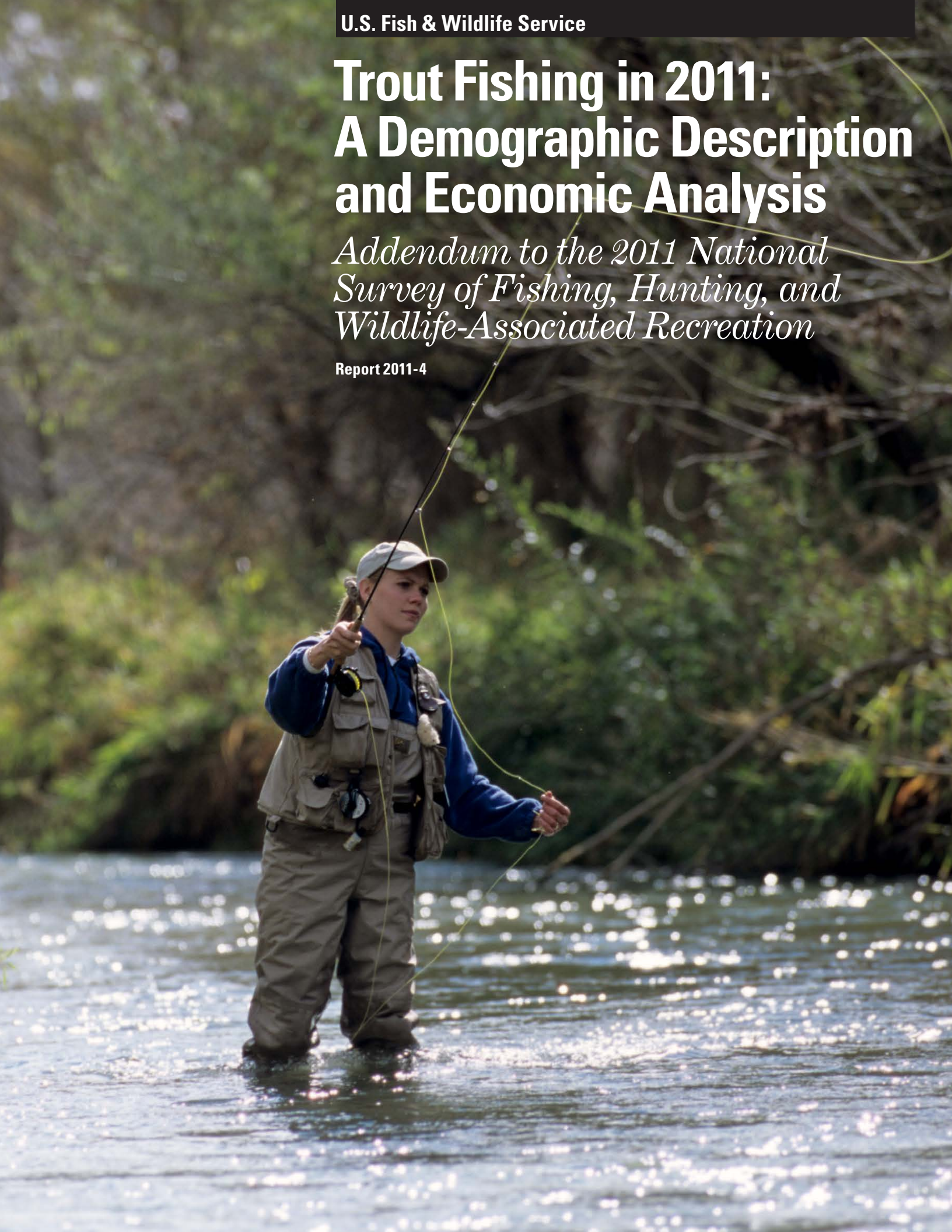


# Trout Fishing in 2011: A Demographic Description and Economic Analysis

*Addendum to the 2011 National  
Survey of Fishing, Hunting, and  
Wildlife-Associated Recreation*

Report 2011-4





# Trout Fishing in 2011: A Demographic Description and Economic Analysis

*Addendum to the 2011 National  
Survey of Fishing, Hunting, and  
Wildlife-Associated Recreation*

Report 2011-4



March 2015

Edward Maillett, Senior Economist, Division of Economics,  
U.S. Fish and Wildlife Service

Richard Aiken, Economist, Wildlife and Sport Fish Restoration,  
U.S. Fish and Wildlife Service

*This report is intended to complement the National and State reports from the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The conclusions are the authors and do not represent official positions of the U.S. Fish and Wildlife Service.*

*Special thanks to Harry Fuller, Economist, Wildlife and Sport Fish Restoration, U.S. Fish and Wildlife Service, for helpful comments.*

# Contents

<b>Introduction</b> .....	<b>3</b>
<b>Background</b> .....	<b>4</b>
<b>National Summary</b> .....	<b>5</b>
<b>Other Freshwater Species Targeted by Freshwater Trout Anglers</b> .....	<b>9</b>
Angler Support for Conservation Organizations .....	10
Angler's Participation in Hunting Activities .....	10
Freshwater Trout Anglers who Fly-Fished .....	10
<b>Residency of Anglers</b> .....	<b>12</b>
Urban and Rural Residency .....	14
Geographic Location of Angling Activities .....	15
<b>Demographics</b> .....	<b>18</b>
Gender .....	18
Marriage .....	19
Age .....	20
Ethnicity and Race .....	21
Education .....	22
Household Income .....	23
<b>Demographic Trends 1991–2011</b> .....	<b>24</b>
Census Geographic Division .....	25
Urban/Rural Residency .....	28
Gender .....	29
Marital Status .....	30
Race and Ethnicity .....	31
Age .....	33
Education .....	35
<b>Expenditures</b> .....	<b>37</b>
Freshwater Trout Angler Expenditures over Time .....	38
<b>Expenditures broken out by Demographics</b> .....	<b>39</b>
Gender .....	39
Expenditures by Density (Urban/Rural) .....	40
Expenditures by Educational Attainment .....	41
Expenditures by Age .....	42
Race .....	43
Expenditures by Ethnicity .....	44
Expenditures by Household Income .....	45
<b>Appendix A. Definitions</b> .....	<b>46</b>
<b>Bibliography</b> .....	<b>48</b>



# Introduction

The National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR or Survey) has become one of the most important sources of information on fish- and wildlife-related recreation in the United States. It is a useful tool that not only quantifies the economic impact of wildlife-based recreation but also collects information on participant's socio-economic characteristics. This report first provides a summary of the demographic and economic characteristics from the 2011 Survey for freshwater trout fishing. Next, this report explores demographic trends and patterns of trout anglers since the 1991 National Survey. Finally, this report looks at the expenditures made by trout anglers and how expenditures vary by demographics.

When reading this report, it is important to keep in mind that trout anglers indirectly support fisheries habitat and restoration funding through excise taxes on equipment purchases. These taxes are funneled through the Sport Fish Restoration Program to States to fund associated conservation and restoration projects. Monitoring trends in trout angler activity helps to better understand socio-economic characteristics that may be important for recruitment and retention purposes in order to maintain political and financial support for our cold water fisheries habitat conservation and restoration programs.



USFWS

# Background

FHWAR surveys are conducted once every five years and among other things collect information from freshwater anglers in terms of their numbers, fishing effort, expenditures, and demographic characteristics. Since the 1991 Survey, the U.S. Fish and Wildlife Service (Service) has produced a summary profile of freshwater trout anglers based on the Survey's findings. This report seeks not only to summarize the results of the 2011 Survey but to also explore and summarize various trends since 1991 based on a review of all five Surveys conducted during the period 1991 through 2011. It is not the intended purposes of this report to theorize or investigate factors that may or may not be influencing perceived trends. Such effort is left for future analyses in order to facilitate the release of these findings.

The focus of this report is to summarize the number, effort level, and demographics of freshwater trout anglers. For the purposes of this report, a freshwater trout angler is defined as an angler who responded affirmatively to fishing in freshwater rivers, lakes, and streams for trout, including rainbow, brown, brook, and lake trout. As in previous reports, this report excludes freshwater anglers who fished solely in the Great Lakes. The Survey only collects information from respondents aged 16 years and older.

The 2011 Survey collected responses from over 6,000 anglers nationwide. The 2011 national estimate of trout anglers has a 95% confidence interval of plus or minus eight percent. Earlier FHWAR Surveys had greater sample sizes than the 2011 Survey and thus their confidence intervals will be equal to or narrower than those of the 2011 Survey.



USFWS

# National Summary

Trout, being one of the most popular sport fish in the United States, were sought by nearly 7.2 million anglers in 2011. This represents a slight increase from the number of trout anglers reported in the 2006 Survey (6.8 million). Of the total number of freshwater anglers, 26 percent of them fished for trout. Only two other species of freshwater fish were targeted by more anglers: black bass were targeted by 39 percent of freshwater anglers (10.6 million) and panfish were targeted by 27 percent of freshwater anglers (7.3 million). Importantly, an angler could target more than a single species of fish. This report draws upon respondents who stated that trout were at least one of the species they fished for in 2011.

Table 1 compares the popularity of trout fishing to other types of freshwater fishing using the number of anglers, days of fishing, and average days of fishing. While 26 percent of freshwater anglers fished for trout, trout fishing represented only 17 percent of total freshwater fishing days. In 2011 freshwater anglers were estimated to have spent a total of 443 million days out on the water. Trout anglers spent 75.7 million days angling for trout. From a cold water fisheries perspective, trout were by far the most popular species targeted by anglers and days spent on the water (compared to other cold water species such as salmon and steelhead). The majority of freshwater anglers continued to target warmwater species such as black bass, panfish, catfish and crappies and spent more days angling for such species than trout anglers. Freshwater anglers fished for trout an average of eleven days in 2011, less than the 16-day average that a typical freshwater angler fished.

**Table 1. Freshwater Anglers and Days of Fishing by Type of Fish: 2011**

(Population 16 years old and older. Numbers in thousands. Excludes Great Lakes fishing.)

Type of fish	Anglers		Days of fishing		Average days per angler
	Number	Percent	Number	Percent	
<b>Total, all types of fish</b>	<b>27,060</b>	<b>100%</b>	<b>443,223</b>	<b>100%</b>	<b>16</b>
Trout	7,157	26%	75,748	17%	11
Black bass (largemouth, smallmouth, etc.)	10,626	39%	171,279	39%	16
Panfish	7,263	27%	96,925	22%	13
Catfish and bullheads	7,048	26%	95,749	22%	14
Crappie	6,123	23%	101,958	23%	17
White bass, striped bass and striped bass hybrids	4,374	16%	60,998	14%	14
Anything <sup>1</sup>	3,360	12%	37,224	8%	11
Walleye	2,493	9%	38,361	9%	15
Northern pike, pickerel, muskie, muskie hybrids	1,642	6%	23,420	5%	14
Another type of freshwater fish	1,327	5%	20,268	5%	15
Salmon	1,160	4%	12,402	3%	11
Steelhead	594	2%	8,585	2%	14
Sauger	219	1%	3,795	1%	17

<sup>1</sup> Respondent fished for no specific species and identified "Anything" from a list of categories of fish. Note: Detail for participants does not add to total because of multiple responses.



An advantage of the 2011 Survey is the ability to develop estimates that are comparable to previous National Surveys. Figure 1 shows the trend in freshwater angling numbers and days of fishing for the previous five National Surveys (1991 through 2011) and Figure 2 shows the trend in trout angling numbers and days of fishing.

As evident in both figures, there had been an overall downward trend in the number of both freshwater and trout anglers between the years 1991 and 2006. For the

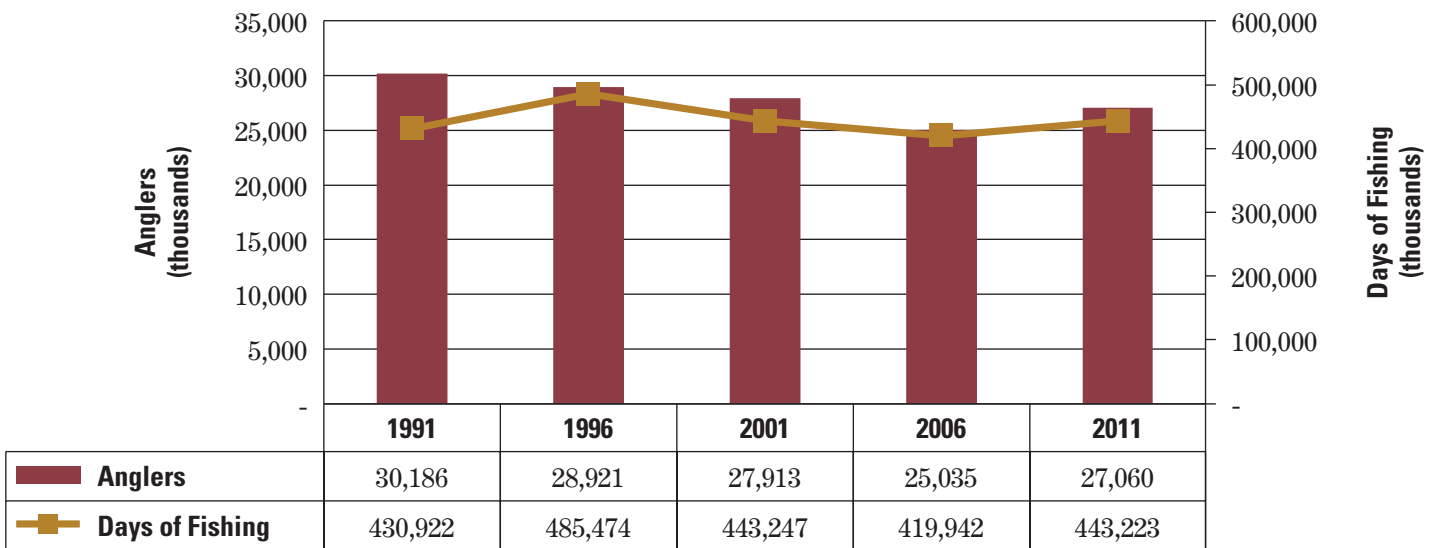
years 1991 through 2006 the number of anglers consistently declined each year for both freshwater anglers (30.2 million to 25.0 million) and trout anglers (9.1 million to 6.8 million). Comparatively, the overall decline in trout anglers (26 percent) exceeded that for all freshwater anglers (17 percent).

The 2011 National Survey, however, showed a reversal in this downward trend. The number of freshwater anglers in 2011 was estimated to be 27 million, up 8.1 percent from 2006, and the number

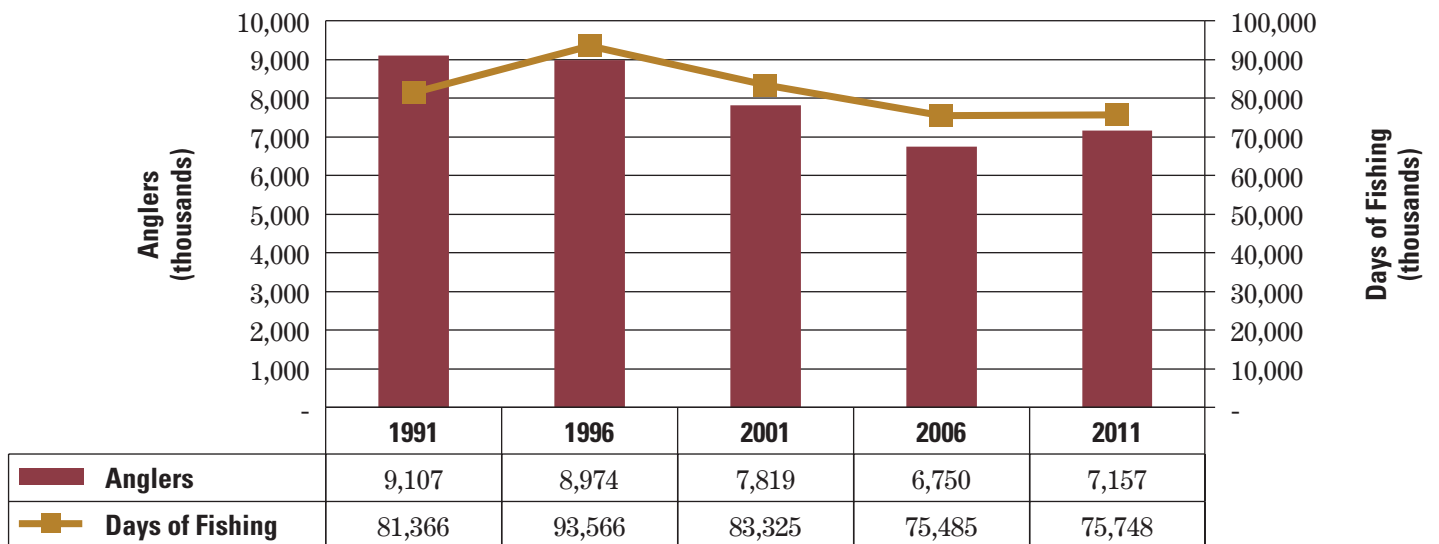
of trout anglers was estimated to be 7.1 million, an increase of 6.0 percent over the previous Survey. 1991, however, remains the highpoint for both the total numbers of freshwater and trout anglers.

Figures 1 and 2 also show the trend in the total days of fishing for both freshwater and trout anglers. In contrast to 1991, the year with the most anglers, 1996 was the year with the greatest number of fishing days (485.5 million days for freshwater angling and 93.6 million days for trout angling). Total angling days declined over

**Figure 1. Freshwater Anglers and Days of Fishing by Year**  
(Population 16 years of age and older. Excludes Great Lakes fishing.)



**Figure 2. Trout Anglers and Days of Fishing by Year**  
(Population 16 years of age and older. Excludes Great Lakes fishing.)





the next two Survey periods (2001 and 2006) for both freshwater and trout but increased in 2011. Freshwater anglers reported spending a total of 443.2 million days fishing and trout anglers reported spending 75.7 million days fishing.

Figure 3 shows how the average number of days for both a general freshwater angler and a trout angler has changed over the past twenty years. In 1991 freshwater anglers averaged about 14 days on the water and trout anglers nine days. By 2011 a freshwater angler

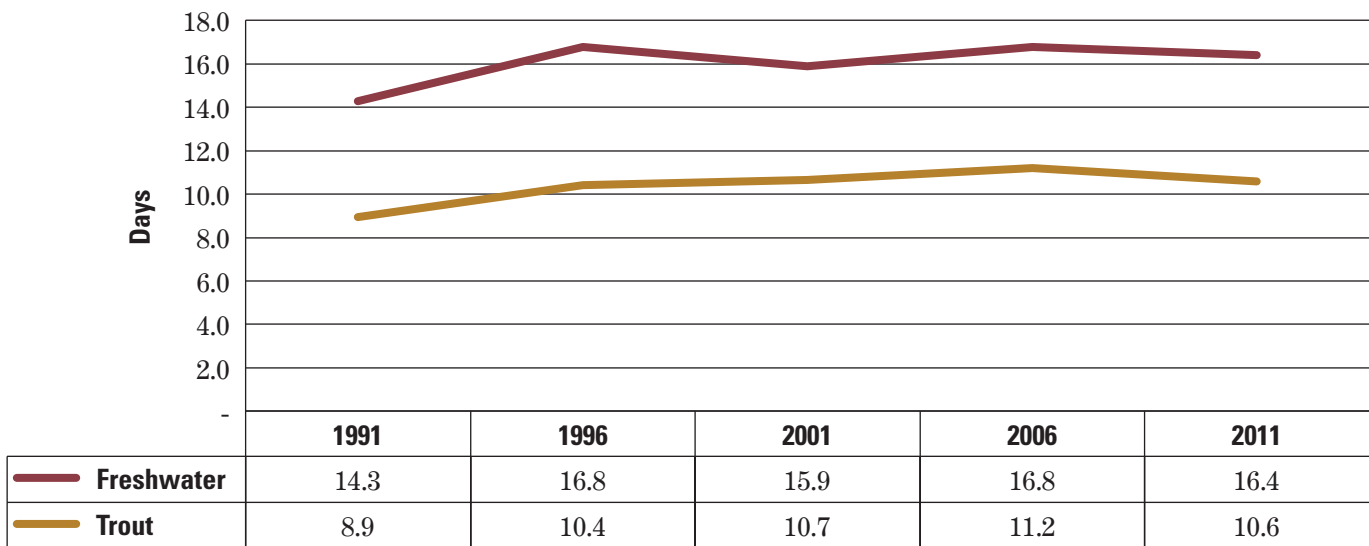
averaged over 16 days on the water and a trout angler over ten days, an increase of nearly 15 percent and 19 percent, respectively. Notably, there was a slight decline in the average number of fishing days for both freshwater and trout anglers since the last Survey. This is most likely due to the corresponding increase in the number of anglers. Newer anglers most likely fished fewer days than seasoned anglers, which would cause the calculated average number of fishing days per angler to drop. Correspondingly, when the number of trout anglers

declined between 1991 and 2006 the average number of fishing days increases. This most likely reflects the dropping out of marginal anglers who fish infrequently compared to seasoned anglers.

