

The Relationship between Wildlife Watchers, Hunters, and Anglers

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

Report 2011-7



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November 2015

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This report is intended to complement the National and State Reports for the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The conclusions in this report are the author's and do not represent official positions of the U.S. Fish and Wildlife Service.

The author thanks Sylvia Cabrera, Richard Aiken, and Jerry Leonard for valuable input into this report.

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Introduction

In 2011 there were 90.1 million U.S. residents 16 years old and older who participated in wildlife-related recreation. This total of wildlife-related recreationists is often split into two different types: sportsperson and wildlife-associated. Wildlife-associated recreation includes activities such as feeding, observing, or photographing wildlife. Sportsperson recreation includes both hunting and fishing. In 2011, participants in wildlife-associated activities, who are often referred to as wildlife watchers, totaled 71.8 million, and participants in sportsperson activities totaled 37.4 million.

A graphical representation of sportspersons and wildlife watchers is presented in Figure 1.

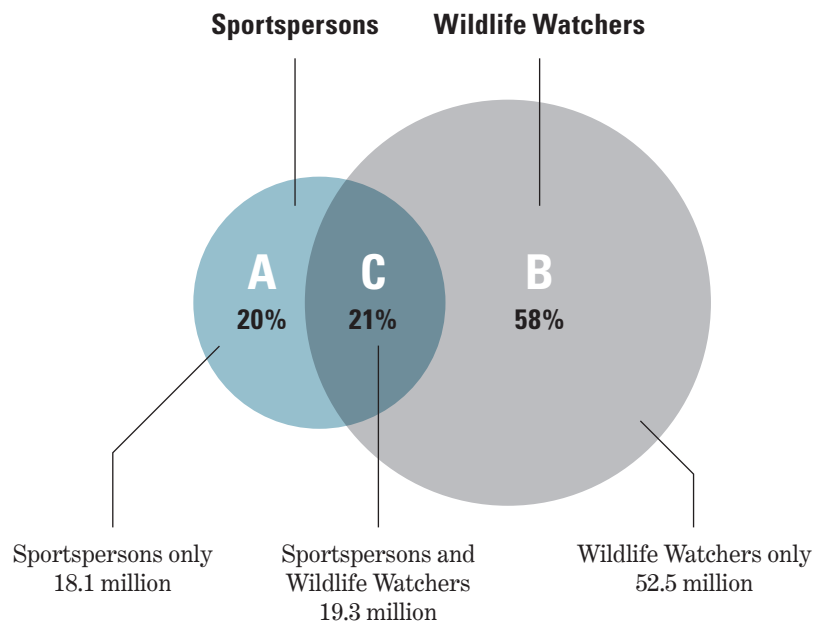
Fifty-eight percent of wildlife-related recreationists were wildlife watchers only, 20% were sportspersons only, and 21% were both wildlife watchers and sportspersons.

The populations of sportspersons and wildlife watchers are certainly interrelated. Both share a mutual concern and appreciation for the outdoors and wildlife resources. Moreover, there are a relatively large number who participate in both types of recreation.

Of the 37.4 million sportspersons (anglers and hunters), 19.3 million were also wildlife watchers in 2011. To some that feel sportspersons and wildlife watchers have few common interests, this statistic may come as a surprise. Pick a sportsperson at random and there is nearly a 52% chance that he or she will also be a wildlife watcher. Or, put another way, just under half of sportspersons will not participate in any wildlife watching.

Despite the interrelationship, the two groups are sometimes considered or treated as separate and distinct by professionals involved with wildlife recreation from a management, marketing, advocacy, or academic

Figure 1. Wildlife-Related Recreationists, by type of Activity: 2011
(Population 16 years of age and older.)



Note: Sportspersons are hunters and anglers. Wildlife watchers are observers, photographers, and feeders of wildlife.

perspective. The notion of separate and distinct groups of recreationists is due in part to the existence of interest groups who represent each group nearly exclusively. These interest groups sometimes have divergent opinions about resource management objectives; and, when conflict arises, both sides can become emphatically opposed to one another.

To be sure, besides their sometimes differing resource management objectives, there are other important differences between the two groups. For example, there are some notable differences in their socioeconomic characteristics. The proportion of the U.S. population who participates in wildlife watching tends to go up with age, whereas the proportion who participates in sporting activities, i.e., hunting or fishing, tends to go

down. When considered in conjunction with information about ongoing demographic changes in the U.S., these socioeconomic characteristics have important implications about recreation participation in the future.

This report seeks to broaden the understanding of the interrelationship between sportspersons and wildlife watchers through:

- Analyzing sportspersons participation of those who wildlife watched. In other words, segment total wildlife-watching participants by sportsperson classification, whether or not the wildlife watcher is a sportsperson or a non-sportsperson. After segmenting wildlife-watching participants by sportsperson classification, compare the types of wildlife-watching activities enjoyed by both groups.

- Compare the socioeconomic characteristics of the three different groups of recreationists shown in Figure 1: wildlife watchers exclusively, sportspersons exclusively, and those who are both sportspersons and wildlife watchers. The socioeconomic characteristics compared include population size of residence, geographic region of residence, age, sex, ethnicity, race, income, and education.
- Examine wildlife-related recreation spending by the three different groups.
- Examine the relationship between historical hunting/fishing participation and wildlife watching. Lastly, the trends of crossover participation from 2001, 2006, and 2011 will be graphically represented and analyzed.

Knowledge obtained through this analysis could be useful for a variety of reasons. Differing participation patterns among sportspersons and wildlife watchers by age and ethnicity could indicate how aging baby boomers and increasing urbanization in the U.S. may affect recreation participation in the future. Knowledge of expenditures by the different groups could give manufacturers a better understanding of total sales potential for different types of products. Knowledge of the relationship between prior hunting and fishing activity and wildlife watching may foster greater consensus about the appropriate stewardship of resources among interest groups or give resource managers guidance in designing resource plans that are capable of bringing the greatest satisfaction to all recreationists. Seeing how changes in the proportions of participants who either specialize or crossover over time will potentially give an indication as to what should be expected in the near term.

Report Organization

The report is organized into five parts:

Part One: The “Wildlife-Watching Participation by Sportsperson Classification” section examines the size and geographic dispersion of the wildlife-watching population by type of activity and by sportsperson classification. Estimates of total participation levels and days of participation are made for numerous aspects of around-the-home and away-from-home wildlife watching.

Part Two: The “Socioeconomic Characteristics” section compares the characteristics of the three different groups of recreationists who appear in Figure 1: wildlife watchers exclusively, sportspersons exclusively, and those who are both sportspersons and wildlife watchers.

Part Three: The “Expenditures by Type of Recreationist” section provides a detailed analysis of all wildlife-related recreation spending by recreationist type. Recreationists are treated as either watchers exclusively, sportspersons exclusively, or sportspersons and wildlife watchers.

Part Four: The “Historical Fishing and Hunting Activity of Wildlife Watchers” section examines the percent of all wildlife watchers who have participated in hunting or fishing in the past.

Part Five: Lastly, in the “Crossover Participation Trends: 2001, 2006, and 2011” section historical trends are analyzed and represented graphically for participation, days, and expenditures.

Data and Definitions

All reported data contained herein are from the *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR)*.¹ Consequently, all participation, dollar expenditures, and hunting behavior statistics are representative of 2011. Additionally, all data represents persons age 16 years and older.

The exact questions used to identify wildlife watchers appear in Appendix A; but, in summary, the following definitions are applicable.

An away-from-home wildlife watcher is one who took trips or outings at least one mile from home for the primary purpose of observing, photographing, or feeding wildlife. Trips do not include those to zoos, circuses, aquariums, museums, nor those for hunting, fishing, or scouting for game.

An around-the-home wildlife watcher is one who participated in one or more of the following activities within a one

mile radius of home: photographing any type of wildlife; feeding any type of wildlife; visiting public parks or publicly owned natural areas for the purpose of observing, photographing, or feeding wildlife; taking a special interest in wildlife other than simply noticing wildlife while doing other activities; or maintaining natural areas or plantings for the benefit of wildlife.

For the sake of brevity wildlife watchers are often referred to simply as watchers. The activity of wildlife watching is referred to simply as watching. Sportsperson activities, i.e., hunting and fishing, are referred to simply as sporting activities. Recreationists that do not participate in sporting activities are referred to as non-sportspersons. The three recreationist groups shown in Figure 1 are referred to as follows: *watchers only* participate in wildlife watching exclusively; *sportspersons only* participate in sporting activities exclusively; *watchers-sportspersons* participate in both watching and sporting activities.

¹ FHWAR documents are available on the U.S. Fish and Wildlife Service webpage: http://wsfrprograms.fws.gov/Subpages/NationalSurvey/National_Survey.htm

Part One—Wildlife-Watching Participation by Sportsperson Classification

Analysis of wildlife watching by sportsperson classification reveals the portion of wildlife-associated recreation attributable to sportspersons and differences in the wildlife-associated recreation activities between sportspersons and non-sportspersons.

