusetts					0.00	1
Michigan					0.01	4
Missouri			0.00	1		
New Jersey			0.01	8	0.01	8
New York	0.85	207	0.70	501	0.51	345
North Carolina					0.02	11
Ohio	0.02	6	0.05	38	0.07	50
Ontario, CA			0.02	17	0.02	12
Pennsylvania	0.11	27	0.12	85	0.07	46
South Carolina					0.00	2
Tennessee					0.03	19
Texas			0.00	1	0.00	2
Vermont					0.00	1
Virginia			0.00	2	0.04	25
West Virginia			0.05	33	0.15	103
Out-of-State Total	0.15	36	0.30	218	0.49	328
Overall		243		719		673

Appendix 3. Proportional angler participation for yellow perch, with N (interviews), for 1988–1991 and 2018–2019.

	Sampling Period						
	1988-19	91	2018-2019				
State	Proportion	N	Proportion	N			
Florida			0.00	1			
New York	0.99	222	0.97	349			
Ohio			0.01	3			
Oregon			0.00	1			
Pennsylvania	0.01	3					
Virginia			0.00	1			
West Virginia			0.01	4			
Out-of-State Total	0.01	3	0.03	10			
Overall		225		359			

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Appendix 4. Proportional angler participation for steelhead (number of interviews), for 2003–2004, 2004–2005, 2007–2008, 2011–2012, 2014–2015 and 2017–2018 tributary creel surveys and overall totals for each state, province, and foreign country.

	Sampling Period							
State	2003-2004	2004-2005	2007-2008	2011-2012	2014-2015	2017-2018	Total	
Alabama						0.00(1)	0.00(1)	
Alaska			0.00(1)				0.00(1)	
California			0.00(2)			0.00(5)	0.00(7)	
Colorado	0.00(1)	0.00(2)	0.00(5)		0.00(1)		0.00(9)	
Connecticut	0.00(5)		0.00(9)	0.00(3)	0.00(2)	0.00(3)	0.00(22)	
Delaware		0.00(2)	0.00(7)	0.00(1)	0.00(6)	0.00(1)	0.00(17)	
Florida	0.00(3)	0.00(2)	0.00(3)	0.00(1)	0.00(2)	0.00(3)	0.00(14)	
Georgia	0.00(1)	0.00(1)	0.00(3)	0.00(4)	0.00(4)	0.00(4)	0.00(17)	
Hawaii					0.00(2)		0.00(2)	
Illinois	0.00(1)	0.00(2)	0.00(1)	0.00(2)		0.00(6)	0.00(12)	
Indiana		0.00(1)		0.00(2)		0.00(1)	0.00(4)	
Iowa				0.00(1)			0.00(1)	
Kentucky	0.00(1)			0.00(1)			0.00(2)	
Louisiana	0.00(1)				0.00(2)		0.00(3)	
Maine	0.00(4)	0.00(3)	0.00(4)			0.00(2)	0.00(13)	
Maryland	0.00(5)	0.00(3)	0.00(7)	0.00(6)	0.01 (9)	0.00(3)	0.00(33)	
Massachusetts	0.00(1)	0.00(3)	0.00(10)	0.00(6)	0.00(6)	0.00(6)	0.00(32)	
Michigan	0.00(2)		0.00(3)	0.00(2)	0.00(4)	0.00(5)	0.00(16)	
Minnesota			0.00(1)		0.00(1)		0.00(2)	
Mississippi					0.00(1)		0.00(1)	
Missouri			0.00(1)	0.00(2)			0.00(3)	
Montana		0.00(1)			0.00(1)		0.00(2)	
New Hampshire			0.00(2)		0.00(2)		0.00(4)	
New Jersey	0.00(7)	0.00(6)	0.00(9)	0.01 (16)	0.00(8)	0.00(6)	0.00(52)	
New York	0.88 (1,395)	0.83 (1,078)	0.86 (2,308)	0.86 (1,331)	0.85 (1,483)	0.88 (1,432)	0.86 (9,027)	
North Carolina		0.00(3)	0.00(2)	0.00(5)	0.01 (9)	0.00(4)	0.00(23)	
Ohio	0.00(5)	0.01 (10)	0.01(22)	0.02(25)	0.01 (15)	0.01 (16)	0.01 (93)	
Ontario, CA	0.03 (41)	0.05 (67)	0.04 (96)	0.03 (46)	0.03 (61)	0.03 (42)	0.03 (353)	
Oregon		0.00(1)			0.00(1)	0.00(1)	0.00(3)	
Pennsylvania	0.06 (100)	0.08 (98)	0.06 (149)	0.05 (82)	0.06 (108)	0.05 (80)	0.06 (617)	
Puerto Rico						0.00(1)	0.00(1)	
Quebec, CA			0.00(2)		0.00(3)		0.00(5)	
Rhode Island				0.00(1)	0.00(2)		0.00(3)	
South Carolina		0.00(3)	0.00(4)	0.00(1)	0.00(3)	0.00(1)	0.00(12)	
Tennessee		0.00(3)			0.00(1)		0.00(4)	

Texas			0.00(1)			0.00(1)	0.00(2)
Utah	0.00(1)	0.00(1)			0.00(1)		0.00(3)
Vermont	0.00(4)	0.00(2)	0.00(7)		0.00(1)	0.00(2)	0.00(16)
Virginia	0.00(5)	0.00(4)	0.00(8)	0.00(2)	0.00(3)	0.00(2)	0.00(24)
Washington, D.C.	0.00(1)			0.00(1)			0.00(2)
West Virginia	0.00(3)	0.00(2)	0.00(8)	0.00(2)	0.00(8)	0.00(3)	0.00(26)
Wisconsin			0.00(3)		0.00(1)		0.00(4)
Wyoming			0.00(1)				0.00(1)
Out-of-State Total	0.12 (192)	0.17 (220)	0.14 (371)	0.14 (212)	0.15 (268)	0.12 (199)	0.14 (1,462)
Overall	(1,578)	(1,298)	(2,679)	(1,543)	(1,751)	(1,631)	(10,489)