Over the previous twenty years the number of trout anglers compared to general freshwater anglers has declined over time. In 1991 trout anglers accounted for over 30 percent of the number of general freshwater anglers. In 2011 the number of trout anglers as a percentage of freshwater anglers

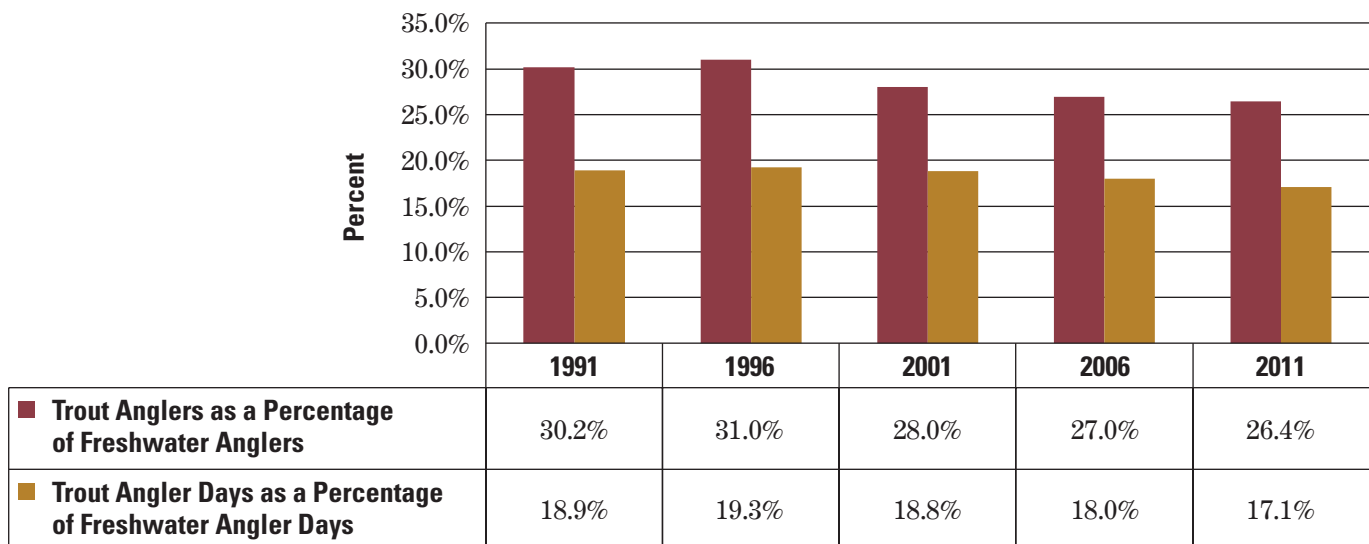
**Figure 3. Average Days of Fishing**

(Population 16 years of age and older. Excludes Great Lakes fishing.)



**Figure 4. Comparison of Trout Anglers to General Freshwater Anglers**

(Population 16 years of age and older. Excludes Great Lakes fishing.)



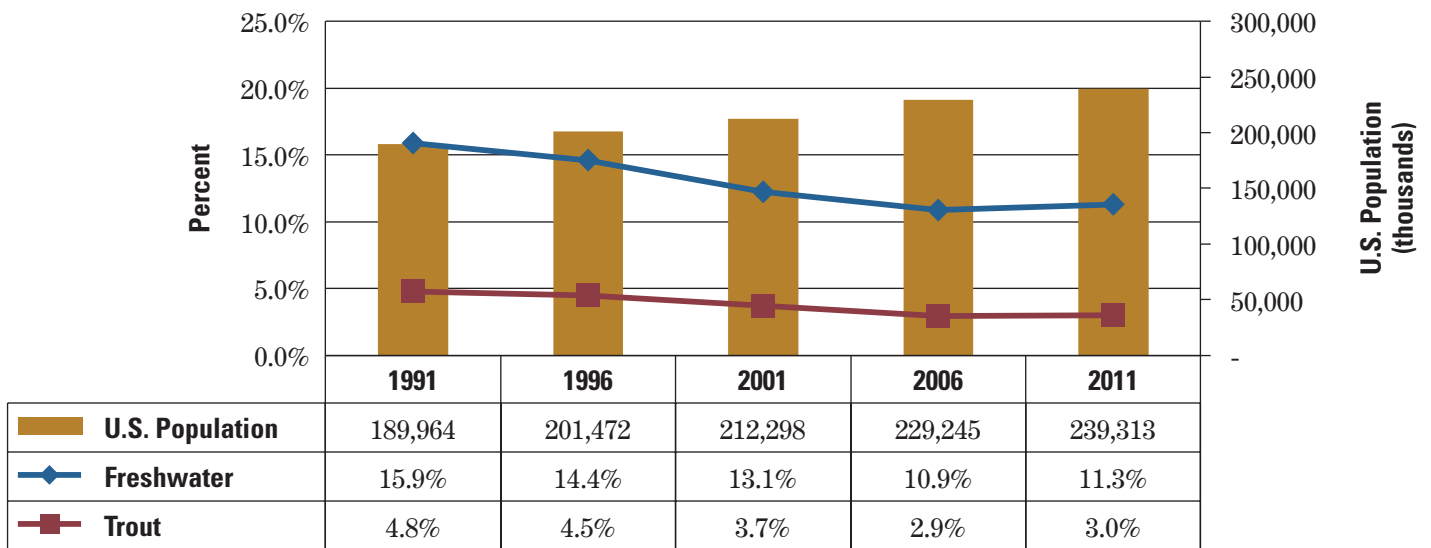
declined to 26.4 percent. Similarly, the total days spent trout fishing compared to freshwater fishing has also declined. In 1991 trout angler days accounted for nearly 19 percent of total freshwater fishing days but by 2011 the percentage dropped to 17 percent. Figure 4 shows the relationships over the last five Survey periods.

years 1991 through 2011 compared to the U.S. population (16 years and older). The overall U.S. population has increased by 26 percent during this period, while the percentage of trout anglers has declined from 4.8 to 3.0 percent. In comparison, the percentage of the U.S. population (16 years and older) who fished for any freshwater species also saw steady declines between the years 1991 and 2006 but increased slightly in 2011.

Figure 5 shows the trend for both freshwater and trout anglers for the

**Figure 5. Anglers as a Percentage of U.S. Population**

(Population 16 years of age and older. Excludes Great Lakes fishing.)



USFWS

# Other Freshwater Species Targeted by Freshwater Trout Anglers

Freshwater trout anglers not only fished for trout in 2011 but for other species as well. Of particular interest for this report is how freshwater anglers who fished for trout differed from freshwater anglers who did not fish for trout. Table 2 shows both the count of anglers and total number of angling days for freshwater anglers who fished for trout and freshwater anglers who did not fish for trout by types of freshwater species fished. The table shows that of the 7.2 million freshwater trout anglers 27 percent also targeted bass during

the year. Other freshwater species likely to be targeted by trout anglers include panfish, catfish, and white bass. Interestingly, trout anglers are more likely than non-trout freshwater anglers to target a particular species when out on the water. In 2011 only four percent of trout anglers reported fishing for “anything” compared to 16 percent of non-trout freshwater anglers. Non-trout freshwater anglers primarily targeted species such as bass, panfish, catfish, and crappies.

Table 2 also reports the total number of angling days by freshwater species for both trout and non-trout freshwater anglers. Freshwater trout anglers fished for a total of 121.8 million days, 62 percent of which were spent targeting trout. A freshwater trout angler fished on average 17 days during the year (for any species, not just trout), ten and one-half days of which were spent targeting trout. In comparison, non-trout anglers spent an average 16 days fishing during the year.

**Table 2. Number of Anglers and Days of Fishing by Type of Fish: 2011**

(Population 16 years old and older. Numbers in thousands. Excludes Great Lakes fishing.)

Type of Fish	Number of Anglers				Angling Days			
	Freshwater Anglers who Fished for Trout		Freshwater Anglers who Did Not Fish for Trout		Freshwater Anglers who Fished for Trout		Freshwater Anglers who Did Not Fish for Trout	
<b>Total, all types of fish</b>	<b>7,157</b>	<b>100%</b>	<b>19,903</b>	<b>100%</b>	<b>121,796</b>	<b>100%</b>	<b>321,427</b>	<b>100%</b>
Trout	7,157	100%	–	0%	75,748	62%	–	0%
Black bass (largemouth, smallmouth, etc.)	1,917	27%	8,709	44%	32,417	27%	138,862	43%
Panfish	967	14%	6,296	32%	16,085	13%	80,840	25%
Catfish and bullheads	969	14%	6,079	31%	18,133	15%	77,616	24%
Crappie	674	9%	5,449	27%	12,987	11%	88,971	28%
White bass, striped bass, and striped bass hybrids	876	12%	3,498	18%	12,907	11%	48,091	15%
Anything	265	4%	3,095	16%	2,912	2%	34,312	11%
Walleye	446	6%	2,047	10%	8,171	7%	30,190	9%
Northern pike, pickerel, muskie, muskie hybrids	317	4%	1,325	7%	6,836	6%	16,584	5%
Another type of freshwater fish	336	5%	991	5%	2,508	2%	17,760	6%
Salmon	508	7%	652	3%	6,478	5%	5,924	2%
Steelhead	303	4%	291	1%	4,696	4%	3,889	1%
Sauger	78	1%	141	1%	1,840	2%	1,955	1%

Note: An angler can fish for more than a single species in a single day.



### Angler Support for Conservation Organizations

The 2011 Survey asked respondents whether or not they gave money to a conservation organization during the year and if so how much was donated. Table 3 shows the total number of sportspersons (both hunters and anglers) that gave money to a conservation organization along with their total dollar amount. The table also shows the number and contributions made by the subset of sportspersons who were freshwater anglers that both did and did not fish for trout.

In 2011 over 5.5 million sportspersons contributed a total of \$1.1 billion to conservation organizations, which is an average of \$200 per person. Of the 5.5 million contributors, 22 percent (1.2 million) reported contributing a total of \$129 million (10 percent of total contributions) specifically to a freshwater fishing conservation organization. (The Survey did not further differentiate among the types of freshwater conservation organizations, e.g., trout versus non-trout). In terms of freshwater anglers, those that fished for trout contributed on average \$136 per angler of which less than one-half (\$61)

went specifically to a freshwater fishing organization. Freshwater anglers who did not fish for trout were more generous in their average contributions. In 2011 non-trout freshwater anglers contributed an average of \$222 per angler of which nearly 60 percent (\$126) went to a freshwater fishing conservation organization.

### Angler's Participation in Hunting Activities

The 2011 Survey also collected information about hunting participation. In 2011 there were nearly 13.7 million hunters. The majority of hunters (85 percent) targeted big game such as deer, elk, and bear. One-third of hunters targeted small game and less than 20 percent targeted migratory birds or other animals. Of the nearly 13.7 million hunters, over 2.4 million (17.5 percent) were also freshwater trout anglers. These anglers were more likely to hunt for small game, migratory birds, and other animals compared to all hunters. Trout anglers were also just as likely to have hunted for big game (84 percent) as any other hunter. Table 4 shows the breakdown, by species, for the total number of all hunters, freshwater trout anglers, and freshwater non-trout anglers who hunted.

### Freshwater Trout Anglers who Fly-Fished

Table 5 shows the number of anglers and total days of fishing for freshwater trout anglers who did and who did not fly fish in 2011. Of the nearly 7.2 million freshwater trout anglers 34 percent (2.4 million) identified themselves as having fished during the year. The table clearly shows that the relative number of fly-fishing trout anglers who fished for other species was much less than the number of non-fly-fishing trout anglers. For example, only 22 percent of trout anglers who fly-fished also fished for black bass during the year compared to 29 percent of trout anglers who did not fly-fish. The same observation generally holds true for the total number of angling days, indicating that fly-fishing freshwater trout anglers are more likely to intensely focus on fishing for trout than other types of freshwater species. Freshwater fly-fishing trout anglers spend on average over two extra days of fishing during the year for trout compared to non-fly-fishing trout anglers. In 2011 the average number of days spent fishing for trout by fly anglers was 12.1 days during the year compared to 9.8 days for non-fly-anglers.

**Table 3. Conservation Organization Contributions: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>All Sportspersons</i>			<i>Freshwater Anglers Who Fished for Trout</i>			<i>Freshwater Anglers Who Did Not Fish for Trout</i>		
	<i>Number</i>	<i>Contributions</i>	<i>Average Expenditures per Sportsperson</i>	<i>Number</i>	<i>Contributions</i>	<i>Average Expenditures per Angler</i>	<i>Number</i>	<i>Contributions</i>	<i>Average Expenditures per Angler</i>
Any Conservation Organization	5,577	\$1,122,787	\$201	1,377	\$187,691	\$136	2,706	\$601,370	\$222
Freshwater Fishing Conservation Organization (excluding Great Lakes only)	1,225	\$129,091	\$105	347	\$21,211	\$61	848	\$107,221	\$126

**Table 4. Hunting Participation by Anglers: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>All Hunters</i>		<i>Freshwater Anglers Who Fished for Trout</i>		<i>Freshwater Anglers Who Did Not Fish for Trout</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Hunted	13,674	100%	2,445	100%	5,927	100%
Big Game	11,570	85%	2,056	84%	5,156	87%
Small Game	4,506	33%	997	41%	2,091	35%
Migratory Birds	2,583	19%	587	24%	1,195	20%
Other Animals	2,168	16%	587	24%	587	10%

Note: Percentages do not total to 100 because hunters generally target more than a single species during the year.

**Table 5. Count of Fly-Fishing Freshwater Trout Anglers and Days of Fishing by Type of Fish: 2011**

(Population 16 years old and older. Numbers in thousands. Excludes Great Lakes fishing.)

Type of Fish	Number of Anglers				Angling Days				Average Days per Angler	
	Freshwater Fly-Fishing Anglers who Fished for Trout		Freshwater Non-Fly-Fishing Anglers who Fished for Trout		Freshwater Fly-Fishing Anglers who Fished for Trout		Freshwater Non-Fly-Fishing Anglers who Fished for Trout		Freshwater Fly-Fishing Anglers who Fished for Trout	Freshwater Non-Fly-Fishing Anglers who Fished for Trout
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Number
<b>Trout</b>	<b>2,401</b>	<b>100%</b>	<b>4,756</b>	<b>100%</b>	<b>29,171</b>	<b>66%</b>	<b>46,577</b>	<b>60%</b>	<b>12.1</b>	<b>9.8</b>
Black bass (largemouth, smallmouth, etc.)	517	22%	1,400	29%	9,517	21%	22,900	30%	18.4	16.4
Panfish	287	12%	680	14%	3,682	8%	12,403	16%	12.8	18.2
Catfish and bullheads	185	8%	784	16%	5,437	12%	12,696	16%	29.4	16.2
Crappie	123	5%	551	12%	2,536	6%	10,451	14%	20.6	19.0
White bass, striped bass, and striped bass hybrids	162	7%	714	15%	1,865	4%	11,042	14%	11.5	15.5
Anything	64	3%	201	4%	481	1%	2,431	3%	7.5	12.1
Walleye	135	6%	311	7%	3,429	8%	4,742	6%	25.4	15.2
Northern pike, pickerel, muskie, muskie hybrids	79	3%	238	5%	882	2%	5,954	8%	11.2	25.0
Another type of freshwater fish	62	3%	274	6%	287	1%	2,221	3%	4.6	8.1
Salmon	182	8%	326	7%	2,480	6%	3,998	5%	13.6	12.3
Steelhead	103	4%	200	4%	853	2%	3,843	5%	8.3	19.2
Sauger	2	0%	76	2%	6	0%	1,834	2%	3.0	24.1
Sauger	76	2%	2	0%	1,834	2%	6	0%	24.1	3.0

Note: Percentages do not necessarily add to 100 because an angler could target more than a single species during a day.



USFWS

# Residency of Anglers

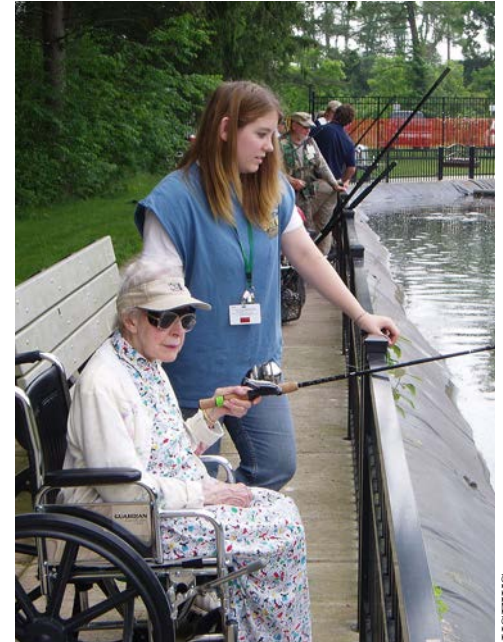
## *U.S. Census Division*

Freshwater and trout anglers are located throughout the United States. Nationally, over 26 percent of all freshwater anglers fished for trout in 2011.

Regionally, the percent of freshwater anglers seeking trout varied widely depending on where the angler lived. Table 3 presents the distribution of all freshwater trout anglers based on U.S. Census Bureau Divisions and compares these distributions to the general U.S. population as well as the distribution of freshwater anglers who did not fish for trout.

The U.S. Mountain Division has both the greatest number of trout anglers as well as the highest percentage of trout anglers. In 2011 in this division over 1.8 million resident anglers fished for trout, constituting 26 percent of the national total. In contrast, this region

accounts for only seven percent of the national population. Residents from the Pacific Division had the next highest number (1.5 million) and percentage (21 percent) of trout anglers. These two regions encompass almost 50 percent of the landmass in the continental U.S. and contain some of the wildest trout streams, many on public lands. Not surprisingly, the majority of freshwater anglers who did not fish for trout came from the central and southern areas of the United States. While these areas all contain trout streams they also provide an abundance of other types of freshwater species habitat, which are likely to be more readily accessible to freshwater anglers. Freshwater anglers from New England, the Mid-Atlantic, Mountain, and Pacific Divisions all had a greater percentage of freshwater trout anglers than their relative overall population.



USFWS

**Table 6. Residency of Freshwater and Trout Anglers by Census Division: 2011**

(Population 16 years and older. Numbers in thousands. Excludes Great Lakes fishing.)

	<i>U.S. Population</i>		<i>Freshwater Anglers Who Fished for Trout</i>		<i>Freshwater Anglers Who Did Not Fish for Trout</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
<b>U.S. Total</b>	<b>239,313</b>	<b>100%</b>	<b>7,157</b>	<b>100%</b>	<b>19,903</b>	<b>100%</b>
<b>Census Geographic Division</b>						
New England	11,593	5%	475	7%	521	3%
Middle Atlantic	32,392	14%	1,175	16%	1,168	6%
East North Central	36,199	15%	387	5%	4,484	23%
West North Central	15,860	7%	496	7%	2,922	15%
South Atlantic	46,417	19%	555	8%	3,686	19%
East South Central	14,206	6%	186	3%	2,088	10%
West South Central	27,195	11%	486	7%	3,274	16%
Mountain	17,013	7%	1,886	26%	608	3%
Pacific	38,438	16%	1,512	21%	1,151	6%

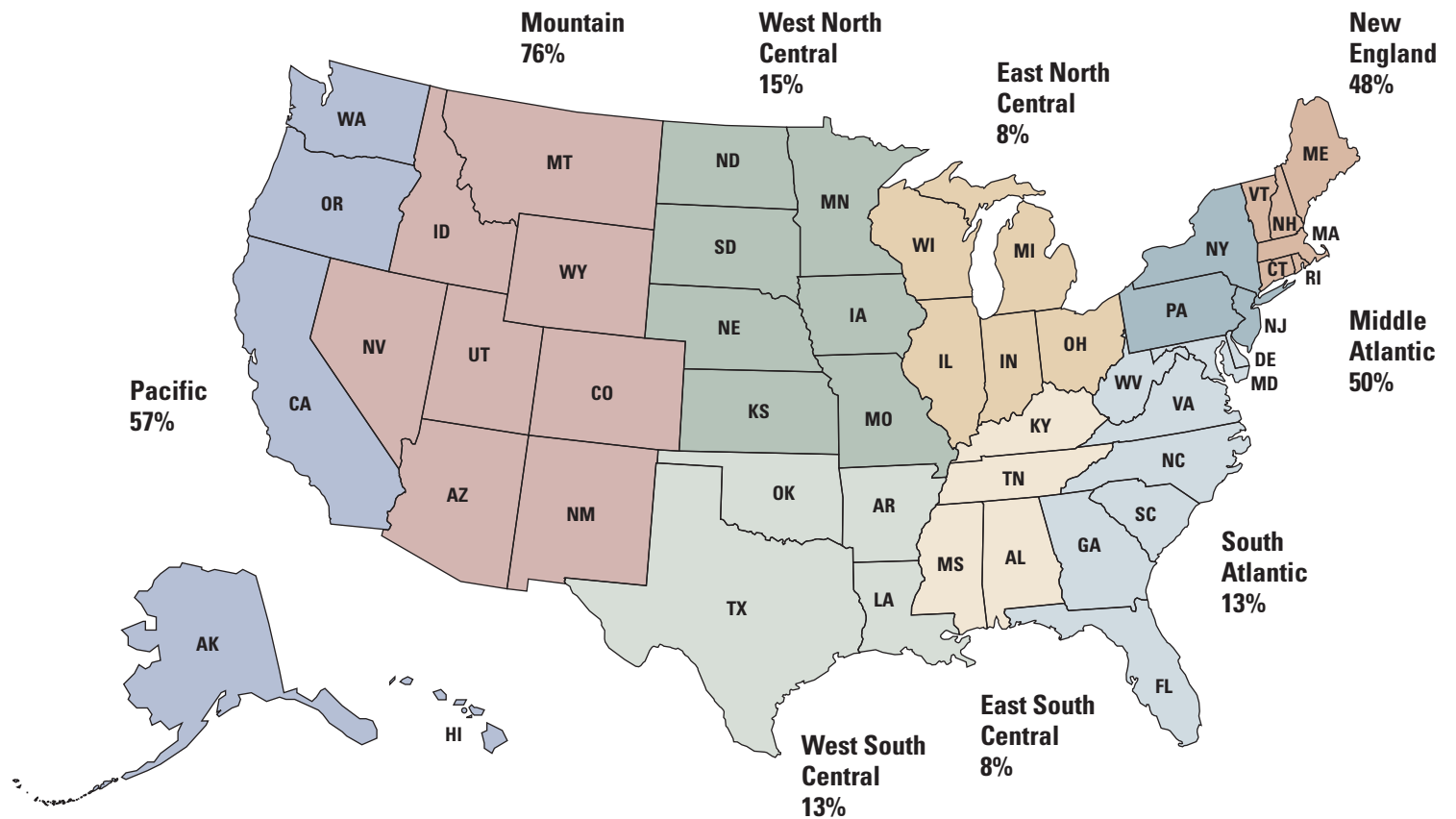


Table 7 compares the number of trout anglers to all freshwater anglers in 2011. Nationally, 26 percent of all freshwater anglers fished for trout. Regionally, the percentage of freshwater trout anglers varied from a low of eight percent to a high of 76 percent. Freshwater anglers in the East North Central states and East South Central states were least likely to fish for trout, while freshwater anglers in the Mountain states were most likely to have fished for trout. Figure 6 shows how the U.S. Census defines their Divisions and also shows each Division's 2011 freshwater trout fishing participation percentage.