Wildlife Watching Nationally

Table 1 reveals the number of participants and days of wildlife watching by type of activity and sportsperson classification. It reveals that a sizeable portion of all wildlife-associated recreationists in 2011, 29%, were also sportspersons. The remaining percentages in column five can be used to gauge which activities have a comparatively higher proportion attributable to sportspersons. For example, a comparison of row two and row six reveals that sportspersons make up a substantially higher share of participants in away-from-home than around-the-home wildlife watching. They make up 38% of away-from-home watchers and 28% of around-the-home watchers. Comparisons of percentages are useful in determining how wildlife-watching activities of sportspersons differ from those of non-sportspersons.

Table 1 indicates little variation in sportspersons' share of wildlife-watching activities within the broader around-the-home and away-from-home classifications. The proportion of sportspersons within all activities classified as away from home are close to 38%. There is a slight increase in share for feeding wildlife, 48%, and a slight decrease in share for photographing, 34%, within the away-from-home contingent. Interestingly, within the around-the-home activities, the share of sportspersons is slightly higher for photographing wildlife.

Table 1 also shows the total days and average days of wildlife watching around the home and away from home. The total number of days around the home and away from home was 5.9 billion, and the proportion attributable to sportspersons is higher than that of participants, 33%.

Table 1. Wildlife-Watching Participants and Days by Type of Activity and Sportsperson Classification: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All</i>	<i>Non-</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
	<i>All</i>	<i>Sportspersons</i>	<i>of All</i>	<i>Sportspersons</i>	<i>of All</i>
Participants					
All Wildlife Watching	71,776	51,015	71%	20,761	29%
Away from Home	22,496	14,016	62%	8,480	38%
Observe Wildlife	19,808	12,804	65%	7,004	35%
Photograph Wildlife	12,354	8,198	66%	4,156	34%
Feed Wildlife	5,399	2,790	52%	2,609	48%
Around the Home	68,598	49,110	72%	19,488	28%
Observe Wildlife	45,046	31,274	69%	13,772	31%
Photograph Wildlife	25,370	17,271	68%	8,099	32%
Feed Wildlife	52,817	37,499	71%	15,318	29%
Visit Parks or Natural Areas	12,311	8,376	68%	3,935	32%
Maintain Plantings or Natural Areas	13,399	9,663	72%	3,736	28%
Average Days of Participation					
All Wildlife Watching	82	77		95	
Away from Home	15	14		16	
Observe Wildlife	14	12		16	
Photograph Wildlife	9	8		11	
Feed Wildlife	11	11		11	
Around the Home	81	76		94	
Observe Wildlife	109	112		103	
Photograph Wildlife	16	13		21	
Visit Parks or Natural Areas	24	22		27	
Total Days					
All Wildlife Watching	5,912,345	3,944,570	67%	1,967,775	33%
Away from Home	335,625	200,268	60%	135,357	40%
Observe Wildlife	268,798	158,926	59%	109,872	41%
Photograph Wildlife	110,459	66,129	60%	44,330	40%
Feed Wildlife	59,255	31,283	53%	27,972	47%
Around the Home	5,576,720	3,744,302	67%	1,832,418	33%
Observe Wildlife	4,923,317	3,506,327	71%	1,416,990	29%
Photograph Wildlife	394,959	226,373	57%	168,586	43%
Visit Parks or Natural Areas	289,937	183,512	63%	106,425	37%

The average days of wildlife watching of sportspersons and non-sportspersons are very similar for many of the subcategories, but a few differences, such as photographing and visiting parks or natural areas, causes the overall average for sportspersons to be significantly higher than that of the non-sportspersons.

Table 2 displays the distribution of away-from-home and around-the-home watchers by species of wildlife observed. Sportspersons and non-sportspersons do have some apparent differences in species viewed. For around the home, sportspersons have an appreciably higher concentration of watchers who observe fish and other wildlife, large land mammals, and reptiles or amphibians. Sportspersons' shares of total participation for these species are 41%, 37%, and 31% respectively, which is higher than their overall around-the-home share of 28%. Sportspersons have a relatively level participation rate among all away-from-home species other than marine mammals and other wildlife which are both at 31% when compared to the total away-from-home participation rate of 38%.

In summary, whether from a days or total participants perspective, sportspersons comprise a sizeable portion of wildlife watching. Further, the information in Tables 1 and 2 reveals that sportspersons have a higher number of average days because of a concentration in photography and visiting parks or natural areas compared to non-sportspersons. Some apparent differences in species observed around the home explain that on those days to photograph or visit parks or natural areas, the sportspersons were looking for fish or other wildlife and large land mammals. This makes sense in that this is the game that sportspersons are after; however scouting for game was explicitly mentioned as not counting toward wildlife-associated recreation.

Table 2. Participants in Wildlife Watching by Species and Sportsperson Classification: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Away from Home, Total	22,496	14,016	62%	8,480	38%
Total Birds	18,924	12,630	67%	6,294	33%
Birds of Prey	12,890	8,188	64%	4,702	36%
Waterfowl	13,333	8,673	65%	4,660	35%
Water Birds	10,606	6,836	64%	3,770	36%
Songbirds	12,120	7,852	65%	4,268	35%
Other Birds	6,857	4,324	63%	2,533	37%
Total Land Mammals	13,653	8,836	65%	4,817	35%
Large Land Mammals	10,369	6,285	61%	4,084	39%
Small Land Mammals	10,299	6,922	67%	3,377	33%
Fish	6,358	3,847	61%	2,511	39%
Marine Mammals	4,008	2,770	69%	1,238	31%
Other Wildlife	10,113	6,973	69%	3,140	31%
Around the Home, Total	68,598	49,110	72%	19,488	28%
Birds	41,346	29,573	72%	11,773	28%
Large Land Mammals	22,056	13,839	63%	8,217	37%
Small Land Mammals	31,629	22,761	72%	8,868	28%
Reptiles and Amphibians	14,132	9,755	69%	4,377	31%
Insects	16,589	11,822	71%	4,767	29%
Fish and Other Wildlife	8,388	4,930	59%	3,458	41%

Wildlife Watching by State

Tables 3, 4, and 5 reveal the number of watchers by sportsperson classification and state where watching occurred. Table 3 presents the state distribution of away-from-home watchers, and Table 4 presents the state distribution of around-the-home watchers. Table 5 presents the total recreationists by type shown in Figure 1: *watchers only*, *sportspersons only*, and *watchers-sportspersons*. Generally, the tables reveal a wide variation in the proportional distribution of watchers with respect to sportsperson classification.

Table 3 reveals that the proportional distribution of away-from-home watchers between non-sportspersons and sportspersons varies substantially by state. At 69% Arkansas and Kentucky have the highest sportsperson share. Oklahoma and Tennessee follow with 67% and 61% sportspersons, respectively. Altogether, sportspersons account for 50% or more of away-from-home watchers in 7 states. States with the least sportsperson share of away-from-home watchers are Maine, Hawaii, Wisconsin, and Massachusetts with 11%, 12%, 15%, and 16%, respectively.

Table 3. Away-from-Home Wildlife Watchers by Sportsperson Classification and State Where Activity Occurred: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Away- from-Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	336	201	60%	135	40%
Alaska	498	327	66%	171	34%
Arizona	732	514	70%	218	30%
Arkansas	137	42	31%	95	69%
California	2,790	2,170	78%	620	22%
Colorado	902	711	79%	191	21%
Connecticut	441	312	71%	129	29%
Delaware	89	63	71%	26	29%
Florida	1,902	1,222	64%	680	36%
Georgia	1,129	603	53%	526	47%
Hawaii	295	260	88%	35	12%
Idaho	281	158	56%	123	44%
Illinois	704	503	71%	201	29%
Indiana	413	232	56%	181	44%
Iowa	212	160	75%	52	25%
Kansas	169	117	69%	52	31%
Kentucky	348	108	31%	240	69%
Louisiana	371	294	79%	77	21%
Maine	538	478	89%	60	11%
Maryland	421	341	81%	80	19%
Massachusetts	662	554	84%	108	16%
Michigan	958	567	59%	391	41%
Minnesota	509	322	63%	187	37%
Mississippi	262	156	60%	106	40%
Missouri	579	416	72%	163	28%
Montana	230	133	58%	97	42%
Nebraska	155	87	56%	68	44%
Nevada	287	229	80%	58	20%
New Hampshire	311	227	73%	84	27%
New Jersey	605	441	73%	164	27%
New Mexico	261	186	71%	75	29%
New York	1,157	791	68%	366	32%
North Carolina	703	330	47%	373	53%
North Dakota	(NA)	(NA)	(NA)	(NA)	(NA)
Ohio	744	591	79%	153	21%
Oklahoma	411	135	33%	276	67%
Oregon	537	373	69%	164	31%
Pennsylvania	809	431	53%	378	47%
Rhode Island	82	42	51%	40	49%
South Carolina	378	207	55%	171	45%
South Dakota	221	154	70%	67	30%
Tennessee	787	308	39%	479	61%
Texas	1,026	664	65%	362	35%
Utah	402	225	56%	177	44%
Vermont	177	106	60%	71	40%
Virginia	759	557	73%	202	27%
Washington	891	656	74%	235	26%
West Virginia	348	204	59%	144	41%
Wisconsin	499	423	85%	76	15%
Wyoming	435	201	46%	234	54%

(NA) Not Available

Table 4 reveals that the distribution of around-the-home watchers between non-sportspersons and sportspersons also varies substantially by state. At 64% Alaska has the highest sportsperson share. Oklahoma, Montana, and Wyoming follow with 55%, 53%, and 50%, respectively. At 14% Nevada has the lowest sportsperson share for around-the-home watchers. California and New York follow with 16% and 18%, while Nebraska and Colorado have 19%.