**Table 7. Trout Anglers as a Percent of Freshwater Anglers by Census Division: 2011**  
(Population 16 years old and older. Numbers in thousands. Excludes Great Lakes fishing.)

	2011		
	<i>Freshwater Anglers</i>	<i>Trout Anglers</i>	<i>Percent</i>
<b>U.S. Total</b>	<b>27,060</b>	<b>7,157</b>	<b>26%</b>
<b>Census Geographic Division</b>			
New England	996	475	48%
Middle Atlantic	2,343	1,175	50%
East North Central	4,871	387	8%
West North Central	3,418	496	15%
South Atlantic	4,241	555	13%
East South Central	2,274	186	8%
West South Central	3,760	486	13%
Mountain	2,494	1,886	76%
Pacific	2,663	1,512	57%

**Figure 6. Percent of Freshwater Anglers Who Fished for Trout by Division: 2011**  
(Population 16 years of age and older. Excludes Great Lakes fishing.)



### Urban and Rural Residency

Nationally, in 2011, over 75 percent of individuals live in an urban area. The Census Bureau identifies an urban area as groups or blocks that have at least 1,000 people per square mile and surrounding blocks that have at least 500 people per square mile. The 2010 Census identified 486 urbanized areas in the United States.<sup>1</sup> The Survey found

that 65 percent of all freshwater anglers who fished for trout resided in an urban area. In contrast, only 55 percent of freshwater anglers who did not fish for trout resided in an urban area. While a majority of freshwater anglers who both did and did not fish for trout resided in an urban area, the percentages are less than the overall percentage of Americans who live in an urban area. In contrast, rural residents are far more likely to fish for freshwater species. Table 8 shows the breakout for freshwater and trout anglers by residency. Figure 7 shows the percentage breakdown.

<sup>1</sup> "Qualifying Urban Areas for the 2010 Census," 77 Federal Register 59 (March 27, 2012), pp. 18651-18668. <http://www.gpo.gov/fdsys/pkg/FR-2012-03-27/html/2012-6903.htm>.

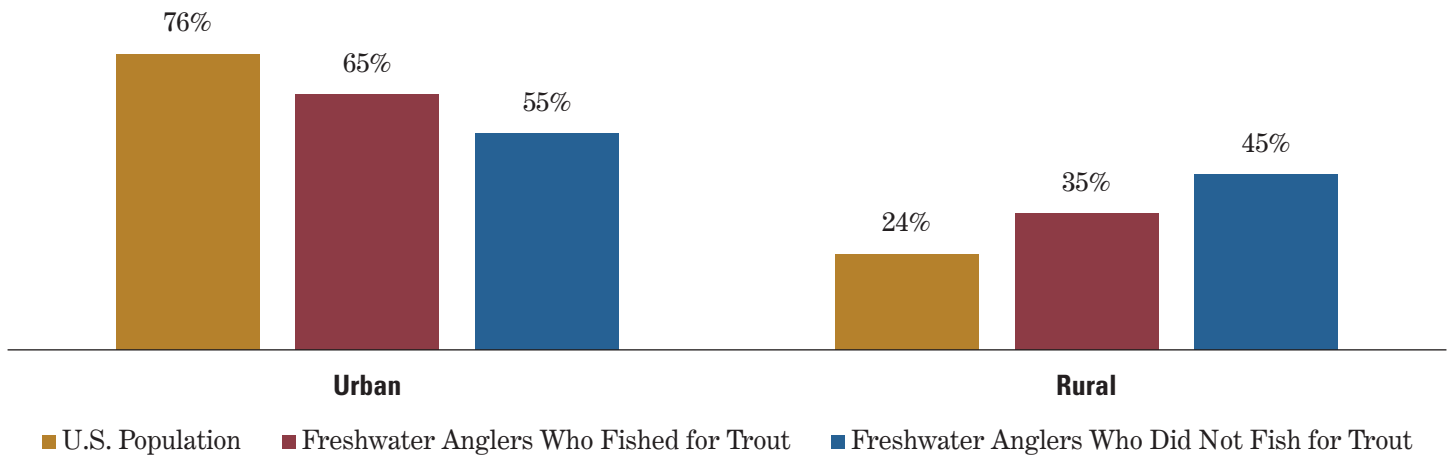
**Table 8. Urban and Rural Distribution of U.S. Population, Freshwater Anglers, and Trout Anglers: 2011**

(Population 16 years old and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>U.S. Population</i>		<i>Freshwater Anglers Who Fished for Trout</i>		<i>Freshwater Anglers Who Did Not Fish for Trout</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
<b>U.S. Total</b>	<b>239,313</b>	<b>100%</b>	<b>7,138</b>	<b>100%</b>	<b>19,922</b>	<b>100%</b>
Urban	180,723	76%	4,654	65%	11,002	55%
Rural	58,589	24%	2,484	35%	8,920	45%

**Figure 7. Residency of Anglers**

(Population 16 years and older. Excludes Great Lakes fishing.)



### Geographic Location of Angling Activities

Table 9 depicts the number of freshwater trout anglers and non-trout anglers by state where fishing occurred. Only those States having a statistically sufficient sample size for trout fishing are shown. Additionally, the table shows the percentage of anglers compared to the national total.

In 2011, the State of California drew the greatest number of trout anglers (798 thousand) of any state. Over eleven percent of all freshwater trout anglers fished in this State. The States of Colorado and New York attracted the second and third highest number of trout anglers (678 thousand and 647 thousand, respectively). Collectively, these three states attracted 30 percent of the country's total number of trout anglers. One-half of all trout anglers fished in the States of California, Colorado, New York, Pennsylvania, Utah, Washington, and Oregon.

The final column of Table 9 depicts the number of freshwater trout anglers compared to the number of freshwater non-trout anglers as a percentage for each State where trout fishing occurred. This percentage illustrates the relative importance of trout fishing to non-trout fishing for freshwater anglers. Many States had a greater number of freshwater trout anglers than non-trout anglers, where the percentage is greater than 100. Wyoming had the biggest difference. There were 281 thousand freshwater trout anglers in Wyoming compared to only 22 thousand non-trout freshwater anglers. Thus, freshwater anglers in Wyoming were more than ten times more likely to fish for trout than not. Anglers in Montana were also ten times more likely to have fished for trout. Other States with a high number of freshwater trout anglers compared to non-trout freshwater anglers include Colorado and Utah. At the other end of the scale, anglers in Michigan, Tennessee, and Wisconsin were least likely to fish for trout compared to other freshwater species.

**Table 9. Number of Freshwater Trout Anglers and Other Freshwater Anglers by State Where Trout Fishing Occurred**

(Population 16 years and older; Numbers in thousands. Excludes Great Lakes fishing.)

State	Freshwater Anglers Who Fished for Trout		Freshwater Anglers Who Did Not Fish for Trout		Freshwater Trout Anglers as a Percent of Non-Trout Freshwater Anglers
	Number	Percent	Number	Percent	Percent
<b>U.S. Total</b>	<b>7,157</b>	<b>100%</b>	<b>19,903</b>	<b>100%</b>	<b>36%</b>
Alaska	136	1.9%	166	0.8%	82%
Arizona	297	4.1%	340	1.7%	87%
Arkansas	*106	1.5%	449	2.3%	24%
California	798	11.1%	554	2.8%	144%
Colorado	678	9.5%	89	0.4%	762%
Connecticut	109	1.5%	134	0.7%	81%
Idaho	307	4.3%	140	0.7%	219%
Maine	157	2.2%	126	0.6%	125%
Maryland	*49	0.7%	178	0.9%	28%
Massachusetts	101	1.4%	193	1.0%	52%
Michigan	*132	1.8%	1,229	6.2%	11%
Minnesota	*197	2.8%	1,216	6.1%	16%
Missouri	227	3.2%	844	4.2%	27%
Montana	243	3.4%	24	0.1%	1,013%
North Carolina	*170	2.4%	884	4.4%	19%
New Hampshire	92	1.3%	117	0.6%	79%
New Jersey	*126	1.8%	132	0.7%	95%
New Mexico	215	3.0%	63	0.3%	341%
Nevada	76	1.1%	71	0.4%	107%
New York	647	9.0%	565	2.8%	115%
Oregon	316	4.4%	200	1.0%	158%
Pennsylvania	412	5.8%	462	2.3%	89%
Rhode Island	18	0.3%	24	0.1%	75%
South Dakota	*55	0.8%	213	1.1%	26%
Tennessee	*105	1.5%	721	3.6%	15%
Utah	370	5.2%	44	0.2%	841%
Virginia	111	1.6%	440	2.2%	25%
Vermont	69	1.0%	138	0.7%	50%
Washington	352	4.9%	391	2.0%	90%
Wisconsin	*87	1.2%	1,020	5.1%	9%
West Virginia	117	1.6%	188	0.9%	62%
Wyoming	281	3.9%	22	0.1%	1,277%

Note: State totals do not add to National total because one angler can fish in more than a single state.

\* denotes that estimate is based on sample size of 10-29.



Table 10 shows the total number of days spent angling for both freshwater trout anglers and non-trout anglers by State. Again, only those states having a statistically sufficient sample size are shown. Collectively, in the U.S. freshwater trout anglers spent over 75.7 million days fishing as compared to over 367 million days of fishing for freshwater anglers who did not fish for trout. Freshwater trout anglers in California accounted for the most trout fishing days of any State (9.3 million) followed by Colorado (7.3 million days) and New York (5.6 million days). As with the number of freshwater trout anglers, these three States also account for 30 percent of total freshwater trout fishing activity.

The last column in Table 10 shows the relative intensity of total days fishing for freshwater trout anglers compared to non-trout anglers for each State. In this instance, Montana leads the group with total freshwater trout anglers fishing days exceeding non-trout fishing days by a factor of twelve. Other States where trout angler fishing days exceeded non-trout fishing days include, in decreasing order of intensity, Colorado (658 percent), Utah (366 percent), Wyoming (357 percent), and New Mexico (213 percent). At the opposite end of the spectrum, anglers in Arkansas (three percent), Wisconsin (three percent), Michigan (five percent), and Minnesota (five percent) had the least number of freshwater angling days likely to be spent trout fishing.

**Table 10. Days of Freshwater Trout Anglers and Other Freshwater Anglers by State Where Trout Fishing Occurred**

(Population 16 years and older. Numbers in thousands. Excludes Great Lakes fishing.)

State	Freshwater Anglers Who Fished for Trout		Freshwater Anglers Who Did Not Fish for Trout		Freshwater Trout Anglers as a Percent of Non-Trout Freshwater Anglers
	Number	Percent	Number	Percent	Percent
<b>U.S. Total</b>	<b>75,748</b>	<b>100%</b>	<b>367,475</b>	<b>100%</b>	<b>21%</b>
Alaska	999	1.3%	1,996	0.5%	50%
Arizona	1,898	2.5%	2,927	0.8%	65%
Arkansas	*492	0.6%	15,170	4.1%	3%
California	9,340	12.3%	8,042	2.2%	116%
Colorado	7,321	9.7%	1,112	0.3%	658%
Connecticut	1,208	1.6%	2,310	0.6%	52%
Idaho	2,301	3.0%	3,206	0.9%	72%
Maine	1,992	2.6%	1,231	0.3%	162%
Maryland	*525	0.7%	2,635	0.7%	20%
Massachusetts	1,846	2.4%	2,653	0.7%	70%
Michigan	*1,075	1.4%	19,886	5.4%	5%
Minnesota	*982	1.3%	19,786	5.4%	5%
Missouri	1,431	1.9%	13,434	3.7%	11%
Montana	2,264	3.0%	186	0.1%	1,217%
North Carolina	*3,283	4.3%	12,481	3.4%	26%
New Hampshire	1,041	1.4%	2,565	0.7%	41%
New Jersey	*777	1.0%	1,903	0.5%	41%
New Mexico	2,654	3.5%	1,245	0.3%	213%
Nevada	768	1.0%	632	0.2%	122%
New York	5,575	7.4%	13,625	3.7%	41%
Oregon	2,475	3.3%	2,726	0.7%	91%
Pennsylvania	4,527	6.0%	4,379	1.2%	103%
Rhode Island	226	0.3%	513	0.1%	44%
South Dakota	*297	0.4%	3,772	1.0%	8%
Tennessee	*1,394	1.8%	15,563	4.2%	9%
Utah	4,697	6.2%	1,282	0.3%	366%
Virginia	1,116	1.5%	6,788	1.8%	16%
Vermont	643	0.8%	1,572	0.4%	41%
Washington	2,136	2.8%	8,804	2.4%	24%
Wisconsin	*625	0.8%	19,325	5.3%	3%
West Virginia	767	1.0%	3,754	1.0%	20%
Wyoming	2,439	3.2%	684	0.2%	357%

Note: State totals do not add to national total because one angler can fish in more than a single state.

\* denotes that estimate is based on sample size of 10–29.

Table 11 shows the average number of days a freshwater trout and non-trout fisherman fished in each State that attracted trout anglers. These estimates were derived based on the total number of anglers and days spent fishing as shown in the previous tables. North Carolina and Massachusetts led all States in the average number of days a freshwater trout angler fished. North Carolina trout anglers spent over 19 days on average targeting trout, while Massachusetts anglers spent slightly over 18 days. Nationally, freshwater anglers who did not fish for trout spent more days on average fishing than trout anglers.

Comparing the average number days a freshwater trout fisherman fished compared to a freshwater non-trout fisherman for each State gives a sense of the intensity of trout fishing within each State per angler. Freshwater trout anglers in Massachusetts, Maine, Montana, North Carolina, Nevada, and Pennsylvania were all more likely to spend more time out on the water than non-trout anglers.

**Table 11. Average Days of Freshwater Trout Anglers and Other Freshwater Anglers by State Where Trout Fishing Occurred**

(Population 16 years and older. Numbers in thousands. Excludes Great Lakes fishing.)

<i>State</i>	<i>Freshwater Anglers Who Did Not Fish for Trout</i>		<i>Freshwater Trout Anglers as a Percent of Non-Trout Freshwater Anglers</i>
	<i>Number</i>	<i>Number</i>	<i>Percent</i>
<b>U.S. Total</b>	<b>10.6</b>	<b>18.5</b>	<b>57%</b>
Alaska	7.3	12.0	61%
Arizona	6.4	8.6	74%
Arkansas	*4.6	33.8	14%
California	11.7	14.5	81%
Colorado	10.8	12.5	86%
Connecticut	11.1	17.2	64%
Idaho	7.5	22.9	33%
Maine	12.7	9.8	130%
Maryland	*10.7	14.8	72%
Massachusetts	18.3	13.7	133%
Michigan	*8.1	16.2	50%
Minnesota	*5.0	16.3	31%
Missouri	6.3	15.9	40%
Montana	9.3	7.8	120%
North Carolina	*19.3	14.1	137%
New Hampshire	11.3	21.9	52%
New Jersey	*6.2	14.4	43%
New Mexico	12.3	19.8	62%
Nevada	10.1	8.9	114%
New York	8.6	24.1	36%
Oregon	7.8	13.6	57%
Pennsylvania	11.0	9.5	116%
Rhode Island	12.6	21.4	59%
South Dakota	*5.4	17.7	30%
Tennessee	*13.3	21.6	62%
Utah	12.7	29.1	44%
Virginia	10.1	15.4	65%
Vermont	9.3	11.4	82%
Washington	6.1	22.5	27%
Wisconsin	*7.2	18.9	38%
West Virginia	6.6	20.0	33%
Wyoming	8.7	31.1	28%

Note: State totals do not add to National total because one angler can fish in more than a single state.

\* denotes that estimate is based on sample size of 10–29.

# Demographics

## Gender

The 2011 Survey shows that fishing for freshwater species continues to be a male dominated sport. Nationally the female population is greater than the male population (52 percent of the population is female). In contrast, females made up just 24 percent of the total number of freshwater anglers who fished for trout. Females represented a slightly higher proportion of non-trout freshwater anglers compared to trout anglers. Table 12 shows the breakout of male and female freshwater and trout anglers in 2011 and Figure 8 shows the distribution of participants.

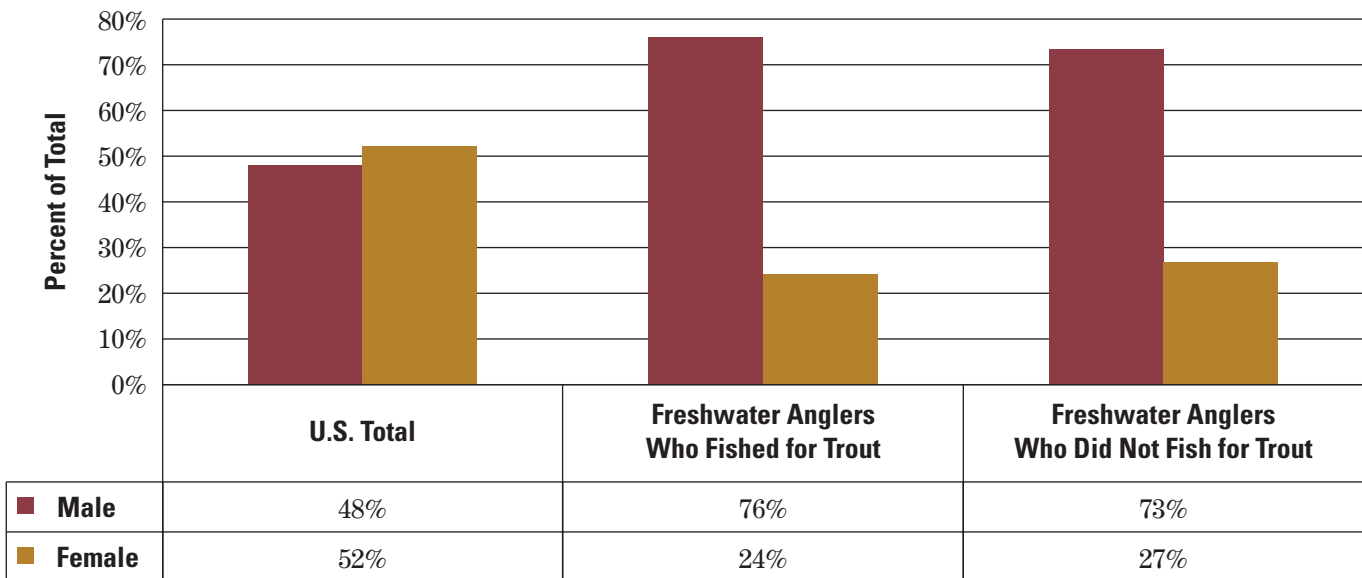
**Table 12. Gender Distribution of U.S. Population, Freshwater Anglers Who Fished for Trout, and Freshwater Anglers Who Did Not Fish for Trout: 2011**

(Population 16 years of age and older. Excludes Great Lakes fishing. Numbers in thousands.)

Gender	U.S. Total		Freshwater Anglers Who Fished for Trout		Freshwater Anglers Who Did Not Fish for Trout	
	Number	Percent	Number	Percent	Number	Percent
<b>Total</b>	<b>239,313</b>	<b>100%</b>	<b>7,157</b>	<b>100%</b>	<b>19,903</b>	<b>100%</b>
Male	114,705	48%	5,436	76%	14,597	73%
Female	124,608	52%	1,721	24%	5,305	27%

**Figure 8. Gender Distribution**

(Population 16 years and older. Excludes Great Lakes fishing.)





## Marriage

Both freshwater trout and non-trout anglers were more likely to be married than an average U.S. citizen. In 2011, 64 percent of trout anglers and 63 percent of non-trout anglers were married compared to a national average of 55 percent. Trout anglers were slightly more likely than an average U.S. resident to be divorced and much less likely to have been never married. Table 13 shows both the number and percentage of married, widowed, divorced, separated, and never married status for trout anglers as well and non-trout anglers and the U.S. population.

**Table 13. Marital Status of U.S. Population, Freshwater and Trout Anglers: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>U.S. Population</i>		<i>Freshwater Anglers Who Fished for Trout</i>		<i>Freshwater Anglers Who Did Not Fish for Trout</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Married	131,570	55%	4,612	64%	12,521	63%
Widowed	13,046	5%	269	4%	334	2%
Divorced	24,418	10%	884	12%	2,349	12%
Separated	4,590	2%	80	1%	498	3%
Never Married	65,691	27%	1,312	18%	4,200	21%



USFWS

## Age

Nationally, 11 percent of the U.S. population went freshwater fishing. Three percent of freshwater anglers targeted trout and eight percent did not. Youth and young adults between the ages of 16 and 24 were less likely to participate in freshwater fishing activities regardless of whether they targeted trout or not during the year. The distribution of freshwater trout and non-trout anglers between the ages of 25 and 44 years were proportionally equal to their national

distribution. Americans between the ages of 45 and 64 were statistically more likely to engage in freshwater trout fishing with 42 percent of all freshwater trout anglers being between the ages of 45 and 64 years yet comprising only 35 percent of the national population above 16 years of age. Americans 65 years and older were less likely to fish for freshwater species compared to their national component.