Table 4. Around-the-Home Wildlife Watchers by Sportsperson Classification and State of Residence: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around-the-Home</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	1,073	693	65%	380	35%
Alaska	229	83	36%	146	64%
Arizona	1,222	800	65%	422	35%
Arkansas	820	555	68%	265	32%
California	5,939	4,986	84%	953	16%
Colorado	1,299	1,054	81%	245	19%
Connecticut	1,053	832	79%	221	21%
Delaware	200	144	72%	56	28%
Florida	3,312	2,463	74%	849	26%
Georgia	2,054	1,227	60%	827	40%
Hawaii	115	92	80%	23	20%
Idaho	439	303	69%	136	31%
Illinois	2,752	1,954	71%	798	29%
Indiana	1,657	1,143	69%	514	31%
Iowa	758	472	62%	286	38%
Kansas	751	547	73%	204	27%
Kentucky	1,117	824	74%	293	26%
Louisiana	794	572	72%	222	28%
Maine	399	321	80%	78	20%
Maryland	1,203	934	78%	269	22%
Massachusetts	1,490	1,196	80%	294	20%
Michigan	2,865	2,049	72%	816	28%
Minnesota	1,419	848	60%	571	40%
Mississippi	620	363	59%	257	41%
Missouri	1,538	1,080	70%	458	30%
Montana	235	111	47%	124	53%
Nebraska	325	263	81%	62	19%
Nevada	465	401	86%	64	14%
New Hampshire	387	283	73%	104	27%
New Jersey	1,661	1,255	76%	406	24%
New Mexico	465	328	71%	137	29%
New York	3,856	3,170	82%	686	18%
North Carolina	2,110	1,463	69%	647	31%
North Dakota	(NA)	(NA)	(NA)	(NA)	(NA)
Ohio	3,142	2,494	79%	648	21%
Oklahoma	1,225	546	45%	679	55%
Oregon	1,206	900	75%	306	25%
Pennsylvania	3,228	2,523	78%	705	22%
Rhode Island	260	199	77%	61	23%
South Carolina	915	617	67%	298	33%
South Dakota	267	175	66%	92	34%
Tennessee	1,584	1,055	67%	529	33%
Texas	4,249	2,565	60%	1,684	40%
Utah	430	300	70%	130	30%
Vermont	270	190	70%	80	30%
Virginia	2,185	1,655	76%	530	24%
Washington	1,849	1,266	68%	583	32%
West Virginia	743	445	60%	298	40%
Wisconsin	2,076	1,141	55%	935	45%
Wyoming	161	81	50%	80	50%

(NA) Not Available

Figure 2. Percent Away-from-Home Wildlife Watchers Who Were also Sportspersons

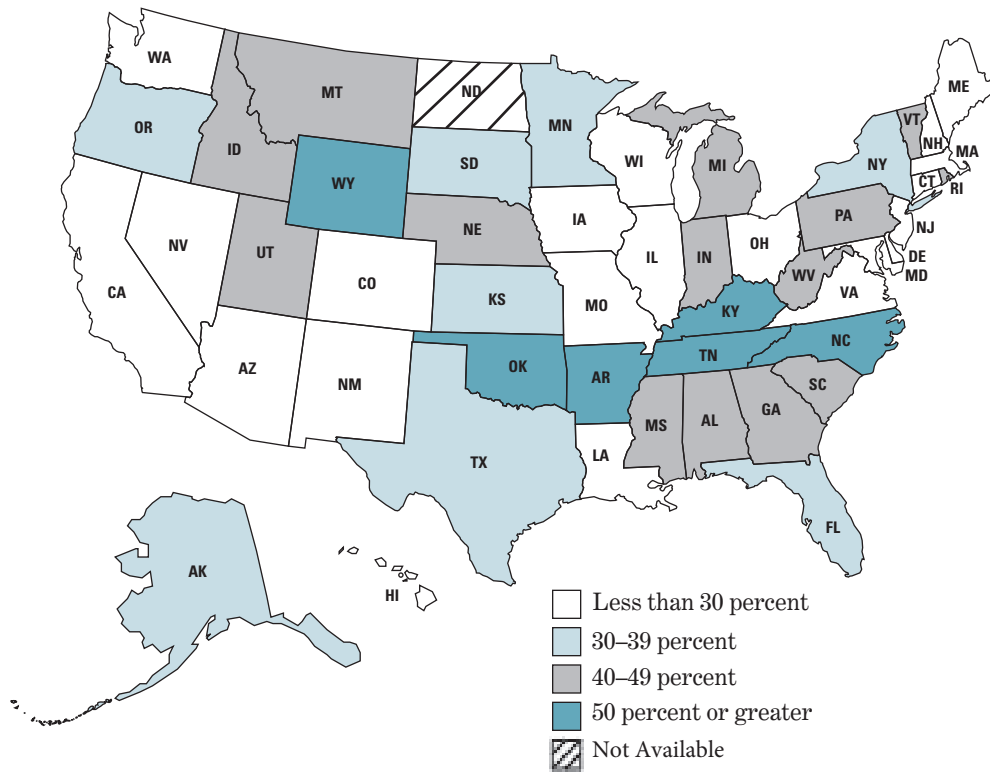


Figure 2 displays a graphical representation of sportspersons' share of away-from-home wildlife watchers by state.

Figure 3 displays a graphical representation of the sportsperson share of around-the-home wildlife watchers by state.

Table 5 indicates similarly that the share of recreationists that are *watchers-sportspersons* varies dramatically by state. Those that participate in both activities ranges from a low of 12% for Massachusetts to a high of 44% for Montana. Other states with notably low proportions of *watchers-sportspersons* are California and Nevada which both come in at 14%. At the other extreme, Alaska (43%) is the only other state above 40% *watchers-sportspersons*.