Looking specifically at the breakout of freshwater trout and non-trout anglers

shows 21 percent of freshwater anglers who fished for trout and 22 percent of the freshwater anglers who did not fish for trout were between 45 and 54 years of age. Only two percent of freshwater trout anglers and three percent of freshwater non-trout anglers were youth. Table 14 shows the age distribution for freshwater trout and non-trout anglers along with the general U.S. population. Figure 9 illustrates the relative population percentage for each of the three groups.

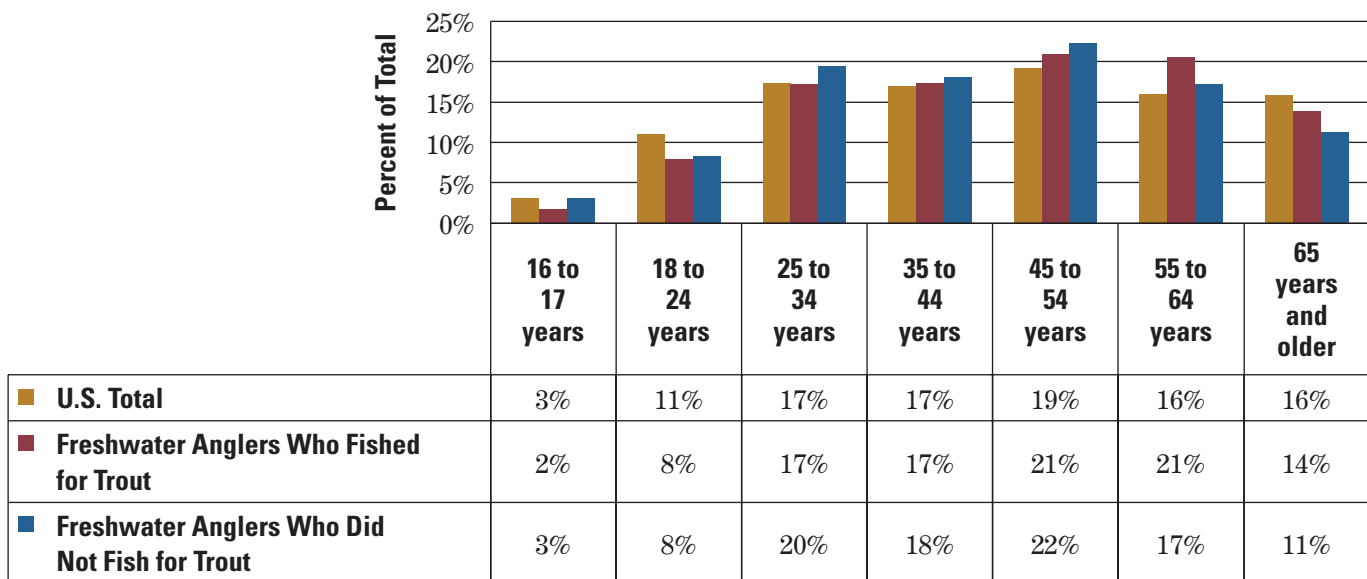
**Table 14. Age Distribution of U.S. Population, Freshwater Anglers Who Fished for Trout, and Freshwater Anglers Who Did Not Fish for Trout: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

Age	U.S. Total		Freshwater Anglers who Fished for Trout			Freshwater Anglers who Did Not Fish for Trout		
	Number	Percent	Number	Percent	Percent of U.S. Population	Number	Percent	Percent of Freshwater Anglers
<b>U.S. Total</b>	<b>239,313</b>	<b>100%</b>	<b>7,157</b>	<b>100%</b>	<b>3%</b>	<b>19,903</b>	<b>100%</b>	<b>8%</b>
16 to 17 years	7,652	3%	129	2%	2%	625	3%	8%
18 to 24 years	26,517	11%	574	8%	2%	1,654	8%	6%
25 to 34 years	41,613	17%	1,234	17%	3%	3,893	20%	9%
35 to 44 years	40,779	17%	1,247	17%	3%	3,600	18%	9%
45 to 54 years	46,167	19%	1,499	21%	3%	4,455	22%	10%
55 to 64 years	38,469	16%	1,478	21%	4%	3,433	17%	9%
65 years and older	38,117	16%	996	14%	3%	2,243	11%	6%

**Figure 9. Percent of Participants by Age: U.S. Population, Freshwater Trout and Non-Trout Anglers: 2011**

(Population 16 years and older. Excludes Great Lakes fishing.)



### Ethnicity and Race

In 2011, Hispanics comprised 14 percent of the total U.S. population but only five percent of the Hispanic population fished for freshwater species compared to a national average of 11 percent. Hispanic trout anglers represented six percent of the total number of trout anglers but only four percent of freshwater non-trout anglers. Put another way, 34 percent of all Hispanic freshwater anglers fished for trout as opposed to only 26 percent

of all non-Hispanic freshwater anglers who fished for trout.

Looking at race, Whites were the only race where the percentage of freshwater trout and non-trout anglers was greater than the corresponding national component. In 2011, 88 percent of freshwater trout anglers were White and 87 percent of freshwater non-trout anglers were White compared to the fact that Whites made up just

76 percent of the national population 16 years and older. African Americans, Asian Americans, and all other races were all less likely to fish for trout or other freshwater species compared to their respective national distribution. Table 15 shows the race and ethnicity distribution for both freshwater trout and non-trout anglers along with the national component estimate for comparison. Figure 10 shows the breakout graphically.

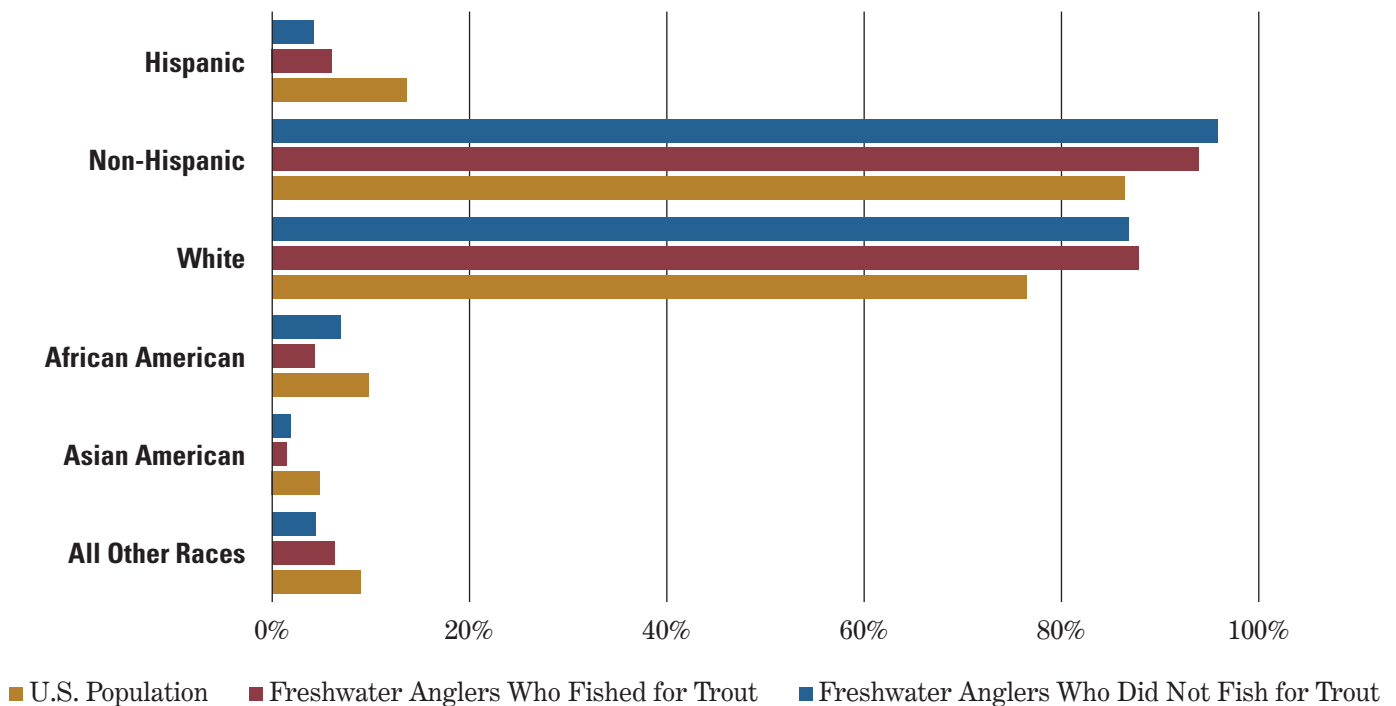
**Table 15. Race and Ethnicity of U.S. Population, Freshwater Anglers Who Fished for Trout, and Freshwater Anglers Who Did Not Fish for Trout: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>U.S. Population</i>		<i>Freshwater Anglers Who Fished for Trout</i>			<i>Freshwater Anglers Who Did Not Fish for Trout</i>		
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Percent of U.S. Population</i>	<i>Number</i>	<i>Percent</i>	<i>Percent of U.S. Population</i>
<b>U.S. Total</b>	<b>239,313</b>	<b>100%</b>	<b>7,157</b>	<b>100%</b>	<b>3%</b>	<b>19,903</b>	<b>100%</b>	<b>8%</b>
<b>Ethnicity</b>								
Hispanic	32,557	14%	435	6%	1%	832	4%	3%
Non-Hispanic	206,756	86%	6,722	94%	3%	19,071	96%	9%
<b>Race</b>								
White	182,872	76%	6,287	88%	3%	17,275	87%	9%
African American	23,402	10%	311	4%	1%	1,390	7%	6%
Asian American	11,647	5%	103	1%	1%	369	2%	3%
All others	21,392	9%	456	6%	2%	870	4%	4%

**Figure 10. Ethnic and Racial Distribution of Freshwater Trout and Non-Trout Anglers and U.S.: 2011**

(Population 16 years and older. Excludes Great Lakes fishing.)



## Education

Freshwater anglers who fished for trout generally attained higher levels of education than the average U.S. resident. Table 16 below shows that 15 percent of freshwater trout anglers had at least some graduate school experience compared to 12 percent of the U.S. population. Similarly, 22 percent of freshwater trout anglers completed

college compared to the national average of 18 percent. Compared to freshwater anglers who did not fish for trout, freshwater trout anglers were also more likely to have achieved a higher level of education. Table 16 shows the breakout for freshwater trout and non-trout fishing by education level and Figure 11 shows this graphically. The figure makes clear that people with a high school education

or less are less likely to participate in freshwater or trout fishing. This finding complements the previous finding that participation by younger age groups is also declining.

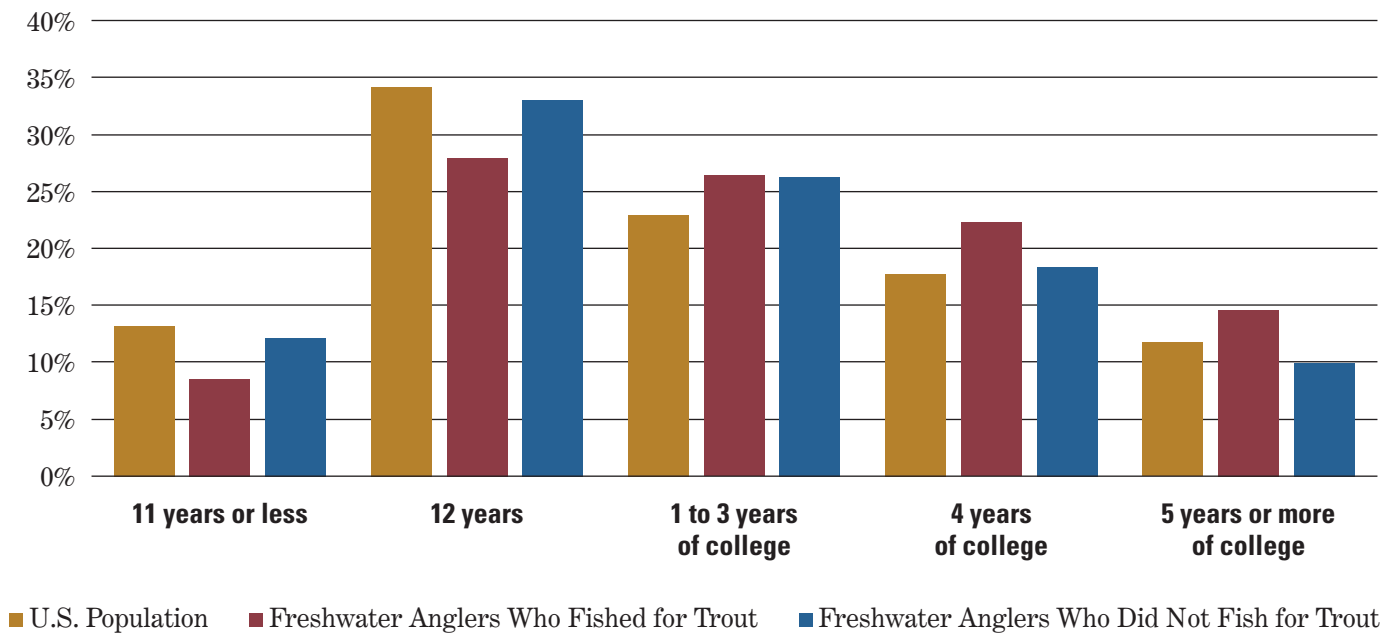
**Table 16. Education of U.S. Population, Freshwater Anglers Who Fished for Trout, and Freshwater Anglers Who Did Not Fish for Trout: 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	<i>U.S. Population</i>		<i>Freshwater Anglers Who Fished for Trout</i>			<i>Freshwater Anglers Who Did Not Fish for Trout</i>		
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Percent of U.S. Population</i>	<i>Number</i>	<i>Percent</i>	<i>Percent of U.S. Population</i>
<b>U.S. Total</b>	<b>239,312</b>	<b>100%</b>	<b>7,157</b>	<b>100%</b>	<b>3%</b>	<b>19,903</b>	<b>100%</b>	<b>8%</b>
11 years or less	31,574	13%	613	9%	2%	2,427	12%	8%
12 years	81,984	34%	2,005	28%	2%	6,591	33%	8%
1 to 3 years of college	55,014	23%	1,892	26%	3%	5,234	26%	10%
4 years of college	42,552	18%	1,598	22%	4%	3,665	18%	9%
5 years or more of college	28,188	12%	1,049	15%	4%	1,986	10%	7%

**Figure 11. Educational Attainment of Freshwater Trout and Non-Trout Anglers and U.S. Population: 2011**

(Population 16 years and older. Excludes Great Lakes fishing.)





### Household Income

Freshwater anglers who fished for trout are more likely to come from higher income earning households than freshwater anglers who did not fish for trout as well as U.S. residents in general. Specifically, for incomes over \$40,000, freshwater trout anglers comprised a greater percentage of this group than U.S. households in general. In total,

75 percent of trout anglers came from households with income earning greater than \$40,000 compared to just 60 percent of U.S. households. At the highest income levels, households earning \$100,000 or more, 28 percent of all trout anglers came from this group compared to just 21 percent of U.S. households and just 19 percent for other freshwater anglers. Table 17 presents the breakout for

freshwater anglers who fished and did not fish for trout along with the general U.S. population by income group. Figure 12 shows the percentage of each group by household income category.

**Table 17. Annual Household Income of U.S. Population, Freshwater Anglers Who Fished for Trout, and Freshwater Anglers Who Did Not Fish for Trout: 2011**

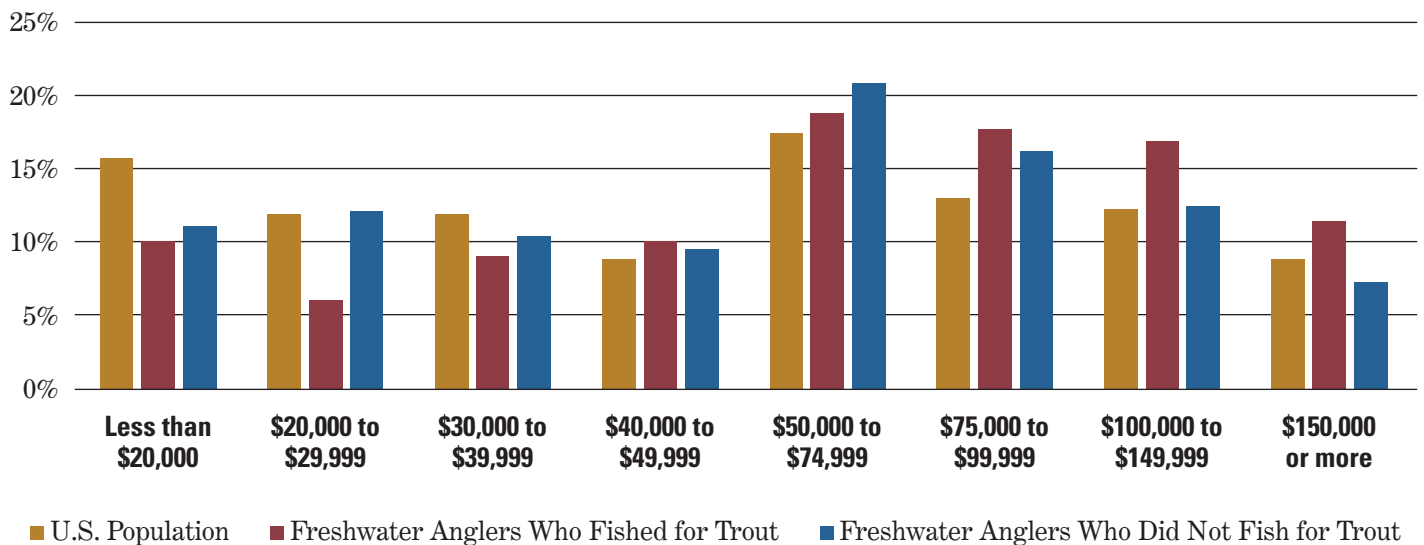
(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	U.S. Population		Freshwater Anglers Who Fished for Trout			Freshwater Anglers Who Did Not Fish for Trout		
	Number	Percent	Number	Percent	Percent of U.S. Population	Number	Percent	Percent of U.S. Population
<b>U.S. Total</b>	<b>239,313</b>	<b>100%</b>	<b>6,444</b>	<b>100%</b>	<b>3%</b>	<b>20,616</b>	<b>100%</b>	<b>9%</b>
Less than \$20,000	30,550	16%	647	10%	2%	1,984	11%	6%
\$20,000 to \$29,999	23,154	12%	383	6%	2%	2,165	12%	9%
\$30,000 to \$39,999	22,945	12%	582	9%	3%	1,849	10%	8%
\$40,000 to \$49,999	17,091	9%	651	10%	4%	1,695	10%	10%
\$50,000 to \$74,999	33,850	17%	1,214	19%	4%	3,707	21%	11%
\$75,000 to \$99,999	25,236	13%	1,141	18%	5%	2,891	16%	11%
\$100,000 to \$149,999	23,790	12%	1,086	17%	5%	2,222	12%	9%
\$150,000 or more	17,151	9%	740	11%	4%	1,282	7%	7%

Note: Categories do not add up to total because unreported incomes are not included. Percentages computed based on the total number of households that provided data.

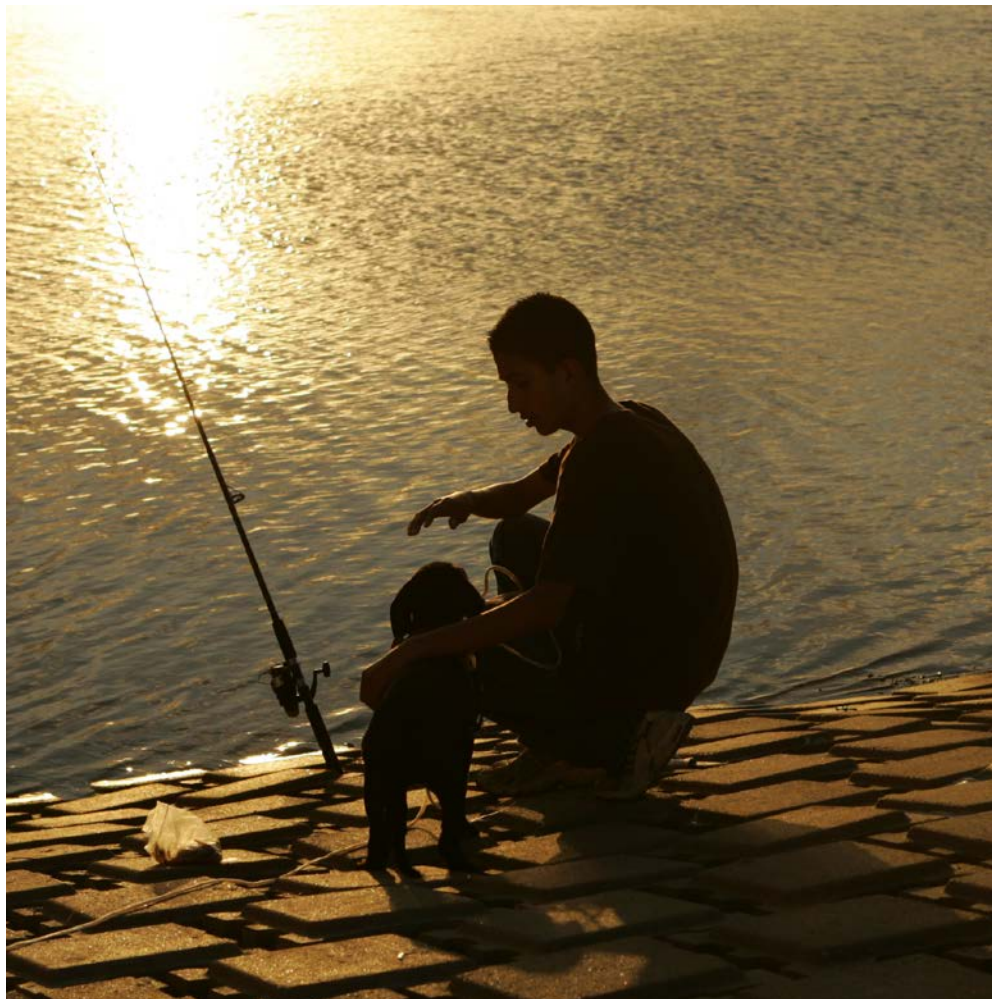
**Figure 12. Annual Household Income of Freshwater and Non-Trout Anglers and U.S. Population: 2011**

(Population 16 years and older. Excludes Great Lakes fishing.)