Figure 3. Percent Around-the-Home Wildlife Watchers Who Were also Sportspersons

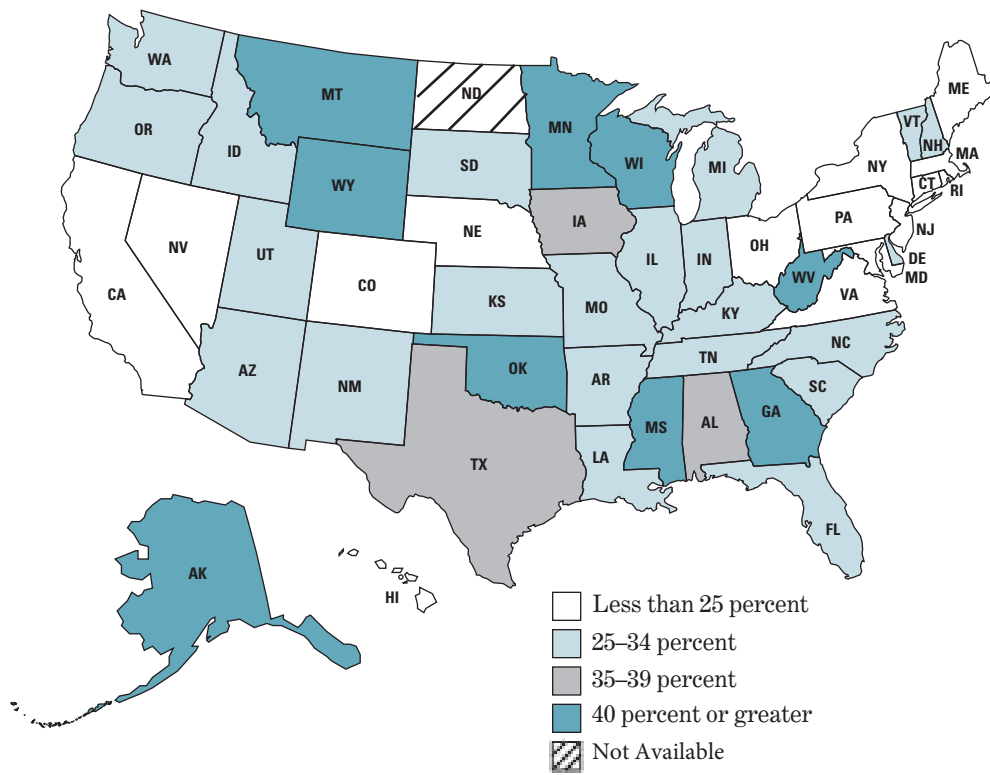


Table 5. Participation in Wildlife-Related Recreation by Recreationists and State of Residence: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Alabama	1,490	746	50%	411	28%	333	22%
Alaska	337	102	30%	90	27%	145	43%
Arizona	1,660	939	57%	379	23%	342	21%
Arkansas	1,119	547	49%	292	26%	281	25%
California	7,360	5,462	74%	885	12%	1,013	14%
Colorado	1,854	1,127	61%	398	21%	329	18%
Connecticut	1,204	857	71%	111	9%	236	20%
Delaware	260	160	62%	52	20%	49	19%
Florida	4,652	2,584	56%	1,054	23%	1,015	22%
Georgia	2,752	1,771	64%	546	20%	435	16%
Hawaii	222	114	51%	62	28%	47	21%
Idaho	638	307	48%	174	27%	157	25%
Illinois	3,493	2,006	57%	709	20%	778	22%
Indiana	2,131	1,289	60%	450	21%	392	18%
Iowa	1,097	511	47%	317	29%	269	25%
Kansas	1,011	558	55%	235	23%	217	21%
Kentucky	1,470	827	56%	250	17%	394	27%
Louisiana	1,380	578	42%	539	39%	263	19%
Maine	520	287	55%	119	23%	114	22%
Maryland	1,396	970	69%	172	12%	254	18%
Massachusetts	1,779	1,316	74%	249	14%	215	12%
Michigan	3,709	2,073	56%	642	17%	994	27%
Minnesota	2,107	707	34%	610	29%	790	37%
Mississippi	1,017	317	31%	387	38%	313	31%
Missouri	2,105	1,103	52%	460	22%	542	26%
Montana	334	111	33%	76	23%	147	44%
Nebraska	499	241	48%	137	27%	121	24%
Nevada	594	423	71%	90	15%	81	14%
New Hampshire	470	302	64%	83	18%	85	18%
New Jersey	2,057	1,349	66%	349	17%	359	17%
New Mexico	592	340	57%	106	18%	143	24%
New York	5,143	3,163	62%	1,062	21%	918	18%
North Carolina	2,717	1,323	49%	593	22%	801	29%
North Dakota	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ohio	4,078	2,475	61%	922	23%	681	17%
Oklahoma	1,549	780	50%	316	20%	454	29%
Oregon	1,396	952	68%	157	11%	287	21%
Pennsylvania	4,063	2,786	69%	734	18%	543	13%
Rhode Island	309	214	69%	39	13%	55	18%
South Carolina	1,299	684	53%	355	27%	260	20%
South Dakota	371	181	49%	104	28%	86	23%
Tennessee	2,121	1,198	56%	388	18%	536	25%
Texas	5,888	3,177	54%	1,625	28%	1,086	18%
Utah	784	378	48%	226	29%	180	23%
Vermont	316	181	57%	43	14%	92	29%
Virginia	2,580	1,737	67%	368	14%	475	18%
Washington	2,311	1,343	58%	378	16%	589	25%
West Virginia	868	546	63%	117	13%	205	24%
Wisconsin	2,499	1,301	52%	346	14%	851	34%
Wyoming	250	105	42%	68	27%	77	31%

(NA) Not Available

Part Two—Socioeconomic Characteristics

This section compares the socioeconomic characteristics of wildlife watchers and sportspersons from several perspectives. The aim is to show how socioeconomic characteristics of different groups of recreationists differ from one another. The comparisons made in this section can best be explained through the use of Figure 1. First, the socioeconomic characteristics of all wildlife watchers are compared to the characteristics of all sportspersons. In Figure 1 the group of recreationists in areas A and C are compared to the group of recreationists in C and B. This is a simplistic comparison that ignores the overlap or intersection of the two groups. Second, the characteristics of those who are *watchers-sportspersons*, area C, are compared to those who are *watchers only*, area B, and *sportspersons only*, area A. The socioeconomic characteristics addressed include the following: population size of residence, Bureau of Census geographic region, age, sex, ethnicity, race, household income, and education.

As will be shown below, an understanding of the distinctiveness of the different recreationist groups yields information about how each will likely be affected by ongoing demographic trends in the U.S. such as population urbanization, increasing average age, and minority growth.

Comparison of Wildlife Watchers and Sportspersons

Table 6 summarizes the socioeconomic characteristics of wildlife watchers and of sportspersons. The first row in Table 6 indicates 30% of all U.S. residents 16 years of age and older are wildlife watchers, and 16% are sportspersons. Deviations from this overall distribution yield information about how socioeconomic characteristics of wildlife watchers differ from sportspersons. This overall distribution is referred to as an “average.” The discussion that follows addresses each of the socioeconomic characteristics presented in Table 6.



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Population Size of Residence

The population size of residence is measured in terms of metropolitan statistical area (MSA). “A Metropolitan Statistical Area is a grouping of one or more counties or equivalent entities that contain at least one urbanized area of 50,000 or more inhabitants.”²

Consequently, classification by MSA type provides information on the population of recreationist residences. The categories of MSA listed in Table 6 indicate whether the recreationist lived in a MSA of various sizes or lived outside of a MSA, which indicates a more rural residence.

The table indicates that the percent of the population that participates (participation rate) falls for both wildlife-watching and

sporting activities as the population size of residence rises. The participation rate in wildlife watching falls from 40% for those residing outside MSAs to 29% for those residing inside MSAs. Similarly, the participation rate in sporting activities falls from 30% for those residing outside MSAs to 15% for those residing inside MSAs. Moreover, the rate also tends to fall as the size of MSA increases.

When considering the change in the participation rate between recreationists residing outside MSAs and those inside MSAs, it is important to note that the proportional decrease is greater for sporting activities. The participation rate for sporting activities falls from 30% to 15%, which represents a proportional change of –50%, compared to a –36% change in wildlife watching.

Census Geographic Regions

The participation rate of both wildlife watchers and sportspersons varies substantially by geographic region.

² 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. Also refer to: www.census.gov/population/metro/about

Table 6. Selected Characteristics of Wildlife Watchers and Sportspersons: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>U.S. Population</i>	<i>Wildlife Watchers</i>	<i>Percent of Population</i>	<i>Sportspersons</i>	<i>Percent of Population</i>
Total All Persons	239,313	71,776	30%	37,397	16%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	224,025	65,664	29%	32,747	15%
1,000,000 or more	127,462	33,070	26%	13,733	11%
250,000 to 999,999	48,157	16,436	34%	7,777	16%
50,000 to 249,999	48,406	16,159	33%	11,238	23%
Outside MSA	15,288	6,111	40%	4,649	30%
Census Geographic Region					
New England	11,593	3,954	34%	1,441	12%
Middle Atlantic	32,392	9,118	28%	3,966	12%
East North Central	36,199	12,840	35%	6,766	19%
West North Central	15,860	5,479	35%	3,980	25%
South Atlantic	46,417	13,315	29%	6,749	15%
East South Central	14,206	4,663	33%	3,010	21%
West South Central	27,195	7,164	26%	4,855	18%
Mountain	17,013	5,189	31%	2,976	17%
Pacific	38,438	10,054	26%	3,654	10%
Age					
16 to 17 years	7,652	964	13%	1,103	14%
18 to 24 years	26,517	2,580	10%	2,886	11%
25 to 34 years	41,613	7,969	19%	6,750	16%
35 to 44 years	40,779	10,163	25%	6,723	16%
45 to 54 years	46,167	15,594	34%	8,365	18%
55 to 64 years	38,469	16,155	42%	6,886	18%
65 years and older	38,117	18,351	48%	4,684	12%
Sex					
Male	114,705	33,176	29%	28,093	24%
Female	124,608	38,600	31%	9,304	7%
Ethnicity					
Hispanic	32,557	3,723	11%	1,793	6%
Non-Hispanic	206,756	68,053	33%	35,603	17%
Race					
White	182,872	65,385	36%	32,706	18%
African American	23,402	2,590	11%	2,341	10%
Asian	11,647	1,049	9%	737	6%
All Others	21,392	2,752	13%	1,612	8%

continues

Table 6. Selected Characteristics of Wildlife Watchers and Sportspersons: 2011 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>U.S. Population</i>	<i>Wildlife Watchers</i>	<i>Percent of Population</i>	<i>Sportspersons</i>	<i>Percent of Population</i>
Annual Household Income					
Less than \$20,000	30,550	6,768	22%	3,610	12%
\$20,000 to \$24,999	12,713	3,564	28%	1,748	14%
\$25,000 to \$29,999	10,441	2,385	23%	1,481	14%
\$30,000 to \$34,999	11,504	4,046	35%	1,648	14%
\$35,000 to \$39,999	11,441	3,326	29%	1,714	15%
\$40,000 to \$49,999	17,091	5,166	30%	3,085	18%
\$50,000 to \$74,999	33,850	12,685	37%	6,725	20%
\$75,000 to \$99,999	25,236	8,950	35%	5,517	22%
\$100,000 to \$149,999	23,790	8,700	37%	4,799	20%
\$150,000 or more	17,151	6,298	37%	2,940	17%
Not Reported	45,545	9,888	22%	4,131	9%
Education					
11 years or less	31,574	5,575	18%	4,225	13%
12 years	81,984	21,098	26%	12,329	15%
1 to 3 years of college	55,014	16,135	29%	9,486	17%
4 years of college	42,552	16,066	38%	6,995	16%
5 years or more of college	28,188	12,901	46%	4,361	15%

The participation rate for both groups is highest in the West North Central region with rates of 35% and 25%, respectively. East North Central also has a 35% participation rate for wildlife watching. The lowest participation rate for watching occurs in the West South Central and Pacific regions with 26%. The Pacific also has the lowest percent of sportspersons with 10%. While the participation rate varies substantially for both watching and sporting activities, there is relatively more variation in sporting participation.

Age

The participation rate for sporting activities is rather stable by age categories, with participation rates ranging from 11% to 18%. Those 35 to 54 years olds have an 18% participation rate, whereas those 65 years old and older drop to 12%. Conversely, there is a positive correlation with the rate of wildlife watching by age. Participation rates for watching activities vary substantially with respect to age. The percent of the population who participates in wildlife-watching activities climbs from 10% for those 18 to 24 years old to 48% for those 65 years old and older. Those 16 to 17 years old do

have a higher participation rate than individuals 18 to 24 years old, but this is likely due to family outings where minors are more subject to decisions made by their parents who fall into the higher participation rate age groups.

Sex

The participation rate for watching and sporting activities also differ substantially with respect to gender. The rate of participation in watching is relatively stable with males at 29% and females at 31%. However, for sporting activities the participation rate of males is substantially higher than that of females, 24% compared to 7%.

Ethnicity

Hispanics have a substantially lower participation rate than Non-Hispanics in both wildlife-watching and sporting activities. Eleven percent of Hispanics participate in watching compared to 33% of Non-Hispanics. Similarly, 6% of Hispanics participate in sporting activities compared to 17% of Non-Hispanics.

Race

The participation rates for both wildlife-watching and sporting activities are

substantially higher for Whites than for African Americans and Asians. While 36% of Whites are watchers, African Americans and Asians participate at 11% and 9%, respectively. Similarly, the participation rate of Whites in sporting activities is 18%, while African Americans and Asians participate at rates of 10% and 6%, respectively.

Annual Household Income

The participation rates of both watching and sporting activities generally increase as incomes increase. The rate for watching climbs from 22% for those with incomes of under \$20,000 to 37% for those with incomes of \$100,000 or more. Similarly, the rate for sporting activities climbs from 12% for those with incomes of under \$20,000 to 22% for those with incomes of \$75,000–\$99,999.

Education

The participation rate for watching has a positive correlation with years of education, whereas the participation rate for sporting activities has a relatively small band in which the participation rates fall, regardless of education. The rate for watching climbs from 18% for those with 11 years of education or less to 46% for those with 5 or more years

Table 7. Socioeconomic Characteristics of Different Types of Wildlife-Related Recreationists: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Wildlife Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Total All Persons	90,108	52,712	58%	18,079	20%	19,317	21%
Population Size of Residence							
Metropolitan Statistical Area (MSA)	81,791	49,043	60%	16,127	20%	16,621	20%
1,000,000 or more	40,225	26,492	66%	7,155	18%	6,578	16%
250,000 to 999,999	20,285	12,508	62%	3,849	19%	3,928	19%
50,000 to 249,999	21,283	10,045	47%	5,124	24%	6,114	29%
Outside MSA	8,064	3,414	42%	1,953	24%	2,697	33%
Census Geographic Region							
New England	4,598	3,157	69%	643	14%	798	17%
Middle Atlantic	11,264	7,298	65%	2,075	18%	1,891	17%
East North Central	15,910	9,145	57%	3,069	19%	3,696	23%
West North Central	7,399	3,419	46%	1,920	26%	2,060	28%
South Atlantic	16,571	9,821	59%	3,168	19%	3,582	22%
East South Central	6,097	3,086	51%	1,353	22%	1,658	27%
West South Central	9,936	5,082	51%	2,764	28%	2,090	21%
Mountain	6,706	3,730	56%	1,514	23%	1,462	22%
Pacific	11,627	7,973	69%	1,573	14%	2,081	18%
Age							
16 to 17 years	1,578	475	30%	614	39%	489	31%
18 to 24 years	4,512	1,626	36%	1,902	42%	984	22%
25 to 34 years	11,780	5,031	43%	3,731	32%	3,018	26%
35 to 44 years	13,787	7,064	51%	3,570	26%	3,153	23%
45 to 54 years	19,484	11,118	57%	3,815	20%	4,551	23%
55 to 64 years	18,832	11,946	63%	2,664	14%	4,222	22%
65 years and older	20,134	15,450	77%	1,783	9%	2,901	14%
Sex							
Male	47,302	19,209	41%	13,967	30%	14,126	30%
Female	42,807	33,503	78%	4,113	10%	5,191	12%
Ethnicity							
Hispanic	4,706	2,913	62%	983	21%	810	17%
Non-Hispanic	85,401	49,797	58%	17,096	20%	18,508	22%
Race							
White	80,724	48,018	59%	15,132	19%	17,574	22%
African American	4,155	1,836	44%	1,535	37%	784	19%
Asian	1,627	890	55%	578	36%	159	10%
All Others	3,624	2,014	56%	833	23%	777	21%

continues

Table 7. Socioeconomic Characteristics of Different Types of Wildlife-Related Recreationists: 2011 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>All Wildlife Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers-Sportspersons</i>	<i>Percent of All</i>
Annual Household Income							
Less than \$20,000	8,565	4,955	58%	1,778	21%	1,832	21%
\$20,000 to \$24,999	4,382	2,634	60%	781	18%	967	22%
\$25,000 to \$29,999	3,180	1,699	53%	795	25%	686	22%
\$30,000 to \$34,999	4,782	3,134	66%	736	15%	912	19%
\$35,000 to \$39,999	4,295	2,581	60%	969	23%	745	17%
\$40,000 to \$49,999	6,705	3,619	54%	1,540	23%	1,546	23%
\$50,000 to \$74,999	15,934	9,210	58%	3,207	20%	3,517	22%
\$75,000 to \$99,999	11,490	5,973	52%	2,439	21%	3,078	27%
\$100,000 to \$149,999	10,926	6,126	56%	2,226	20%	2,574	24%
\$150,000 or more	7,621	4,681	61%	1,320	17%	1,620	21%
Not Reported	12,228	8,098	66%	2,289	19%	1,841	15%
Education							
11 years or less	8,227	4,001	49%	2,586	31%	1,640	20%
12 years	27,362	15,033	55%	6,178	23%	6,151	22%
1 to 3 years of college	20,803	11,316	54%	4,646	22%	4,841	23%
4 years of college	19,010	12,015	63%	2,872	15%	4,123	22%
5 years or more of college	14,705	10,344	70%	1,798	12%	2,563	17%

of college. The participation rates for sporting activities range from 13% to 17% for all education levels.

Characteristics of Different Recreationist Groups

Rather than compare all wildlife watchers with all sportspersons, this section compares the socioeconomic characteristics of the three different groups of recreationists in Figure 1: *watchers only*, *sportspersons only*, and *watchers-sportspersons*. In other words it compares the socioeconomic characteristics of those in regions A, B, and C in Figure 1. Comparison by type of recreationist reveals additional information about how the composition of wildlife recreationists will likely change due to demographic shifts.

Table 7 summarizes the socioeconomic characteristics of the different recreationist groups. The first row indicates 58% of all recreationists are *watchers only*, 20% are *sportspersons only*, and 21% are *watchers-sportspersons*. As discussed above, deviations from these percentages yield information about how the different types of recreationists differ from one another.

Population Size of Residence

Table 7 indicates that recreationists who live outside MSAs are more likely to be *watchers-sportspersons* than those who live inside MSAs. Thirty-three percent of recreationists who live outside MSAs are *watchers-sportspersons*, which compares to 20% of those who live inside MSAs. There is also an apparent negative correlation between the size of MSA and the proportion of *watchers-sportspersons*. The proportion goes from a low of 16% for MSAs of one million or more residents to 29% for MSAs of 50,000–249,999.