# Demographic Trends 1991–2011

This section looks back across the previous five surveys to assess trends in the demographics of trout anglers over the past twenty years. Specifically, this section will look at trends in the residency of trout anglers, race and ethnicity, age, education and income levels. Through a better understanding of trout angler characteristics and participation and how these changes compare to overall national trends, improved programs could be developed to both recruit new groups into trout fishing and to conduct outreach with existing anglers. This could prove very important as we head into an uncertain future regarding the health and variety of cold water habitats along with declining public monies to be spent on habitat management and restoration. Cold water habitats are under threat from a variety of sources both local and national in scope and the health and distribution of trout, particularly native trout, will prove to be an important indicator of the healthiness of these habitats. While trout anglers may be most connected to the resource through active recreation their numbers are relatively small compared to the rest of the angling community and nation as a whole. Trout anglers however can be a very passionate user group that has and can effectively unite under organized conservation groups such as Trout Unlimited or the Federation of Fly Fishermen to actively and vocally advocate for conservation actions benefitting trout and other coldwater species. The recruitment and retention of such anglers will play a strong role for the support of future conservation programs.



USFWS

### Census Geographic Division

The Surveys' have shown that there is a long-term declining trend in the number of freshwater trout anglers. Between the years 1991 and 2011 the total number of trout anglers declined by over 21 percent despite a national population increase of 26 percent during the same period for persons 16 years and older. In 1991 there were 9.1 million trout anglers compared to 7.2 million

trout anglers in 2011. Looking at the changes between Survey periods, the number of trout anglers declined by one percent between the years 1991 and 1996, 13 percent between the years 1996 and 2001, and 14 percent between the years 2001 and 2006. The latest survey however showed a reversal of this trend. The number of trout anglers increased by six percent between 2006 and 2011.

Table 18 shows the reported number of freshwater trout anglers by Census Division for each Survey year, along with each Division's corresponding general population. Three Census Divisions actually experienced an increase in the total number of trout anglers in contrast to the national trend. The number of anglers in the West North Central, West South Central, and Mountain Census Divisions all experienced a increase in

**Table 18. Residency of Freshwater Anglers who Fished for Trout by Census Division Residency: 1991–2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

<i>Census Geographic Division</i>	<i>1991</i>	<i>1996</i>	<i>2001</i>	<i>2006</i>	<i>2011</i>	<i>Percent Change 1991–2011</i>
<b>U.S.</b>						
Trout Anglers	9,107	8,974	7,819	6,750	7,157	-21%
General Population	189,964	201,472	212,298	229,245	239,313	26%
Percentage	5%	4%	4%	3%	3%	-38%
<b>New England</b>						
Trout Anglers	784	694	566	539	475	-39%
General Population	10,180	10,306	10,575	11,233	11,593	14%
Percentage	8%	7%	5%	5%	4%	-47%
<b>Middle Atlantic</b>						
Trout Anglers	1,637	1,289	1,017	1,033	1,175	-28%
General Population	29,216	29,371	29,806	31,518	32,392	11%
Percentage	6%	4%	3%	3%	4%	-35%
<b>East North Central</b>						
Trout Anglers	590	531	517	420	387	-34%
General Population	32,188	33,121	34,082	35,609	36,199	12%
Percentage	2%	2%	2%	1%	1%	-42%
<b>West North Central</b>						
Trout Anglers	423	464	364	304	496	17%
General Population	13,504	13,875	14,430	15,458	15,860	17%
Percentage	3%	3%	3%	2%	3%	0%
<b>South Atlantic</b>						
Trout Anglers	772	942	729	792	555	-28%
General Population	33,682	36,776	39,286	43,965	46,417	38%
Percentage	2%	3%	2%	2%	1%	-48%
<b>East South Central</b>						
Trout Anglers	207	198	214	140	186	-10%
General Population	11,667	12,459	12,976	13,722	14,206	22%
Percentage	2%	2%	2%	1%	1%	-26%
<b>West South Central</b>						
Trout Anglers	447	417	500	358	486	9%
General Population	19,926	21,811	23,337	25,407	27,195	36%
Percentage	2%	2%	2%	1%	2%	-20%
<b>Mountain</b>						
Trout Anglers	1,595	1,854	1,873	1,583	1,886	18%
General Population	10,092	11,966	13,308	15,651	17,013	69%
Percentage	16%	15%	14%	10%	11%	-30%
<b>Pacific</b>						
Trout Anglers	2,651	2,583	2,040	1,580	1,512	-43%
General Population	29,508	31,787	34,498	36,681	38,438	30%
Percentage	9%	8%	6%	4%	4%	-56%

their estimated number of trout anglers between the years 1991 and 2011. However, only the Mountain Division experienced a generally increasing trend line over this period as the increase for the other two Divisions was heavily influenced by their 2011 estimates.

The Pacific Division led all other Census Divisions in the total number of freshwater trout anglers in every National Survey between the years 1991 and 2011. However, as a percentage of their associated total population, the Pacific Division experienced the greatest relative decline of trout anglers out of all Divisions. In 1991 there were over 2.6 million trout anglers in the Pacific Division, which represented nine percent of the population. By 2011 the total number of trout anglers declined to 1.5 million while the general population

increased to 38.4 million. The percentage of the Pacific Division's general population that fished for trout declined by over 50 percent between the years 1991 and 2011. Other Divisions with near similar relative declines include New England and the South Atlantic.

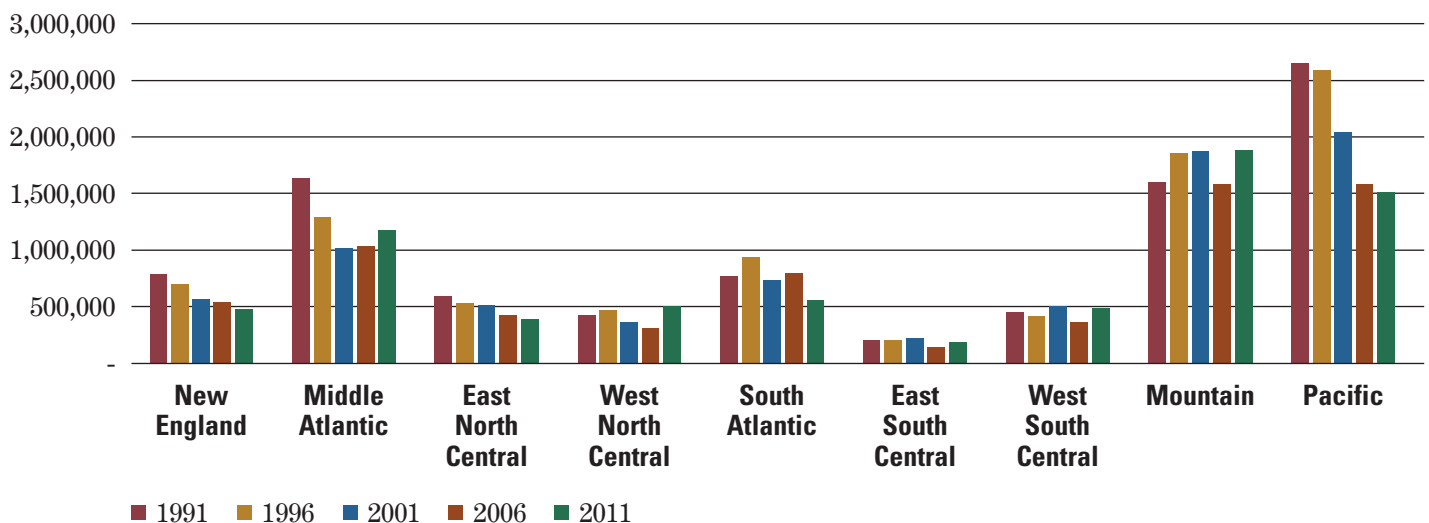
The Mountain Division had the greatest number of trout anglers along with the highest percentage of resident anglers of any other Census Division throughout the period. In 1991 there were nearly 1.6 million trout anglers out of a general population of ten million (16 percent of the population). In 2011 the number of trout anglers had increased to 1.9 million as the general population increased to 17.0 million. Nonetheless, given the large increase in the general population, the percentage of trout anglers declined to 11 percent.

Table 19 presents the number of resident freshwater trout anglers for the 1991, 1996, 2001, 2006, and 2011 National Surveys. The table also compares how the total number of trout anglers changed between 1991 and 2011 and compares this change to the overall change in population for the division. Table 19 shows for each Census Division the relative percent of trout anglers to the national total and also shows the change in relative percent between the years 1991 and 2011. Figure 13 shows how the number of freshwater trout anglers has changed over time and Figure 14 shows the percentage change between each survey period for the number of freshwater trout anglers by Census Division.

**Table 19. Relative Distribution of Freshwater Trout Anglers by Census Division Residency: 1996–2011**  
(Population 16 years and older. Excludes Great Lakes.)

<i>Census Geographic Division</i>	1991	1996	2001	2006	2011
<b>U.S. total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
New England	9%	8%	7%	8%	7%
Middle Atlantic	18%	14%	13%	15%	16%
East North Central	6%	6%	7%	6%	5%
West North Central	5%	5%	5%	5%	7%
South Atlantic	8%	11%	9%	12%	8%
East South Central	2%	2%	3%	2%	3%
West South Central	5%	5%	6%	5%	7%
Mountain	18%	21%	24%	23%	26%
Pacific	29%	29%	26%	23%	21%

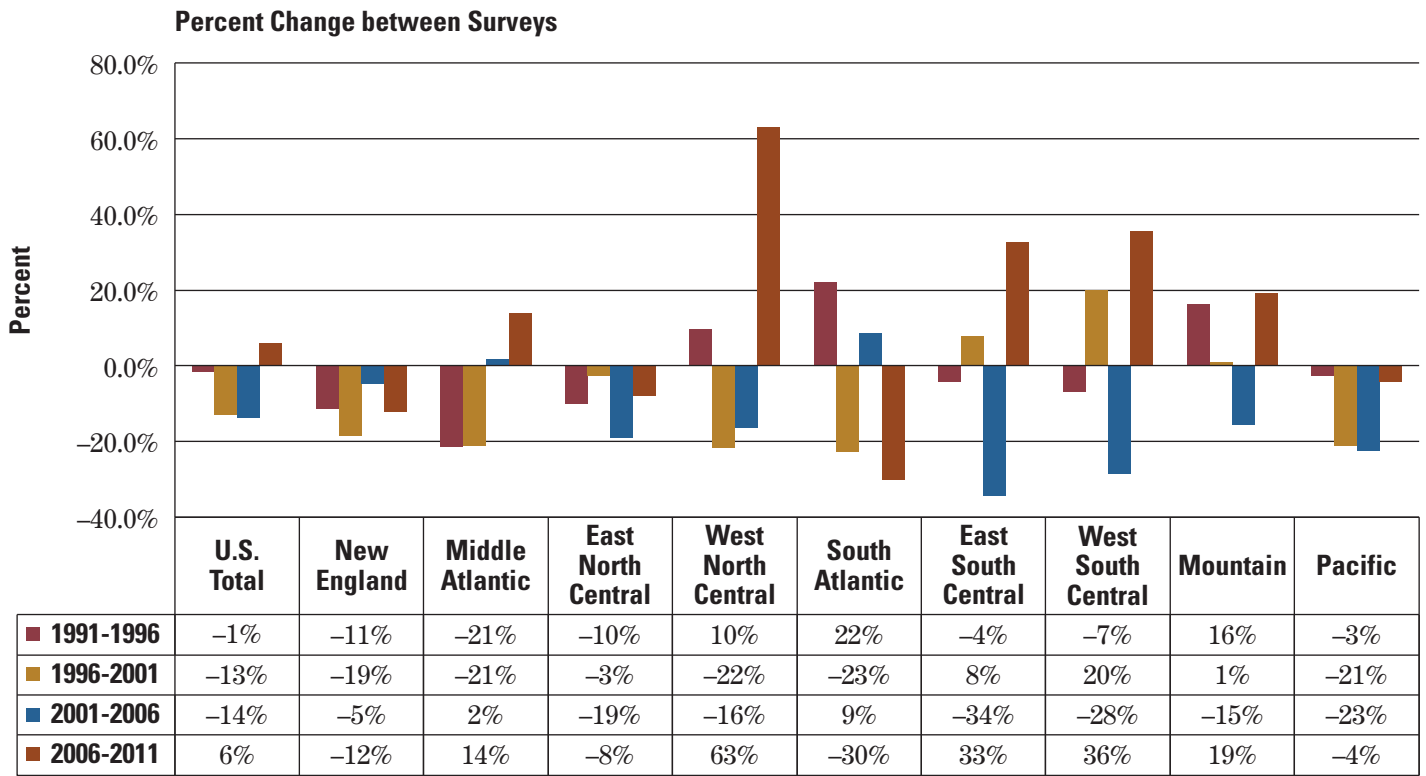
**Figure 13. Residency of Trout Anglers by Census Division**  
(Population 16 years and older. Excludes Great Lakes fishing.)





**Figure 14. Residency of Freshwater Trout Anglers by Census Division**

(Population 16 years and older. Excludes Great Lakes fishing.)



### Urban/Rural Residency

The population of the United States has become increasingly more urban over the years. Since 1991 the urban population for those 16 years and older has increased by 30 percent compared to an overall population growth of 26 percent. Rural populations also grew, albeit at half the rate of the overall U.S. growth.

In contrast to the increasing urban and rural national populations the absolute number for both urban and rural trout anglers declined between the years 1991 and 2011. In 1991 there were 5.9 million urban trout anglers and 3.1 million rural trout anglers who collectively represented nearly five percent of the national population. By 2011 the number of urban trout anglers declined to 4.7

million and rural trout anglers declined to 2.5 million. The decline for both urban and rural anglers was 22 percent over the previous 20 years.

There were, however, differences in the relative declines between urban and rural trout anglers compared to their associated populations. The Survey found that urban trout anglers went from representing four percent of the urban population in 1991 down to three percent of the urban population in 2011 reflecting a decline of 40 percent. In comparison, rural trout anglers went from representing six percent of the rural population down to four percent, a relative decline of 30 percent. While the number of rural anglers is less than that for urban anglers, rural trout anglers still

constitute a higher percentage of their group compared to urban trout anglers.

Table 20 shows the urban and rural breakout for trout anglers for the Survey years 1991 through 2011. The table shows both the number of trout anglers as well as how trout anglers compare to the overall U.S. population in each year. Figure 15 shows the relative change in numbers for both urban and rural trout anglers between each Survey period. Of note is the fact that the most recent Survey found that the number of anglers fishing for trout increased for both urban and rural trout anglers since the 2006 Survey. This increase reverses a steady decline in both urban and rural anglers in all previous years.

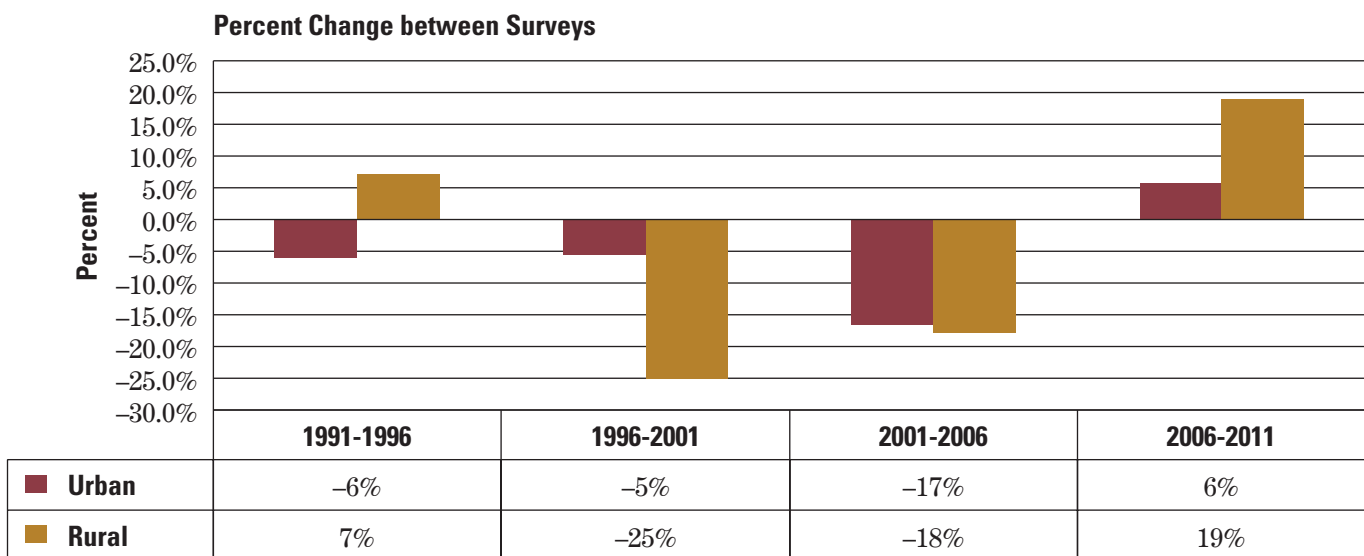
**Table 20. Population Density of Trout Anglers and U.S. Population: 1991–2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1991	1996	2001	2006	2011	% Change 1991–2011
<b>U.S. Population</b>						
Urban	138,191	144,760	157,943	176,740	180,723	31%
Rural	51,773	56,712	54,355	52,504	58,589	13%
<b>Trout Anglers</b>						
Urban	5,944	5,587	5,282	4,404	4,654	-22%
Rural	3,163	3,386	2,537	2,088	2,484	-21%
<b>Trout Anglers as a Percent of U.S. Population</b>						
Urban	4%	4%	3%	2%	3%	-40%
Rural	6%	6%	5%	4%	4%	-31%

**Figure 15. Trout Angler Population Density**

(Population 16 years and older. Excludes Great Lakes fishing.)



## Gender

While the number of females 16 years and older has consistently outnumbered the number of males in the U.S. over the years, the number of male trout anglers has significantly outnumbered female trout anglers. The U.S. male population grew by nearly 27 percent since 1991, while the number of male freshwater trout anglers declined by 22 percent. Similarly, the number of female trout anglers declined by 19 percent since 1991, while the total number of females

in the U.S. grew by 25 percent. In 1991 nearly eight percent of U.S. males fished for freshwater trout but by 2011 the percentage declined to five percent. In 1991 two percent of U.S. females fished for freshwater trout but by 2011 the percentage declined to one percent.

Table 21 shows the gender breakout for trout anglers for 1991 through 2011. The table shows both the number of trout anglers as well as how trout anglers compare to the overall U.S.

population in each year. Figure 16 shows the relative change in numbers for both male and female trout anglers between each Survey period. Of note is the big increase in the participation rate of female trout anglers between the last two survey periods. The number of female trout anglers increased over 20 percent between the years 2006 and 2011 compared to only a two percent increase in the number of male trout anglers.

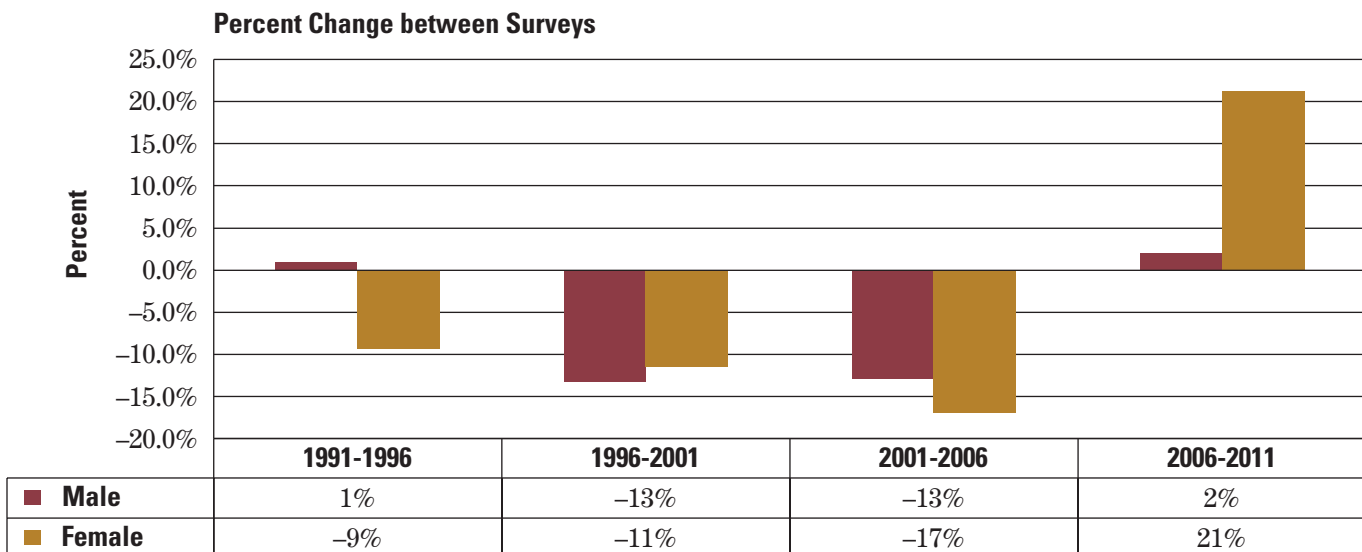
**Table 21. Gender of Trout Anglers and U.S. Population: 1991 through 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1991	1996	2001	2006	2011	% Change 1991–2011
<b>U.S. Population</b>						
Male	90,369	96,660	101,916	110,273	114,705	27%
Female	99,595	104,812	110,381	118,972	124,608	25%
<b>Trout Anglers</b>						
Male	6,982	7,045	6,110	5,330	5,436	-22%
Female	2,125	1,929	1,709	1,420	1,721	-19%
<b>Trout Anglers as a Percent of U.S. Population</b>						
Male	8%	7%	6%	5%	5%	-39%
Female	2%	2%	2%	1%	1%	-35%

**Figure 16. Gender of Trout Anglers**

(Population 16 years and older. Excludes Great Lakes fishing.)



## Marital Status

Since 1996 the Surveys have asked respondents about their marital status. Trout anglers are predominantly more likely to be married as opposed to divorced, widowed, separated, or never married. However, the trend over time is that the number of married trout anglers

has been declining compared to an overall increase for the U.S. population. The number of separated and never married trout anglers is also declining over time while the number of widowed and divorced anglers is increasing. Table 22 shows the breakout for the marital status of trout anglers as well as the

overall U.S. population for comparison. For the most part, regardless of marital status, the number of trout anglers compared to the U.S. population has been declining over time. Figure 17 shows the percentage change between Survey years for the marital status of trout anglers.

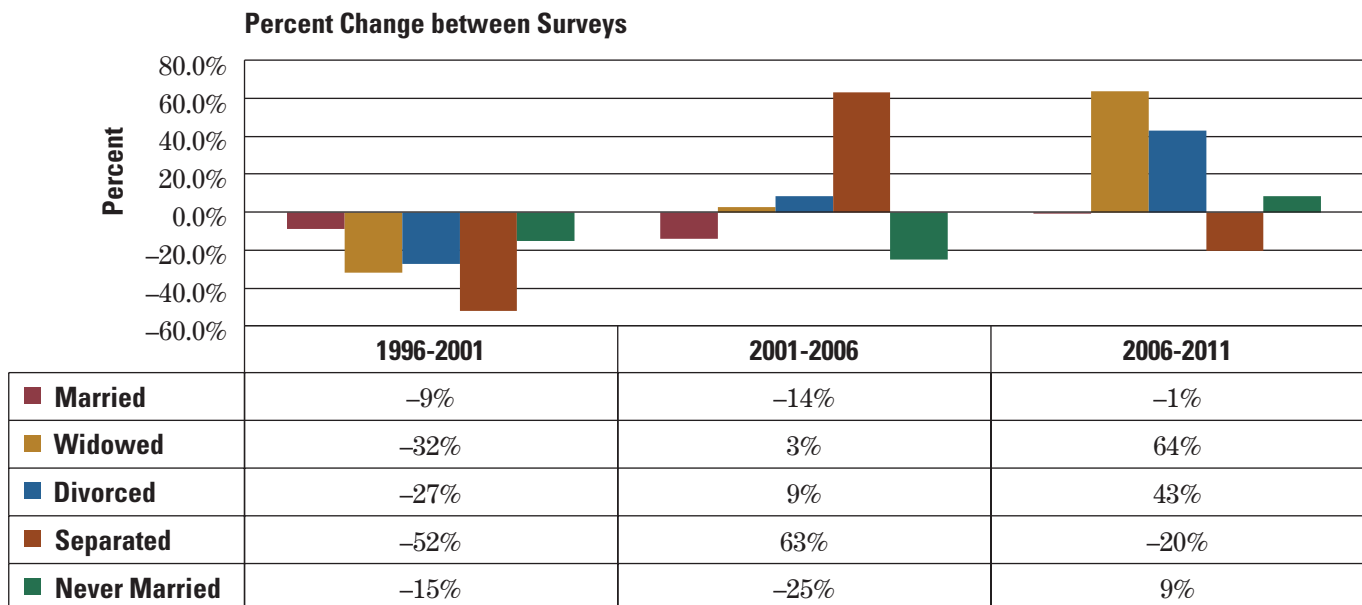
**Table 22. Marital Status of Trout Anglers and U.S. Population: 1996 through 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1996	2001	2006	2011	% Change 1996–2011
<b>U.S. Population</b>					
Married	120,770	125,600	133,370	131,570	9%
Widowed	14,378	14,273	14,350	13,046	-9%
Divorced	16,512	16,801	19,146	24,418	48%
Separated	3,323	3,294	3,839	4,590	38%
Never Married	46,492	52,328	58,541	65,691	41%
<b>Trout Anglers</b>					
Married	5,922	5,412	4,658	4,612	-22%
Widowed	236	160	164	269	14%
Divorced	783	569	619	884	13%
Separated	128	61	100	80	-38%
Never Married	1,904	1,616	1,209	1,312	-31%
<b>Trout Anglers as Percent of U.S. Population</b>					
Married	5%	4%	3%	4%	-29%
Widowed	2%	1%	1%	2%	26%
Divorced	5%	3%	3%	4%	-24%
Separated	4%	2%	3%	2%	-55%
Never Married	4%	3%	2%	2%	-51%

**Figure 17. Marital Status of Trout Anglers**

(Population 16 years and older. Excludes Great Lakes fishing.)





## Race and Ethnicity

The U.S. continues to become increasingly diversified over the years. While the national population grew by 26 percent between the years 1991 and 2011 the growth of Whites, which constitutes the largest racial group in the country, was less than one-half the national rate. Meanwhile, the African American population growth was similar to the national population growth rate, while the growth rate for other races (e.g., Native American, Asian American, Eskimo, etc.) grew by an astounding 260 percent. Looking at ethnicity, the Hispanic population also grew at an accelerated rate during this period. Between 1991 and 2011 the Hispanic population in the U.S. grew nearly 150 percent.

White freshwater trout anglers constituted the vast majority of all freshwater trout anglers over the past twenty years. However, between the years 1991 and 2011 the number of White freshwater trout anglers declined by

27 percent from 8.6 million to 6.3 million. In 1991 White trout anglers constituted five percent of the national population but by 2011 they represented three percent of the population, which reflects a relative reduction of 35 percent.

The number of African American trout anglers has also been declining between the years 1991 and 2006. However the participation rate for African American anglers nearly tripled between the years 2006 and 2011, resulting in a modest increase in their relative makeup of the total number of trout anglers.

Table 23 shows the racial and ethnic breakout for trout anglers for the Survey years 1991 through 2011. The table shows both the number of trout anglers as well as how trout anglers compare to the overall U.S. population in each year. Between the 1991 Survey and the 2011 Survey, the number of White trout anglers decreased from 8.6 million

to 6.3 million, the number of African American trout anglers increased from 202 thousand to 311 thousand, and the number of all other races of trout anglers increased from 325 thousand to 560 thousand. The number of Hispanic trout anglers declined slightly during this period from 438 thousand to 435 thousand.

Figure 18 shows the percentage change in trout angler numbers between Survey periods by race and ethnicity. While the total number of White trout anglers has decreased in every period, the relative decrease during the most recent period (2006–2011) was the smallest over the past twenty years. This period (2006–2011) also showed a significant increase in the relative number of African American and Other trout anglers. This increase reflects the relatively small number of trout anglers in these two groups to begin with so it does not take as much of an absolute increase in participation to show a large percentage change.

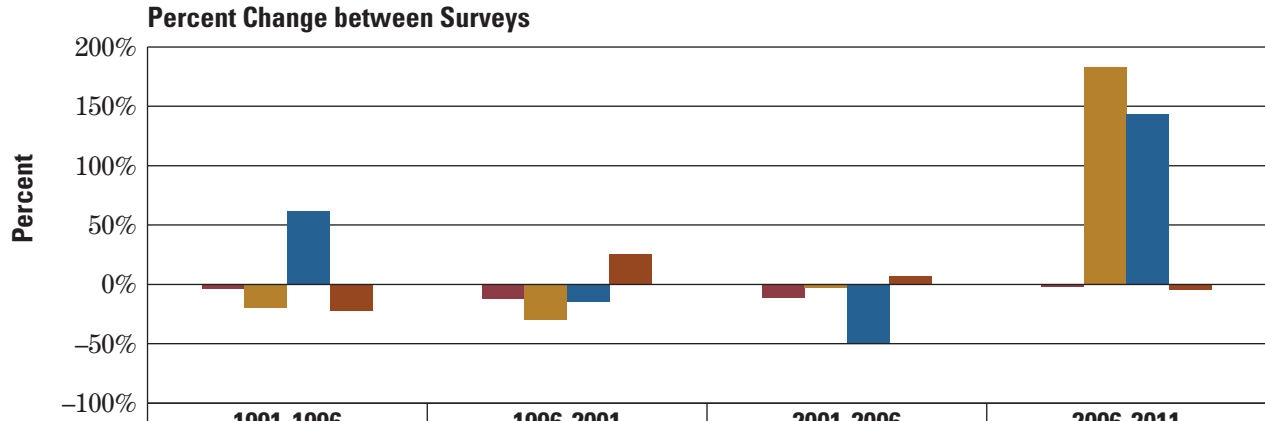
**Table 23. Race and Ethnicity of Trout Anglers and U.S. Population: 1991 through 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1991	1996	2001	2006	2011	% Change 1991–2011
<b>U.S. Population</b>						
White	162,367	167,497	181,129	189,255	182,872	13%
African American	18,395	18,728	21,708	25,925	23,402	27%
Other	9,202	15,247	9,461	14,065	33,039	259%
Hispanic	13,098	16,505	21,910	29,218	32,557	149%
<b>Trout Anglers</b>						
White	8,580	8,285	7,256	6,410	6,287	-27%
African American	202	162	114	110	311	54%
Other	325	526	450	229	559	72%
Hispanic	438	340	426	455	435	-1%
<b>Trout Anglers as Percent of U.S. Population</b>						
White	5%	5%	4%	3%	3%	-35%
African American	1%	1%	1%	0%	1%	21%
Other	4%	3%	5%	2%	2%	-52%
Hispanic	3%	2%	2%	2%	1%	-60%

**Figure 18. Race and Ethnicity of Trout Anglers**

(Population 16 years and older. Excludes Great Lakes fishing.)



	1991-1996	1996-2001	2001-2006	2006-2011
■ White	-3%	-12%	-12%	-2%
■ African American	-20%	-30%	-3%	183%
■ Other	62%	-15%	-49%	144%
■ Hispanic	-23%	25%	7%	-4%

## Age

While the U.S. population (16 years and older) has increased by 26 percent between 1991 and 2011 there are some notable differences across age groups. In general, older age populations have been increasing at a faster rate than younger age groups. The number of adults between the ages of 55 to 64 years increased by 82 percent between 1991 and 2011, while the number of adults between the ages of 45 and 54 years increased by 71 percent. On the other end of the spectrum, there was a decrease in the number of adults between the ages of 25 and 34 years (-3.1 percent) and a modest increase of only 6.4 percent for adults between the ages of 35 to 44 years.

The ages of trout anglers over time somewhat mirrors the general U.S. trend. Trout anglers between the ages

of 55 to 64 years grew nearly 87 percent over the last 20 years. In 1991 there were 791 thousand freshwater trout anglers between the ages of 55 to 64 years and by 2011 this age group increased to 1.48 million.

Looking in greater detail at the trend in the number of freshwater trout anglers by age group shows the lack of recruitment for younger anglers. There was a 55 percent decline in the number of anglers between the ages of 16 to 24 years and a 52 percent decline in the number of anglers between the ages of 25 to 34 years. The number of trout anglers between the ages of 35 to 44 years also declined by about 45 percent.

Looking at the number of trout anglers as a percentage of the national population shows that for all but the oldest age

group, trout angling participation is not keeping up with population increases. All age groups below 54 years experienced relative declines in participation rates compared to their corresponding national populations. In contrast, only participation by freshwater trout anglers 55 years and older increased at a greater rate than the general population.

Table 24 shows the age distribution for trout anglers for the Survey years 1991 through 2011. The table shows both the number of trout anglers as well as how trout anglers compare to the overall U.S. population in each year. Figure 19 shows the change in numbers for trout anglers by age group. Figure 20 shows the percentage change in trout angler numbers.

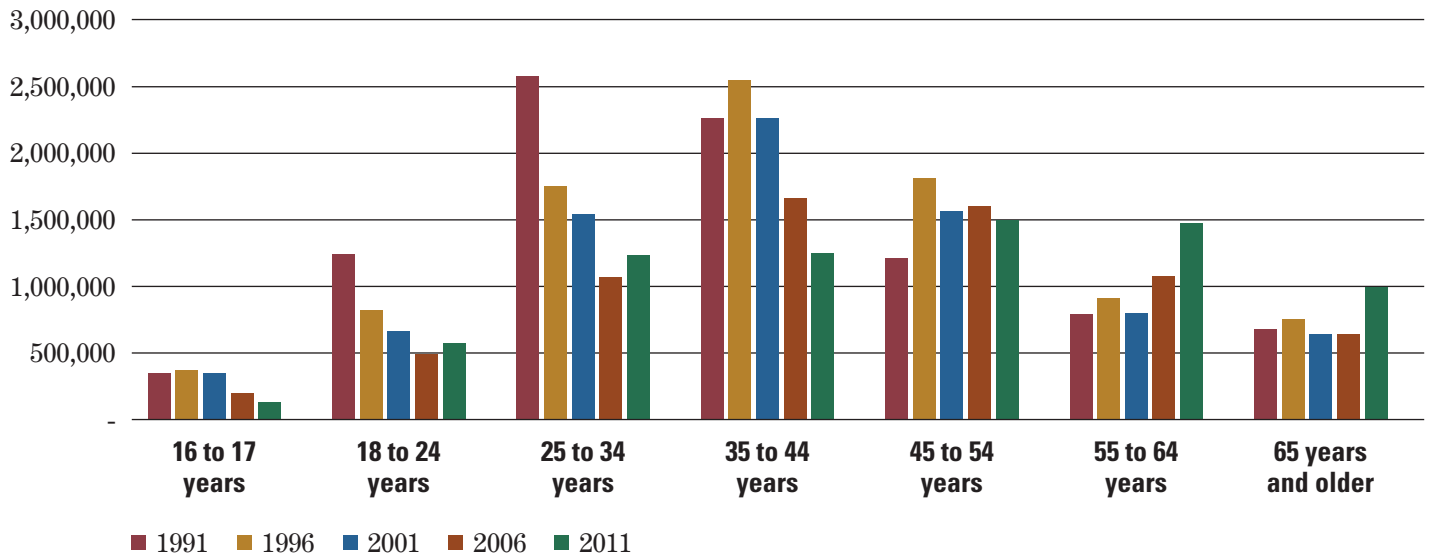
**Table 24. Age of Trout Anglers and U.S. Population: 1991 through 2011**

(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1991	1996	2001	2006	2011	% Change 1991–2011
<b>U.S. Population</b>						
16 to 24 years	29,553	27,503	29,943	31,564	34,169	16%
25 to 34 years	42,931	34,973	35,333	37,468	41,613	-3%
35 to 44 years	38,341	44,376	44,057	45,112	40,779	6%
45 to 54 years	27,021	35,867	40,541	44,209	46,167	71%
55 to 64 years	21,085	23,311	25,601	32,867	38,469	82%
65 years and older	31,032	35,442	36,823	38,024	38,117	23%
<b>Trout Anglers</b>						
16 to 24 years	1,592	1,193	1,013	692	703	-56%
25 to 34 years	2,575	1,750	1,540	1,068	1,234	-52%
35 to 44 years	2,260	2,549	2,261	1,666	1,247	-45%
45 to 54 years	1,211	1,815	1,564	1,605	1,499	24%
55 to 64 years	791	913	798	1,077	1,478	87%
65 years and older	678	754	643	643	996	47%
<b>Trout Anglers as Percent of U.S. Population</b>						
16 to 24 years	5%	4%	3%	2%	2%	-62%
25 to 34 years	6%	5%	4%	3%	3%	-51%
35 to 44 years	6%	6%	5%	4%	3%	-48%
45 to 54 years	4%	5%	4%	4%	3%	-28%
55 to 64 years	4%	4%	3%	3%	4%	2%
65 years and older	2%	2%	2%	2%	3%	20%

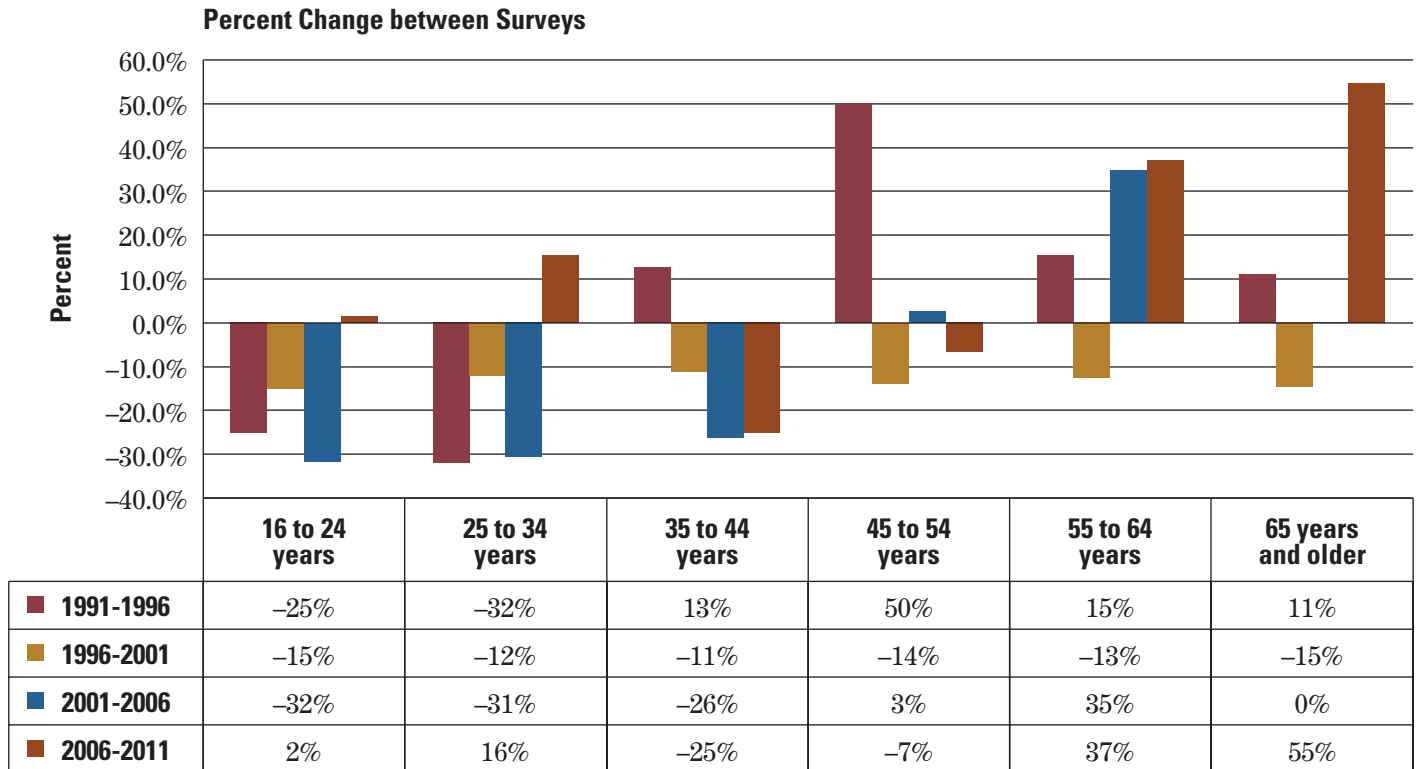
**Figure 19. Trout Anglers by Age**

(Population 16 years and older. Excludes Great Lakes fishing.)



**Figure 20. Change in Trout Anglers by Age: 1991–2011**

(Population 16 years and older. Excludes Great Lakes fishing.)





## Education

It is evident that since 1991 as the U.S. population grew so did educational attainment. The number of Americans with four years of college grew by 85 percent and those with additional education grew by 65 percent. People still in college or with some college education grew by 50 percent. All of these growth rates exceeded the general population growth rate of 26 percent.

Interestingly, the number of trout anglers with less than four years of college shrunk during the period 1991 through 2011. This is probably a reflection of the low recruitment rate for new or younger trout anglers. In contrast, the number of trout anglers with four or more years of college experienced increases in their numbers. Trout anglers across all education levels decreased as a percentage of the national population during the period 1991 through 2011.