Census Geographic Regions

The share of *watchers-sportspersons* varies dramatically by geographic region. The highest proportion occurs in the West North Central Region with 28%. The West South Central region follows close behind with 27%. At the other extreme are the Middle Atlantic region and New England region, both with 17%.

If there is some conflict between the resource management objectives of wildlife watchers and sportspersons, then potential conflict could be greater in regions with a lower share of *watchers-*

sportspersons. A lower share of *watchers-sportspersons* indicates fewer recreationists who desire a management strategy that provides for a desirable mix of both activities. The individuals that participate in both activities are likely to favor “middle of the road” management practices.

To be sure, individuals who participate in both activities will likely differ in their optimal “mix” of management practices to satisfy both interests, but they all will desire preservation of resource amenities useful for both. In the West North Central and West South Central a relatively large portion of watchers are also sportspersons and vice versa. Alternatively, in the Middle Atlantic and New England regions there is a substantially smaller intersection in recreation practices. If it is true that conflict is greater in regions with a smaller intersection of recreationists, one implication is that resource managers along the Atlantic coast may have a more difficult task of satisfying the desires of both.

Age

Age has a dramatic impact on the type of recreation in which individuals participate. The proportion of all recreationists who are *watchers only* is positively correlated with age. For recreationists 18 to 24 years old, only 36% are *watchers only*. However, as age increases this share climbs consistently up to 77% for those 65 and older.

Conversely, those who participate in only sporting activities fall from 42% in the 18 to 24 year old category to 9% for those 65 and older.

Sex

30% of males are *watchers-sportspersons*, which compares to only 12% of females.

Ethnicity

Hispanics are slightly less likely than Non-Hispanics to participate in watching and sporting activities. The share of *watchers-sportspersons* for Hispanics is 17%, while for Non-Hispanics the share climbs to 22%.

Race

The results for race indicate some noteworthy differences in recreationist type. For *sportspersons only*, Whites participate at notably lower rate than

the other races, only 19%. All races participate at approximately the same rate for *watchers-sportspersons*, ranging from 19% to 22%, except Asians, who participate at 10%. The same holds true with *watchers only*, as there is relatively similar participation rates for all races, ranging from 55% to 59%, however, African Americans participate at a lower rate than everyone else, at only 44%.

Annual Household Income

There is some variation in the proportion of recreationists who are *watchers-sportspersons*. There appears to be a bimodal distribution with peaks coming with income ranges from \$20,000–\$29,999 at 22% and \$75,000–\$99,999 at 27%. The troughs appear at the lowest income range of less than \$20,000 at 21%, \$35,000–\$39,999 at 17%, and \$150,000 or more at 21%.

Education

There is some variation in recreationist type by years of education. The share of *watchers only* increases sharply for those with 4 years of college or more. Their share climbs from around 54% for those with less than 4 years of college to around 66% for those with more.

Part Three—Expenditures by Type of Recreationist

This section examines wildlife-related recreation spending by type of recreationist: *watchers only*, *sportspersons only*, and *watchers-sportspersons*. The analysis of spending by type of recreationist differs from the conventional analysis by type of activity. Examining wildlife-related recreation spending by type of recreationist reveals that the majority of spending on wildlife-related recreation is made by individuals that participate in both watching and sporting activities. This finding helps dispel the notion that spending is made by two separate groups of recreationists.

The 2011 FHWAR queried respondents about their spending attributable to wildlife-related recreation, and it distinguished wildlife-associated spending from spending on sporting activities. In other words, it distinguished spending made pursuant to wildlife watching from that made pursuant to either hunting or fishing. In the published data tables of the 2011 FHWAR, these expenditures are presented in detail. However, publishing estimates by type of activity alone conceals the substantial crossover of recreationists from one type of activity to another. In a sense, estimates by type of activity alone foster an impression that the two types of recreationists belong to separate cliques or factions. However, the analysis presented above indicates that this is clearly not the case, as substantial crossover does occur.

Although not presented in the published tables, data available from the 2011 FHWAR public data set can be used to analyze spending from numerous other perspectives. Total wildlife-watching expenditures can be apportioned between sportspersons and non-sportspersons. Total hunting and fishing spending can be apportioned between those who participate in wildlife watching and those who do not. Average expenditures of sportspersons who are wildlife watchers can be calculated and compared to those who are not. Average expenditures of wildlife watchers who are sportspersons can be calculated and compared to



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those who are not. Total wildlife-related recreation spending can be apportioned between recreationists of different types. Table 8 and tables in Appendix D address wildlife-related recreation spending in every perspective listed here. However, the following discussion is focused on the last perspective, as it is the most instructive in highlighting the interrelationship of the different types of recreationists.

Figure 4 displays total wildlife-related recreation spending in two ways. The chart on the top displays spending by type of activity. It indicates that 62% of all wildlife-related recreation spending is made pursuant to hunting or fishing and 38% to wildlife watching. This is the historical method in which spending has been displayed. The chart on the bottom displays spending by type of recreationist. It indicates that the majority of spending on wildlife-related recreation is done by persons who participate in both wildlife watching and sporting activities. Fifty-three percent of all recreation expenditures are made

by recreationists in both “camps.” Expenditures made by recreationists who participate in only sporting activities make up a smaller amount compared to wildlife watching, 20% and 27%, respectively. From this perspective, it is clear that the majority of recreation spending is not made by two mutually exclusive groups.

Table 8 presents spending by recreationist type in greater detail. Expenditures are categorized by type of good purchased. “Hunting equipment” includes purchases of rifles, ammunition, and hunting dogs. “Fishing equipment” includes purchases of rods, reels, tackle boxes, and lures. “Auxiliary hunting and fishing equipment” includes spending made pursuant to either hunting or fishing such as camping equipment, clothing, and taxidermy costs. Wildlife-watching equipment includes binoculars, photographic equipment, film, bird food, bird houses, etc. “Auxiliary wildlife-watching equipment” is similar to auxiliary hunting and fishing equipment and includes camping equipment, tents,

tarps, and backpacking equipment, but the primary intended use of these items was to support wildlife-watching activity, not hunting or fishing. Special equipment includes purchases of big ticket items such as boats, campers, trucks, and cabins that are primarily purchased for use in wildlife-related recreation.

For trip-related expenditures, 52% is attributable to *watchers-sportspersons*, 26% is attributable to *sportspersons only*, and 23% is attributable to *watchers only*. The relatively lower share for *watchers only* is due to substantially lower spending on “Other trip costs.” *Watchers only* account for 10% of other trip costs, and in the largest category of expenditures within other trip costs, boating costs, they account for only 4%. The only category within other trip costs where *watchers only* account for a higher than average proportion of spending is public land use fees, where their share is 30%. This likely results from their relatively high use of public parks that charge admission fees.

Nearly two-thirds of all spending on fishing equipment and more than two-thirds of all spending on hunting equipment is attributable to *watchers-sportspersons*. This is a potentially valuable piece of information for manufacturers and sellers of hunting and fishing equipment.

Almost two-thirds of wildlife-watching equipment is attributable to *watchers only*. This is generally in line with the proportion of wildlife-watching participants that do not participate in sporting activities, which is seen in Table 1.

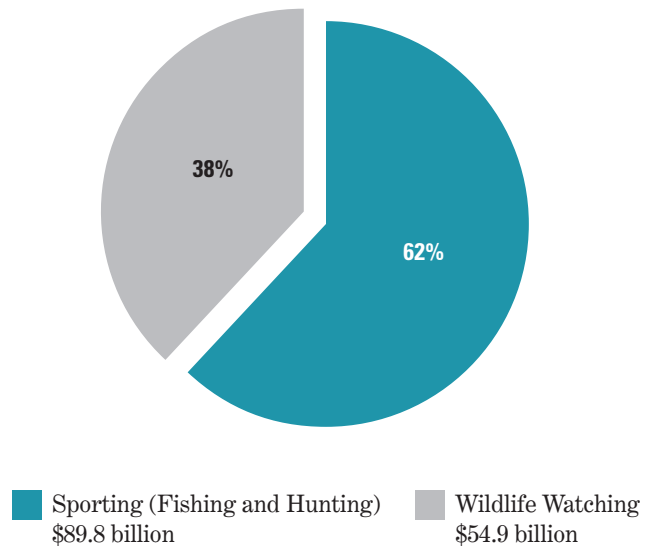
In summary, there are items where the proportional distribution of wildlife-related recreation expenditures differs from the 27%, 20%, and 53% for all items presented in Figure 4. Nevertheless, there is not one type of good where spending from only one of the recreationist categories dominates all spending. Spending for every good is attributable to more than one recreationist classification, which underscores the interrelationship that recreationists have in the marketplace.

Figure 4. Expenditures for Wildlife-Related Recreation

(Total Expenditures \$144.7 billion.)

Distribution of Wildlife-Related Recreation Expenditures by Type of Activity

Total: \$144.7 billion



Distribution of Wildlife-Related Recreation Expenditures by Type of Recreationist

Total: \$144.7 billion

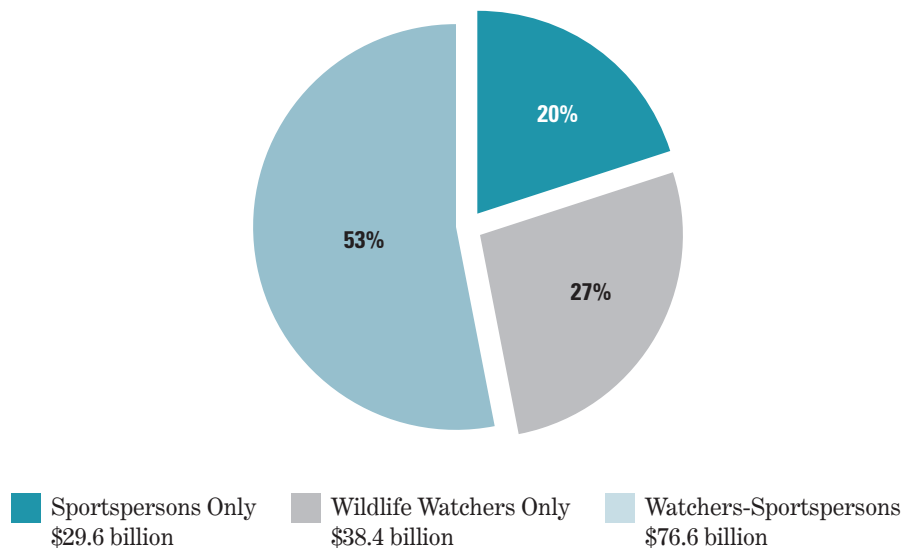


Table 8. Expenditures for all Wildlife-Related Recreation by Recreationist Type: 2011

(Population 16 years old and older. Numbers in thousands of dollars.)

	<i>All Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Total, All Items	144,651,796	38,419,578	27%	29,613,114	20%	76,619,104	53%
Trip-Related Expenditures							
Total trip-related	49,485,328	11,291,473	23%	12,704,031	26%	25,489,824	52%
Food and lodging, total	20,942,061	6,124,255	29%	4,498,057	21%	10,319,749	49%
Food	14,118,087	3,336,288	24%	3,559,995	25%	7,221,804	51%
Lodging	6,823,974	2,787,968	41%	938,063	14%	3,097,943	45%
Transportation, total	17,036,311	4,007,569	24%	4,404,935	26%	8,623,807	51%
Public	3,629,222	1,954,605	54%	531,709	15%	1,142,908	31%
Private	13,407,089	2,052,964	15%	3,873,225	29%	7,480,900	56%
Other trip costs, total	11,506,956	1,159,648	10%	3,801,039	33%	6,546,269	57%
Guide fees, pack trips or package fees	2,371,363	693,384	29%	766,371	32%	911,608	38%
Public land use fees	517,355	154,099	30%	105,050	20%	258,206	50%
Private land use fees	1,111,999	24,699	2%	438,636	39%	648,664	58%
Equipment rental	449,311	46,279	10%	106,027	24%	297,005	66%
Boating costs	4,577,511	174,060	4%	1,400,163	31%	3,003,288	66%
Heating and cooking fuel	472,479	67,128	14%	156,017	33%	249,334	53%
Bait	1,497,445	(X)	(X)	595,766	40%	901,679	60%
Ice	509,494	(X)	(X)	233,010	46%	276,484	54%
Equipment and Other Expenses							
Total	95,166,468	27,128,105	29%	16,909,083	18%	51,129,280	54%
Hunting equipment	8,182,297	(X)	(X)	2,562,065	31%	5,620,232	69%
Fishing equipment	6,179,132	(X)	(X)	2,352,071	38%	3,827,061	62%
Auxiliary hunting and fishing equipment	3,736,648	(X)	(X)	1,065,307	29%	2,671,341	71%
Wildlife-watching equipment	11,323,179	7,325,625	65%	(X)	(X)	3,997,554	35%
Auxiliary wildlife-watching equipment	1,555,374	811,740	52%	(X)	(X)	743,634	48%
Special equipment	39,401,694	10,842,875	28%	7,451,797	19%	21,107,022	54%
Magazines, books, and DVDs	740,176	279,924	38%	97,766	13%	362,486	49%
Land leasing and ownership	16,240,156	4,521,976	28%	2,332,883	14%	9,385,297	58%
Membership dues and contributions	3,286,355	1,680,824	51%	291,954	9%	1,313,577	40%
Licenses, stamps, tags, and permits	1,614,937	(X)	(X)	693,146	43%	921,791	57%
Plantings	2,203,920	1,665,140	76%	(X)	(X)	538,780	24%

Part Four—Historical Fishing and Hunting Participation of Wildlife Watchers

This analysis has shown that there are numerous wildlife recreationists who participate in both wildlife watching and hunting or fishing in the same year: about three in ten wildlife watchers in 2011 participated in sporting activities, and more than half of all sportspersons in 2011 participated in wildlife watching. Consequently, the notion of two mutually exclusive groups of recreationists is not tenable, and it is more difficult to distinguish two groups of recreationists than one might suppose.

The distinctiveness of two separate groups is even more obscure when recreation activity is considered for more than the span of one year. If someone did not participate in hunting or fishing in 2011, but did in prior years, should he or she still be considered a sportsperson? If so, how many years of inactivity in hunting or fishing must pass before one is no longer considered a sportsperson? These are certainly subjective questions that elicit different responses. Some may consider a recreationist a viable sportsperson if he or she participated in hunting or fishing within the last three years; whereas, others may consider participation within the last five years to be sufficient. Fortunately, data from the 2011 *screen phase* of the *FHWR* can be used to satisfactorily answer this question from different perspectives.

The 2011 *FHWR* was conducted in two phases by the U.S. Census Bureau. The first was the *screen phase* in which the Census Bureau interviewed a sample of 42,800 households nationwide to determine who in the household had fished, hunted, or wildlife watched in years 2010 and before, and who planned to engage in those activities in 2011. In most cases, one adult household member provided information for all household members. The second was the *detailed interview phase* in which those selected as likely anglers, hunters, and wildlife watchers from the *screen* were given detailed interviews about their recreation activities in 2011. Up until now, all the data discussed in this analysis was from the *detailed interview phase* because



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it provides the most information about recreationist activities in 2011. The *screen* data could not have been used because respondents answer only a limited set of questions about prior activity and expected future activity, and it has a longer recall period, so it is more prone to suffer from recall bias. However, because the *screen* does query respondents about sporting activities for years prior to 2010, it is uniquely suited to analyze the relationship between wildlife watching in 2010 and prior sporting activities.

Figures 5 and 6 display the distribution of away-from-home and around-the-home wildlife watchers based on prior sporting activities. The distributions presented rely on only that portion of the screen sample that answered questions about his or her own activities. All observations

where the survey respondent was asked about the activity of another household member were excluded for reliability considerations. Lastly, those who are considered watchers in each figure indicated that they participated in wildlife watching in the year 2010.

Figure 5 indicates that the proportion of all away-from-home watchers who are also sportspersons is substantially greater than the 38% previously indicated in Table 1 if historical sporting activities are considered valid criteria for one's inclusion into the set of all sportspersons. It indicates that within two years prior to the time of the survey, 50% of all away-from-home watchers hunted or fished. More than half of all respondents who indicated that they had participated in away-from-home wildlife watching in

2010 also participated in either hunting or fishing from 2008 to 2010. The proportion of away-from-home watchers who participated in hunting or fishing within 5 years of the time of the survey goes up to 55%. Lastly, and perhaps most surprising, Figure 5 indicates that 78% of away-from-home watchers have hunted or fished at some point.

Similarly, Figure 6 indicates that the proportion of all around-the-home watchers who are considered sportspeople is substantially greater than the 28% previously indicated in Table 1 if historical sporting activities are considered valid criteria for one's inclusion into the set of all sportspeople. It indicates that within the two years prior to the time of the survey, 42% of all around-the-home wildlife watchers either hunted or fished. The proportion of around-the-home wildlife watchers who participated in hunting or fishing within 5 years of the time of the survey goes up to 47%. Lastly, Figure 6 indicates that 75% of around-the-home watchers have hunted or fished at some point.

Given the findings here that more than half of away-from-home and 42% of around-the-home watchers have participated in either hunting or fishing within 5 years from the time of the survey, this analysis supports the notion that it is more difficult to distinguish two separate groups of recreationists if respondents' prior sporting activities are taken into account. Figures 5 and 6 indicate that the majority of both around-the-home and away-from-home wildlife watchers have participated in sporting activities at some point. It underscores just how interrelated the different types of wildlife recreationists really are.