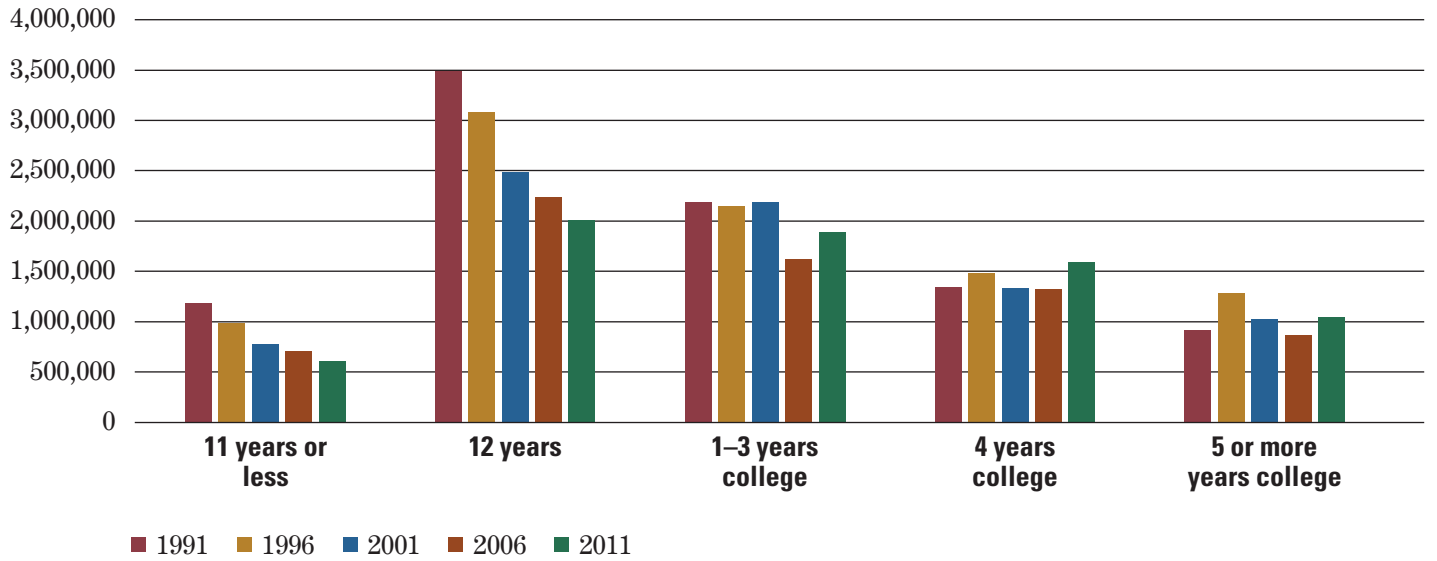
Table 25 shows the educational distribution for trout anglers for the Survey years 1991 through 2011. The table shows both the number of trout anglers as well as how trout anglers compare to the overall U.S. population in each year. Figure 22 shows the percentage change in trout angler numbers.

**Table 25. Education Level of Trout Anglers and U.S. Population**

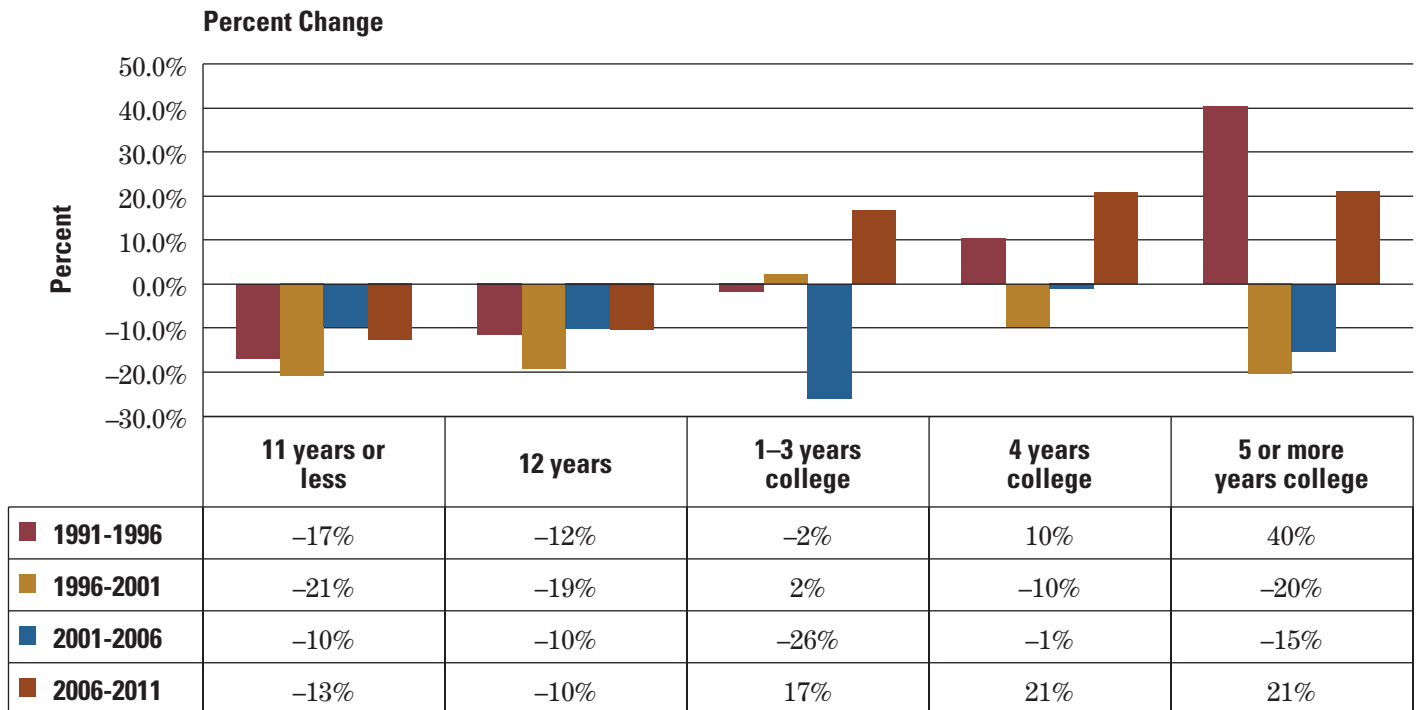
(Population 16 years and older. Excludes Great Lakes fishing. Numbers in thousands.)

	1991	1996	2001	2006	2011	% Change 1991–2011
<b>U.S. Population</b>						
11 years or less	35,906	33,743	32,820	34,621	31,574	-12%
12 years	77,293	71,098	73,719	78,073	81,984	6%
1–3 years college	36,725	45,573	49,491	53,019	55,014	50%
4 years college	22,920	28,005	34,803	39,506	42,552	86%
5 or more years college	17,120	23,052	21,464	24,025	28,188	65%
<b>Trout Anglers</b>						
11 years or less	1,180	981	777	701	613	-48%
12 years	3,483	3,079	2,489	2,238	2,005	-42%
1–3 years college	2,183	2,144	2,191	1,621	1,892	-13%
4 years college	1,343	1,483	1,339	1,323	1,598	19%
5 or more years college	917	1,287	1,023	866	1,049	14%
<b>Trout Anglers as Percent of U.S.</b>						
11 years or less	3%	3%	2%	2%	2%	-41%
12 years	5%	4%	3%	3%	2%	-46%
1–3 years college	6%	5%	4%	3%	3%	-42%
4 years college	6%	5%	4%	3%	4%	-36%
5 or more years college	5%	6%	5%	4%	4%	-31%

**Figure 21. Education Level of Trout Anglers**



**Figure 22. Trout Anglers by Educational Attainment**  
(Population 16 years and older. Excludes Great Lakes fishing.)



# Expenditures

Trout anglers reported spending nearly \$3.6 billion in 2011 on fishing equipment and trip-related expenses. Over 80 percent of this total was on trip-related expenses composed primarily of food and lodging and transportation expenses. Fishing equipment expenditures in 2011 were estimated to be \$625 million, which represented 17 percent of trout anglers' total expenditures. In comparison with non-trout anglers, trout anglers spent less per person, on average, in every category of expenditures except on public transportation, where they spent nearly four times more than non-trout anglers. Public transportation expenditures include airfare and rental cars, which may indicate that trout anglers are willing to travel further to pursue their

sport. Table 26 shows the breakdown for both freshwater anglers who did and did not fish for trout along with the average expenditure per participant.

The \$3.6 billion spent by 7.2 million trout anglers in 2011 had an overall estimated economic impact of \$8.6 billion in 2011. The national economic impact represents all of the subsequent purchases made by the businesses and individuals with the dollars they received from the initial purchases made by trout anglers. The total economic impact associated with trout angler expenditures is estimated to support over 60,800 jobs and over \$2.6 billion in salaries, wages, and business earnings. Associated federal taxes are estimated to be over \$610 million and

State and local tax revenues of over \$500 million. Table 27 summarizes the estimated economic impact associated with trout angler expenditures in 2011.<sup>2</sup>

<sup>2</sup> The estimation of economic impacts uses the freshwater economic impact multipliers as reported in the American Sportfishing Association report "Sportfishing in America." Southwick Associates, January 2013. [http://asafishing.org/uploads/2011\\_ASASportfishing\\_in\\_America\\_Report\\_January\\_2013.pdf](http://asafishing.org/uploads/2011_ASASportfishing_in_America_Report_January_2013.pdf). This report estimated the total economic impact for freshwater fishing expenditures as reported in the USFWS National Survey. Using these multipliers to approximate the total economic impact for freshwater trout angling is believed to be appropriate given that trout angling is a subset of freshwater angling.

**Table 26. Measures of Economic Importance. Trip-related and Fishing Expenditures by Freshwater and Trout Anglers: 2011.**  
(Population 16 years of age or older. Excludes Great Lakes fishing.)

Expenditure Item	Freshwater Anglers Who Did Not Fish for Trout			Freshwater Anglers Who Fished for Trout		
	Total Expenditures (\$ thousand)	Percent of Total	Expenditures per Angler	Total Expenditures (\$ thousand)	Percent of Total	Expenditures per Angler
<b>Total, all items</b>	<b>\$13,828,916</b>	<b>100%</b>	<b>\$691</b>	<b>\$3,592,109</b>	<b>100%</b>	<b>\$502</b>
Total trip-related	\$10,406,581	76%	\$523	\$2,966,808	83%	\$415
Food and Lodging	\$3,884,356	28%	\$195	\$1,076,258	30%	\$150
Food	\$2,852,834	21%	\$143	\$730,498	20%	\$102
Lodging	\$1,031,523	8%	\$52	\$345,760	10%	\$48
Transportation	\$3,356,269	24%	\$169	\$1,106,250	31%	\$155
Public	\$196,293	1%	\$10	\$269,797	8%	\$38
Private	\$3,159,976	23%	\$159	\$836,453	23%	\$117
Other Trip Costs	\$3,165,956	23%	\$159	\$784,300	22%	\$110
Fishing equipment	\$3,422,335	24%	\$168	\$625,301	17%	\$87

Note: Fishing equipment includes such items as rods and reels, lines and leaders, tackle and bait. See Appendix for full definition.

**Table 27. Total Economic Impact of Trout Fishing Expenditures: 2011**  
(Population 16 years of age or older. Excludes Great Lakes fishing.)

Retail sales (expenditures)	\$3,592,108,900
Economic output or ripple effect	\$8,606,820,560
Salaries, wages, and business earnings	\$2,605,325,916
Jobs	60,835
Federal tax revenue	\$610,802,206
State and local tax revenue	\$507,878,126

Note: Trout fishing expenditures include trip-related expenditures and expenditures on fishing equipment. Expenditures do not include items that could be easily used in other recreational activities (e.g., camping equipment, binoculars, and boats).

### Freshwater Trout Angler Expenditures over Time

Since 1991 total expenditures for freshwater anglers who fished for trout has generally risen. In 1991 these anglers spent a total of \$607 million on fishing equipment and \$2.3 billion on trip-related expenses compared to the most recent estimate in 2011 of \$625 million in equipment expenses and nearly \$3.0 billion in trip-related expenses. (All expenditures were converted to 2011 dollars using the Consumer Price Index.) Trip-related expenditures in 2011 represent the highest amount spent over the previous 20 years as opposed to total equipment expenditures, which peaked in 1996 when freshwater trout anglers spent a total of \$873 million on equipment.

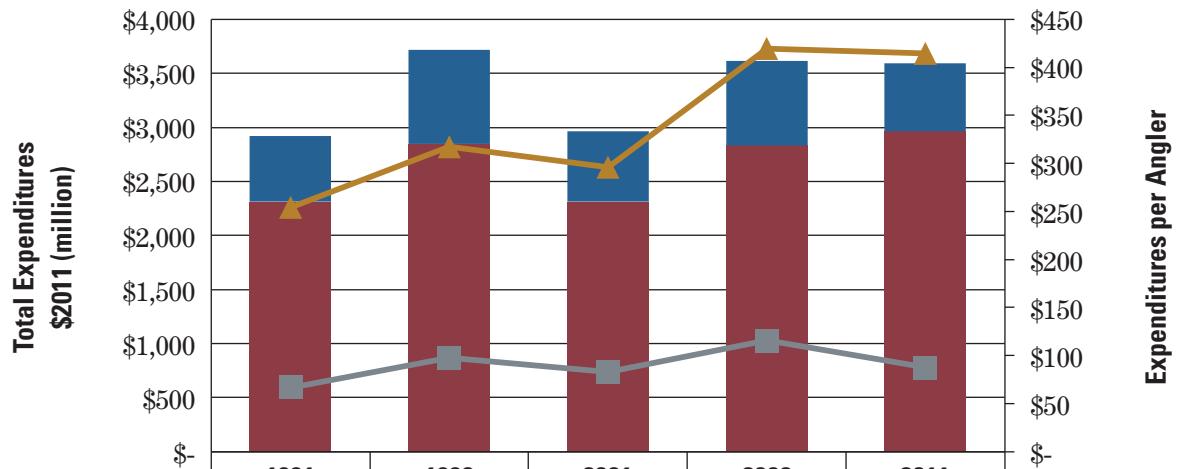
Interestingly, because the number of trout anglers has been on a general decline since 1991 (Figure 2) average expenditures per angler have fluctuated over time. Trip-related expenditures per angler, which were generally the same over the last two Survey periods (\$420

in 2006 and \$415 in 2011) jumped by about \$100 per angler compared to the two earlier Survey periods in 1996 (\$317 per angler) and 2001 (\$296 per angler). In contrast to a generally rising trip-related expenditure per angler over time equipment expenditures per angler has not followed the same pattern. In 2006 the average amount spent per angler was \$115, which was the greatest amount over the 20 year period. This dropped to \$87 per angler in 2011. In 1996, anglers spent an average of \$97 on equipment purchases, which was the second highest amount over the last 20 years.

Figure 23 shows the trend in total expenditures for fishing equipment and trip-related equipment per angler as well as the average amount spent per angler for the period 1991 through 2011. In looking at the trend in equipment expenditures it is important to remember that these expenditures provide general support to freshwater conservation activities through the Sport Fish Restoration Program. This program,

which was authorized under the 1950 Dingell-Johnson Sport Fish restoration Act, taxes sport fishing equipment at ten percent of the sale price. The collected monies are then re-apportioned to States to fund freshwater conservation programs and management activities. Freshwater conservation activities therefore are indirectly dependent on the active purchase of sport fishing equipment, which in turn is dependent on angler participation rates. As previously discussed, trout anglers in general are older and better off than the average American or freshwater non-trout angler, which probably has been playing a strong role in keeping equipment expenditures relatively stable. However, the apparent lack of recruitment of younger anglers portends a potential concern for the future funding of freshwater conservation programs once older anglers are no longer able to actively continue to participate in the sport and their equipment purchases correspondingly decline.

**Figure 23. U.S. Trout Angler Expenditures. Trip-Related and Fishing Equipment**  
(2011 dollars)



	1991	1996	2001	2006	2011
Fishing Equipment	\$607	\$873	\$647	\$780	\$625
Trip-related	\$2,316	\$2,847	\$2,314	\$2,833	\$2,967
Avg Trip-related per Angler	\$254	\$317	\$296	\$420	\$415
Avg Fishing Equipment per Angler	\$67	\$97	\$83	\$115	\$87

# Expenditures broken out by Demographics

This section looks more closely at the breakout of 2011 expenditures by demographic composition. Both trip-related and equipment expenditures are considered for both freshwater trout anglers and non-trout anglers.

## Gender

Male trout anglers spent an overall \$2.7 billion on their activities in 2011 compared to \$843 million spent by female trout anglers. In 2011, 80 percent of total expenditures by male trout anglers were on trip-related expenses compared to over 90 percent for female trout anglers. Conversely, male trout anglers spent 20 percent of their total purchases on equipment and female trout anglers less than 10 percent.

In looking at the breakdown of total trip-related and equipment expenditures, male trout anglers accounted for 74 percent of all trip-related expenditures and nearly 88 percent of all equipment expenditures. Conversely, female trout anglers accounted for 26 percent of all trip-related expenditures and 12 percent of equipment expenditures. While trip-related expenditures are very similar to the proportion of male trout anglers (76 percent) and female (24 percent), males tended to spend more than females on equipment. Nearly 88 percent of equipment purchases were made by males compared to 12 percent for females.

Interestingly, expenditure patterns were slightly different for non-trout anglers. Males accounted for proportionally more

on total trip expenditures (83 percent) compared to females (17 percent) even though females constitute a slightly higher percentage of non-trout anglers (27 percent) than female trout anglers.

On average, there is not much difference between the average total expenditures for a male trout angler and a female trout angler. In 2011, a male trout angler spent on average a total of \$505 and a female \$490. There is a difference of course in the amount spent on trip-related items and equipment. Male trout anglers spent on average \$405 on trip-related expenses and \$100 on equipment compared to \$445 on trip-related expenses for an average female trout angler and \$45 on equipment. Table 28 shows the breakdown of expenditures by gender.

**Table 28. Expenditures by Gender: 2011.**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
Male	\$2,201	\$548	\$2,749	80%	20%	\$8,675	\$2,803	\$11,479	76%	24%
Female	\$766	\$77	\$843	91%	9%	\$1,732	\$619	\$2,351	74%	26%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
Male	74%	88%	77%	–	–	83%	82%	83%	–	–
Female	26%	12%	23%	–	–	17%	18%	17%	–	–
<b>Average Expenditure per Participant</b>										
Male	\$405	\$101	\$506	–	–	\$594	\$192	\$786	–	–
Female	\$445	\$45	\$490	–	–	\$326	\$117	\$443	–	–



### Expenditures by Density (Urban/Rural)

Urban trout anglers spent \$2.5 billion overall on their activities in 2011 compared to \$1.0 billion spent by rural trout anglers. Looking closer at expenditures by density shows that expenditure patterns are not at all that different between urban and rural residents. In 2011, 83 percent of total expenditures by urban residents were on trip-related expenses compared to 80 percent for rural residents. Urban residents spent 17 percent of their total purchases on equipment and rural residents about 20 percent. Both urban and rural trout anglers tended to spend

more of their total budget on trip-related expenses than other freshwater anglers.

In looking at the breakdown of total trip-related and equipment expenditures, urban residents accounted for 72 percent of all trip-related expenditures and 68 percent of all equipment expenditures. Conversely, rural residents accounted for 28 percent of all trip-related expenditures and 32 percent of equipment expenditures. In comparison, rural residents accounted for a higher percentage of spending for non-trout anglers. In 2011, non-trout freshwater anglers that were rural

residents accounted for 42 percent of trip-related expenditures and 49 percent of equipment expenditures.

On average, an urban trout angler spent \$552 in 2011 on their freshwater fishing activities and rural trout anglers spent on average \$409. For an urban trout angler, \$461 was spent on average for trip-related expenses and \$91 for equipment compared to \$329 on trip-related expenses and \$81 on equipment for a rural trout angler. Table 29 shows the breakdown of expenditures by urban/rural density.

**Table 29. Expenditures by Urban/Rural: 2011.**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
Urban	\$2,146	\$424	\$2,570	84%	16%	\$6,026	\$1,734	\$7,760	78%	22%
Rural	\$817	\$200	\$1,017	80%	20%	\$4,370	\$1,686	\$6,055	72%	28%
<b>Total</b>	<b>\$2,963</b>	<b>\$624</b>	<b>\$3,587</b>	<b>83%</b>	<b>17%</b>	<b>\$10,396</b>	<b>\$3,419</b>	<b>\$13,815</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
Urban	72%	68%	72%	–	–	58.0%	50.7%	56.2%	–	–
Rural	28%	32%	28%	–	–	42.0%	49.3%	43.8%	–	–
<b>Average Expenditure per Participant</b>										
Urban	\$461	\$91	\$552	–	–	\$548	\$158	\$705	–	–
Rural	\$329	\$81	\$409	–	–	\$490	\$189	\$679	–	–

Note: The total expenditure estimates do not match the estimates in other demographic tables because the urban/rural status of some respondents was not made available by the Bureau of Census.

### Expenditures by Educational Attainment

College graduates and non-graduates spent the most of all freshwater trout anglers when broken out by educational attainment. This group spent a total of \$1.8 billion in 2011, which represents over one-half of total expenditures by all freshwater trout anglers. College graduates spent nearly 85 percent of their total expenditures on trip-related expenses and 15 percent on equipment. Freshwater trout anglers who attended graduate school contributed the least amount to overall expenditures

(15 percent) but this group spent the greatest proportion of their expenditures on equipment-related expenses (29 percent of expenditures by freshwater trout anglers who attended graduate school was on equipment).

In comparison, for freshwater anglers who did not fish for trout both high school and college graduates contributed about 45 percent to total expenditures (90 percent combined). These groups were also very similar in terms of how they spent their money. Both groups

spent about 75 percent of their purchases on trip-related expenses. Freshwater anglers who attended graduate school and did not fish for trout accounted for about ten percent of total freshwater, non-trout expenditures.

For freshwater trout anglers, the average annual expenditure per angler was \$459 for high school anglers, \$530 for college anglers, and \$516 for anglers who attended graduate school. Table 30 shows the breakdown of expenditures by educational attainment.

**Table 30. Expenditures by Educational Attainment: 2011.**  
(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
High School Graduates	\$1,022	\$180	\$1,202	85%	15%	\$4,691	\$1,562	\$6,252	75%	25%
College Graduates and Non-graduates	\$1,558	\$291	\$1,849	84%	16%	\$4,662	\$1,587	\$6,248	75%	25%
Graduate School	\$387	\$154	\$541	71%	29%	\$1,054	\$274	\$1,328	79%	21%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percentage Breakdown</b>										
High School Graduates	34%	29%	33%	–	–	45%	46%	45%	–	–
College Graduates and Non-graduates	53%	47%	51%	–	–	45%	46%	45%	–	–
Graduate School	13%	25%	15%	–	–	10%	8%	10%	–	–
<b>Average Expenditure per Participant</b>										
High School Graduates	\$390	\$69	\$459	–	–	\$520	\$173	\$693	–	–
College Graduates and Non-graduates	\$446	\$83	\$530	–	–	\$524	\$178	\$702	–	–
Graduate School	\$369	\$147	\$516	–	–	\$531	\$138	\$669	–	–

## Expenditures by Age

Trout anglers 25 to 34 years of age spent the most of all anglers when total expenditures are broken out by age-group. This group spent a total of \$862 million, which represents nearly one-quarter of all expenditures. This group spent over 85 percent of their total expenditures on trip-related expenses. Proportionally, trout anglers under 18 spent the greatest amount of their expenditures on equipment (nearly 25 percent) but in total this group's expenditures were the smallest of all age groups. In comparison to freshwater non-

trout anglers, all freshwater trout anglers spent a greater proportion of their expenditures on trip-related expenses than freshwater non-trout anglers.

In looking at the percentage breakdown by age group for total trip-related and equipment expenditures, freshwater trout anglers between the ages of 25 to 34 years accounted for 25 percent of total trip-related expenditures and anglers between the ages of 35 to 44 years and 55 to 64 years both accounted for nearly 22 percent of equipment purchases

(combined these two groups account for 44 percent of total equipment purchases).

For trout anglers, the average annual expenditure per angler was \$698 for 25 to 34 year olds, followed by \$529 for those 65 years and older and \$520 for those 45 to 54 years. Average angler expenditures were greater for freshwater anglers who did not fish for trout than for those who did fish for trout with the exception of anglers between the ages of 25 to 34 years. Table 31 shows the breakdown of expenditures by age group.

**Table 31. Expenditures by Age: 2011**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
Under 18	\$24	\$8	\$32	75%	25%	\$119	\$48	\$166	71%	29%
18 to 24 years	\$130	\$24	\$154	85%	15%	\$515	\$179	\$694	74%	26%
25 to 34 years	\$745	\$117	\$862	86%	14%	\$1,565	\$745	\$2,310	68%	32%
35 to 44 years	\$431	\$136	\$567	76%	24%	\$2,095	\$686	\$2,781	75%	25%
45 to 54 years	\$668	\$112	\$780	86%	14%	\$2,759	\$746	\$3,506	79%	21%
55 to 64 years	\$535	\$135	\$670	80%	20%	\$2,306	\$719	\$3,026	76%	24%
65 years and over	\$433	\$94	\$527	82%	18%	\$1,047	\$299	\$1,346	78%	22%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
Under 18	1%	1%	1%	–	–	1%	1%	1%	–	–
18 to 24 years	4%	4%	4%	–	–	5%	5%	5%	–	–
25 to 34 years	25%	19%	24%	–	–	15%	22%	17%	–	–
35 to 44 years	15%	22%	16%	–	–	20%	20%	20%	–	–
45 to 54 years	23%	18%	22%	–	–	27%	22%	25%	–	–
55 to 64 years	18%	22%	19%	–	–	22%	21%	22%	–	–
65 years and over	15%	15%	15%	–	–	10%	9%	10%	–	–
<b>Average Expenditure per Participant</b>										
Under 18	\$189	\$62	\$251	–	–	\$190	\$76	\$266	–	–
18 to 24 years	\$227	\$41	\$268	–	–	\$311	\$108	\$420	–	–
25 to 34 years	\$604	\$95	\$698	–	–	\$402	\$191	\$593	–	–
35 to 44 years	\$346	\$109	\$455	–	–	\$582	\$191	\$773	–	–
45 to 54 years	\$446	\$75	\$520	–	–	\$619	\$168	\$787	–	–
55 to 64 years	\$362	\$92	\$453	–	–	\$672	\$210	\$881	–	–
65 years and over	\$435	\$94	\$529	–	–	\$467	\$133	\$600	–	–

## Race

Of the nearly \$3.6 billion spent by freshwater trout anglers in 2011, nearly 90 percent of this total was spent by trout anglers who were White. Both African American and Asian American trout anglers accounted for about one percent of total expenditures apiece, while other races accounted for the remaining eight percent. This contrasts somewhat with the 2011 estimate that 88 percent of trout anglers were White, four percent African American, one percent Asian American, and six percent of another race. Both

African American and Asian American trout anglers tended to spend a greater percentage of their related expenditures on equipment purchases than other races (including Whites). All races, however, did spend a majority of their budget on trip-related expenses compared to equipment.

On average a White freshwater trout angler spent a total of \$513 in 2011, \$422 on trip-related expenses and \$90 on equipment. In contrast, White freshwater anglers who did not fish for trout spent more on trip-related expenses (\$541) and

on equipment (\$181). Freshwater trout anglers who were not classified as White, African American or Asian American (e.g., Native Americans, Eskimos, other races) spent on average more per angler than any other race. This group spent on average \$562 on trip-related expenses and \$73 on equipment for an average expenditure per angler or \$635. Table 32 presents the overall breakdown of 2011 expenditures for both freshwater anglers who fished for trout in addition to freshwater anglers who did not fish for trout.

**Table 32. Expenditures by Race: 2011.**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>			<i>Freshwater Anglers Who Did Not Fish for Trout</i>						
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
White	\$2,655	\$567	\$3,222	82%	18%	\$9,346	\$3,134	\$12,480	75%	25%
African American	\$32	\$18	\$50	63%	37%	\$525	\$166	\$691	76%	24%
Asian American	\$23	\$7	\$30	78%	22%	\$171	\$19	\$190	90%	10%
Other	\$256	\$33	\$289	89%	11%	\$364	\$104	\$468	78%	22%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
White	90%	91%	90%	–	–	90%	92%	90%	–	–
African American	1%	3%	1%	–	–	5%	5%	5%	–	–
Asian American	1%	1%	1%	–	–	2%	1%	1%	–	–
Other	9%	5%	8%	–	–	3%	3%	3%	–	–
<b>Average Expenditure per Participant</b>										
White	\$422	\$90	\$513	–	–	\$541	\$181	\$722	–	–
African American	\$103	\$59	\$162	–	–	\$378	\$119	\$497	–	–
Asian American	\$225	\$63	\$289	–	–	\$465	\$50	\$515	–	–
Other	\$562	\$73	\$635	–	–	\$418	\$120	\$538	–	–

### Expenditures by Ethnicity

Non-Hispanic freshwater anglers who fished for trout accounted for over 90 percent of total expenditures. Compared to freshwater anglers who did not fish for trout, Hispanic trout anglers constituted a higher percentage of total expenditures (nine percent compared to three percent). Both Hispanic and non-Hispanic freshwater trout anglers spent over 80 percent of their total expenditures on trip-related expenses.

In looking at the average expenditures per participant, Hispanic trout anglers spent an overall greater amount than a non-Hispanic trout angler. In 2011, a Hispanic trout angler spent on average \$615 on trip-related expenses and \$102 on equipment compared to a non-Hispanic trout angler who spent on average \$402 on trip-related expenses and \$86 on equipment. Hispanic trout anglers tended to spend more on their freshwater fishing activities than Hispanic anglers who did

not fish for trout, in contrast to non-Hispanic anglers. Table 33 presents the overall breakdown of 2011 expenditures for both freshwater anglers who fished for trout in addition to freshwater anglers who did not fish for trout.

**Table 33. Expenditures by Ethnicity: 2011.**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
Hispanic	\$268	\$44	\$312	86%	14%	\$320	\$94	\$414	77%	23%
Non-Hispanic	\$2,699	\$581	\$3,280	82%	18%	\$10,087	\$3,328	\$13,415	75%	25%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
Hispanic	9%	7%	9%	–	–	3%	3%	3%	–	–
Non-Hispanic	91%	93%	91%	–	–	97%	97%	97%	–	–
<b>Average Expenditures per Participant</b>										
Hispanic	\$615	\$102	\$717	–	–	\$385	\$113	\$498	–	–
Non-Hispanic	\$402	\$86	\$488	–	–	\$529	\$175	\$703	–	–



### Expenditures by Household Income

Freshwater trout anglers with households incomes greater than \$150,000 accounted for the highest percentage of total expenditures compared to all other household income groups. In 2011, 19 percent of total expenditures came from this group. This group spent more than any other group of trip-related items. In 2011 the average angler in this group spent approximately \$835 on trip-related items. Interestingly, this group spent

relatively little on equipment, on average only \$80 per angler, which was well below the average amount spent on equipment by anglers in lower earning households. Twenty-three percent of all equipment purchases were made by anglers in households earning between \$100,000 and \$149,000, while anglers in households with incomes between \$75,000 to \$99,000 accounted for 18 percent of total equipment expenditures. Interestingly, total expenditures by freshwater anglers

who did not fish for trout in households with incomes between \$50,000 to \$99,000 accounted for the majority of purchases. Table 34 presents the breakdown for angler expenditures by household income category for both freshwater anglers who fished for trout and for those that did not in 2011.

**Table 34. Expenditures by Household Income: 2011.**

(Population 16 years and older. Excludes Great Lakes fishing.)

	<i>Freshwater Trout Anglers</i>					<i>Freshwater Anglers Who Did Not Fish for Trout</i>				
	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Trip-related</i>	<i>Equipment</i>	<i>Total</i>	<i>Trip-related</i>	<i>Equipment</i>
<b>Total Expenditures (\$ million)</b>										
Less than \$20,000	\$141	\$21	\$162	87%	13%	\$467	\$158	\$625	75%	25%
\$20,000 to \$29,999	\$147	\$46	\$193	76%	24%	\$699	\$474	\$1,174	60%	40%
\$30,000 to \$39,999	\$159	\$63	\$222	71%	29%	\$1,119	\$295	\$1,414	79%	21%
\$40,000 to \$49,999	\$243	\$54	\$297	82%	18%	\$783	\$337	\$1,121	70%	30%
\$50,000 to \$74,999	\$456	\$76	\$532	86%	14%	\$1,915	\$537	\$2,451	78%	22%
\$75,000 to \$99,999	\$523	\$114	\$637	82%	18%	\$1,940	\$606	\$2,545	76%	24%
\$100,000 to \$149,999	\$440	\$147	\$587	75%	25%	\$1,575	\$483	\$2,058	77%	23%
\$150,000 or more	\$618	\$59	\$677	91%	9%	\$1,008	\$255	\$1,263	80%	20%
Not reported	\$239	\$46	\$285	84%	16%	\$900	\$279	\$1,179	76%	24%
<b>Total</b>	<b>\$2,967</b>	<b>\$625</b>	<b>\$3,592</b>	<b>83%</b>	<b>17%</b>	<b>\$10,407</b>	<b>\$3,423</b>	<b>\$13,829</b>	<b>75%</b>	<b>25%</b>
<b>Percent of Total</b>										
Less than \$20,000	5%	3%	5%	–	–	4%	5%	5%	–	–
\$20,000 to \$29,999	5%	7%	5%	–	–	7%	14%	8%	–	–
\$30,000 to \$39,999	5%	10%	6%	–	–	11%	9%	10%	–	–
\$40,000 to \$49,999	8%	9%	8%	–	–	8%	10%	8%	–	–
\$50,000 to \$74,999	15%	12%	15%	–	–	18%	16%	18%	–	–
\$75,000 to \$99,999	18%	18%	18%	–	–	19%	18%	18%	–	–
\$100,000 to \$149,999	15%	23%	16%	–	–	15%	14%	15%	–	–
\$150,000 or more	21%	9%	19%	–	–	10%	7%	9%	–	–
<b>Not reported</b>	<b>8%</b>	<b>7%</b>	<b>8%</b>	<b>–</b>	<b>–</b>	<b>9%</b>	<b>8%</b>	<b>9%</b>	<b>–</b>	<b>–</b>
<b>Average Expenditures per Angler</b>										
Less than \$20,000	\$219	\$32	\$251	–	–	\$235	\$80	\$315	–	–
\$20,000 to \$29,999	\$384	\$119	\$503	–	–	\$323	\$219	\$542	–	–
\$30,000 to \$39,999	\$273	\$109	\$382	–	–	\$605	\$159	\$765	–	–
\$40,000 to \$49,999	\$373	\$83	\$456	–	–	\$462	\$199	\$661	–	–
\$50,000 to \$74,999	\$375	\$63	\$438	–	–	\$517	\$145	\$661	–	–
\$75,000 to \$99,999	\$458	\$100	\$558	–	–	\$671	\$209	\$880	–	–
\$100,000 to \$149,999	\$406	\$135	\$540	–	–	\$709	\$217	\$926	–	–
\$150,000 or more	\$836	\$80	\$916	–	–	\$786	\$199	\$985	–	–

Note: Average expenditures per household exclude unreported incomes.

# Appendix A. Definitions

**Annual household income** – Total 2011 income of household members before taxes and other deductions.

**Auxiliary equipment** – Equipment owned primarily for wildlife-associated recreation. For the sportspersons section these include sleeping bags, packs, duffel bags, tents, binoculars and field glasses, special fishing and hunting clothing, foul weather gear, boots and waders, maintenance and repair of equipment, and processing and taxidermy costs.

**Big game** – Bear, deer, elk, moose, wild turkey, and similar large animals that are hunted.

## Census Divisions

### East North Central

Illinois  
Indiana  
Michigan  
Ohio  
Wisconsin

### East South Central

Alabama  
Kentucky  
Mississippi  
Tennessee

### Middle Atlantic

New Jersey  
New York  
Pennsylvania

### Mountain

Arizona  
Colorado  
Idaho  
Montana  
Nevada  
New Mexico  
Utah  
Wyoming

### New England

Connecticut  
Maine  
Massachusetts  
New Hampshire  
Rhode Island  
Vermont

### Pacific

Alaska  
California  
Hawaii  
Oregon  
Washington

### South Atlantic

Delaware  
District of Columbia  
Florida  
Georgia  
Maryland  
North Carolina  
South Carolina  
Virginia  
West Virginia

### West North Central

Kansas  
Iowa  
Minnesota  
Missouri  
Nebraska  
North Dakota  
South Dakota

### West South Central

Arkansas  
Louisiana  
Oklahoma  
Texas

**Day** – Any part of a day spent participating in a given activity. For example, if someone hunted two hours one day and three hours another day, it would be reported as two days of hunting. If someone hunted two hours in the morning and three hours in the afternoon of the same day, it would be considered one day of hunting.

**Education** – The highest completed grade of school or year of college.

**Expenditures** – Money spent in 2011 for wildlife-related recreation trips in the United States, wildlife-related recreational equipment purchased in the United States, and other items. The “other items” were books and magazines, membership dues and contributions, land leasing or owning, hunting and fishing licenses, and plantings, all for the

purpose of wildlife-related recreation. Expenditures included both money spent by participants for themselves and the value of gifts they received.

**Fishing** – The sport of catching or attempting to catch fish with a hook and line, bow and arrow, or spear; it also includes catching or gathering shellfish (clams, crabs, etc.); and the noncommercial seining or netting of fish, unless the fish are for use as bait. For example, seining for smelt is fishing, but seining for bait minnows is not included as fishing.

**Fishing equipment** – Items owned primarily for fishing:

- Rods, reels, poles, and rodmaking components
- Lines and leaders
- Artificial lures, flies, baits, and dressing for flies or lines
- Hooks, sinkers, swivels, and other items attached to a line, except lures and baits
- Tackle boxes
- Creels, stringers, fish bags, landing nets, and gaff hooks
- Minnow traps, seines, and bait containers
- Depth finders, fish finders, and other electronic fishing devices
- Ice fishing equipment
- Other fishing equipment

**Freshwater** – Reservoirs, lakes, ponds, and the nontidal portions of rivers and streams.

**Great Lakes fishing** – Fishing in Lakes Superior, Michigan, Huron, St. Clair, Erie, and Ontario, their connecting waters such as the St. Mary’s River system, Detroit River, St. Clair River, and the Niagara River, and the St. Lawrence River south of the bridge at Cornwall, New York. Great Lakes fishing includes fishing in tributaries of the Great Lakes for smelt, steelhead, and salmon.

**Hunting** – The sport of shooting or attempting to shoot wildlife with firearms or archery equipment.

**Metropolitan Statistical Area (MSA)** – Except in the New England States, an MSA is a county or group of contiguous counties containing at least one city of 50,000 or more inhabitants or twin cities (i.e., cities with contiguous boundaries and constituting, for general social and economic purposes, a single community) with a combined population of at least 50,000. Also included in an MSA are contiguous counties that are socially and economically integrated with the central city. In the New England States, an MSA consists of towns and cities instead of counties. Each MSA must include at least one central city. See the Bureau of Census publication *State and Metropolitan Area Data Book 1997–1998* for more detailed information on MSAs.

**Migratory birds** – Birds that regularly migrate from one region or climate to another such as ducks, geese, and doves and other birds that may be hunted.

**Multiple responses** – The term used to reflect the fact that individuals or their characteristics fall into more than one reporting category. An example of a big game hunter who hunted for deer and elk demonstrates the effect of multiple responses. In this case, adding the number of deer hunters (one) and elk hunters (one) would overstate the number of big game hunters (one) because deer and elk hunters are not mutually exclusive categories. In contrast, for example, total participants is the sum of male and female participants, because “male” and “female” are mutually exclusive categories.

**Nonresidents** – Individuals who do not live in the State being reported. For example, a person living in Texas who watches whales in California is a nonresidential wildlife-watcher in California.

**Nonresponse** – A term used to reflect the fact that some Survey respondents provide incomplete sets of information. For example, a Survey respondent may have been unable to identify the primary type of hunting for which a gun was bought. Total hunting expenditure estimates will include the gun purchase, but it will not appear as spending for big game or any other type of hunting. Nonresponses result in reported totals that are greater than the sum of their parts.

**Other animals** – Coyotes, crows, foxes, groundhogs, prairie dogs, raccoons, alligators, and similar animals that can be legally hunted and are not classified as big game, small game, or migratory birds. They may be classified as unprotected or predatory animals by the State in which they are hunted. Feral pigs are classified as “other animals” in all States except Hawaii, where they are considered big game.

**Participants** – Individuals who engage in fishing, hunting, or a wildlife-watching activity. Unless otherwise stated, a person has to have hunted, fished, or wildlife watched in 2011 to be considered a participant.

**Primary purpose** – The principal motivation for an activity, trip, or expenditure.

**Residents** – Individuals who lived in the State being reported. For example, a person who lives in California and watches whales in California is a residential wildlife watcher in California.

**Rural** – All territory, population, and housing units located outside of urbanized areas and urban clusters, as determined by the Bureau of Census.

**Small game** – Grouse, pheasants, quail, rabbits, squirrels, and similar small animals for which States have small game seasons and bag limits.

**Special equipment** – Big-ticket equipment items that are owned primarily for wildlife-related recreation:

- Bass boats
- Other types of motor boats
- Canoes and other types of nonmotor boats
- Boat motors, boat trailer/hitches, and other boat accessories
- Pickups, campers, vans, travel or tent trailers, motor homes, house trailers, recreational vehicles (RVs)
- Cabins
- Off-the-road vehicles such as trail bikes, all terrain vehicles (ATVs), dune buggies, four-wheelers, 4x4 vehicles, and snowmobiles
- Other special equipment

**Spenders** – These are people who spent money on fishing, hunting, or wildlife-watching activities or equipment and also participated in those activities.

**Sportspersons** – Individuals who engaged in fishing, hunting, or both.

**Trip** – An outing involving fishing, hunting, or wildlife watching. A trip may begin from an individual’s principal residence or from another place, such as a vacation home or the home of a relative. A trip may last an hour, a day, or many days.

**Type of fishing** – There are three types of fishing: (1) freshwater except Great Lakes, (2) Great Lakes, and (3) saltwater.

**Type of hunting** – There are four types of hunting: (1) big game, (2) small game, (3) migratory bird, and (4) other animal.

**Unspecified expenditure** – An item that was purchased for use in both fishing and hunting, rather than primarily one or the other. Auxiliary equipment, special equipment, magazines and books, and membership dues and contributions are the items for which a purchase could be categorized as “unspecified”.

**Urban** – All territory, population, and housing units located within boundaries that encompass densely settled territory, consisting of core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. Under certain conditions, less densely settled territory may be included, as determined by the Bureau of Census.

# Bibliography

Felder, Anthony and David M. Nickum. "The 1991 Economic Impact of Sport Fishing in the United States." Sport Fishing Institute.

Harris, Anna. 2010. "Trout Fishing in 2006: A Demographic and Economic Analysis, Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife Associated Recreation." U.S. Fish and Wildlife Service. Report 2006-6.

Leonard, Jerry. 2005. "Black Bass and Trout Fishing in the United States, Addendum to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation." U.S. Fish and Wildlife Service. Report 2001-10.

Leonard, Jerry. 2007. "Fishing and Hunting Recruitment and Retention in the U.S. from 1990 to 2005, Addendum to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation." U.S. Fish and Wildlife Service. Report 2001-11.

Southwick Associates. Sportfishing in America: An Economic Force for Conservation. Produced for the American Sportfishing Association (ASA) under a U.S. Fish and Wildlife Service (USFWS) Sport Fish Restoration grant (F12AP00137, VA M-26-R) awarded by the Association of Fish and Wildlife Agencies (AFWA), 2012.

Pullis, Genevieve. 1999. "Trout Fishing in the U.S., Addendum to the 1996 National Survey of fishing, Hunting, and Wildlife-Associated Recreation." U.S. Fish and Wildlife Service. Report 96-4.

"Qualifying Urban Areas for the 2010 Census," 77 Federal Register 59 (March 27, 2012), pp. 18651-18668.

U.S. Department of Labor, Bureau of Labor Statistics, CPI Inflation Calculator, [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm)

U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 1991 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

U.S. Department of the Interior, Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.

Waddington, David G. and Andrew Laughland. 1996. "Trout Fishing in the U.S., Addendum to the 1991 National Survey of fishing, Hunting, and Wildlife-Associated Recreation." U.S. Fish and Wildlife Service. Report 91-5.





**U.S. Department of the Interior  
U.S. Fish & Wildlife Service**



**March 2015**