Figure 5. Distribution of Away-from-Home Wildlife Watchers by Hunting and Fishing Activity

(No proxy responses included.)

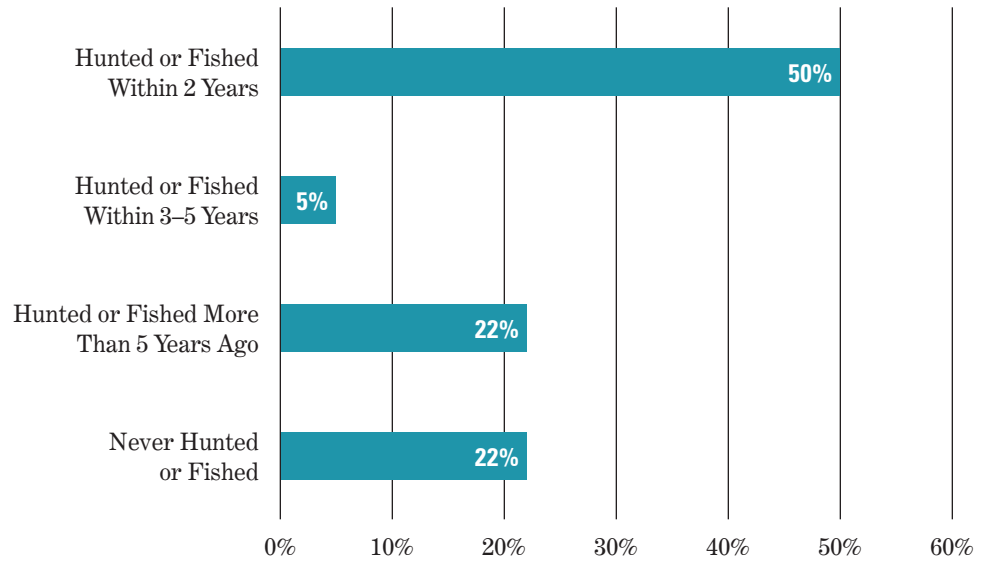
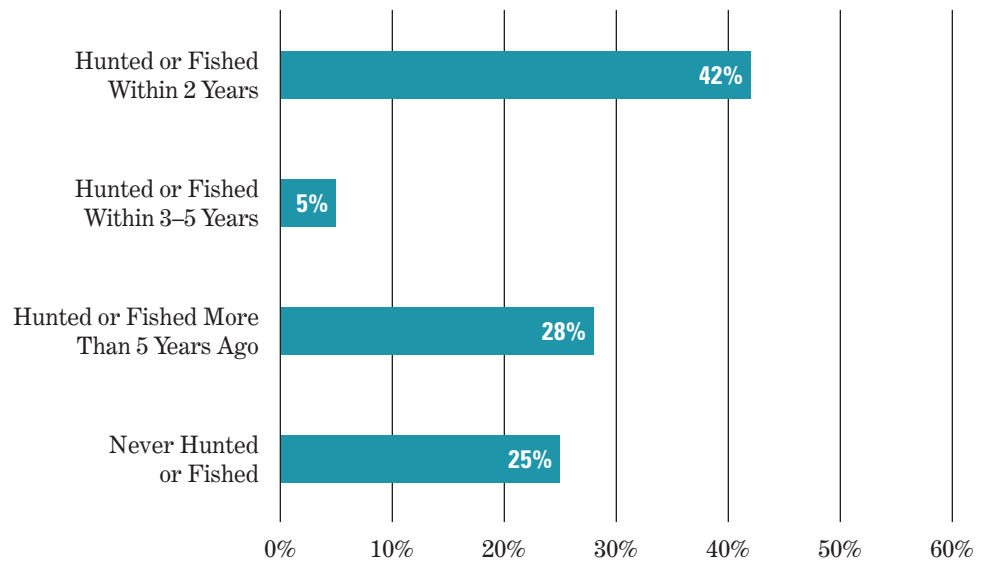


Figure 6. Distribution of Around-the-Home Wildlife Watchers by Hunting and Fishing Activity

(No proxy responses included.)



Part Five—Crossover Participation Trends: 2001, 2006, and 2011

The analysis up until this point has focused on activity that occurred in 2011, however a historical perspective is necessary to see how current crossover participation rates compare to those in the past. In this section, data from the 2001 and 2006 FHWARs will also be used to show historical trends and decipher in what direction crossover participation is heading.

The Relationship between Wildlife Watchers, Hunters, and Anglers: Addendum to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation analyzed crossover participation at the beginning of the millennium. This report has updated much of the work that was done in 2001. For comparative purposes, Table 9 shows the breakdown of crossover participants, days, and expenditures from 2001 and 2011. It also shows whether or not the change from 2001 to 2011 is statistically different.

Table 9 shows that from 2001 to 2011 the number of participants who were *sportspersons only* or *wildlife watchers only* increased by 13% and 19%, respectively. Meanwhile, there has been a significant decrease in the number of people who are *watcher-sportspersons*, down 12% from 2001 to 2011. This means that people were specializing more in their participation and that there was less crossover among the factions of wildlife-related recreationists.

Although there was a significant increase in the overall number of wildlife-related recreationists, the increase in overall recreationists is smaller than the increase in those who only did one of the activities. Therefore some of the increase in specialization can be attributed to the overall increase in participation, but a large portion is due to the decrease in the number of *watcher-sportspersons*.

Table 9 also shows that the significant increase in wildlife watchers is due to an increase in non-sportspersons participating in wildlife-associated activities.



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While overall sportspersons activities and the subgroups of hunting and fishing statistically stayed the same, all three groups saw an increase in the number of sportspersons who are non-wildlife watchers and a decrease in the number of sportspersons who are wildlife-watchers, further validating the specialization trend since 2001.

Table 9 also compares days and expenditures from 2001 and 2011. An 8% increase in the number of wildlife-watching days is the same for sportspersons and non-sportspersons alike. However, this increase is not statistically significant. Expenditures for *wildlife-watchers only* had the largest percentage increase, but none of the changes were statistically

different. When comparing the change in participation with the change in expenditures, it is clear that the reason for the perceived differences in expenditures is due to the change in participants. While the change in participation is significant, the change in expenditures is not. This may indicate that people were participating when they could, but not necessarily spending as much money to do these activities. The poor economic climate at the time could certainly have been a cause.

Table 9. 2001–2011 Crossover Participants, Days, and Expenditures

(U.S. Population 16 years old and older. Numbers in thousands.)

	2001		2011		2001–2011	Significance
	Number	Percent	Number	Percent	Percent Change	
Participants						
Wildlife-Related Recreationists	82,068	100%	89,855	100%	9%	
Sportsperson only	15,963	19%	18,079	20%	13%	
Wildlife Watchers only	44,263	54%	52,459	58%	19%	
Sportspersons and Wildlife Watchers	21,842	27%	19,317	21%	-12%	
All Wildlife Watchers	66,105	81%	71,776	80%	9%	
Non-sportspersons	44,263	54%	51,015	57%	15%	
Sportspersons	21,842	27%	20,761	23%	-5%	NS
Around-the-home Wildlife Watchers	62,928	77%	68,598	76%	9%	
Non-sportspersons	42,766	52%	49,110	55%	15%	
Sportspersons	20,162	25%	19,488	22%	-3%	NS
Away-from-home Wildlife Watchers	21,823	27%	22,496	25%	3%	NS
Non-sportspersons	12,190	15%	14,106	16%	16%	
Sportspersons	9,633	12%	8,480	9%	-12%	NS
All Sportspersons	37,805	46%	37,397	42%	-1%	NS
Non-Wildlife Watchers	15,963	19%	18,079	20%	13%	
Wildlife Watchers	21,842	27%	19,317	21%	-12%	
All Anglers	34,071	42%	33,112	37%	-3%	NS
Non-Wildlife Watchers	14,359	17%	16,082	18%	12%	
Wildlife Watchers	19,712	24%	17,029	19%	-14%	
All Hunters	13,034	16%	13,674	15%	5%	NS
Non-Wildlife Watchers	4,969	6%	5,869	7%	18%	
Wildlife Watchers	8,066	10%	7,805	9%	-3%	NS
Days						
All Wildlife Watchers	5,488,866	100%	5,912,345	100%	8%	NS
Non-sportspersons	3,659,767	67%	3,944,570	67%	8%	NS
Sportspersons	1,829,099	33%	1,967,755	33%	8%	NS
Expenditures						
Wildlife-Related Recreationists	\$137,669,807	100%	\$144,651,796	100%	5%	NS
Sportspersons only	\$28,137,834	20%	\$29,613,114	20%	5%	NS
Wildlife Watchers only	\$31,094,088	23%	\$38,419,578	27%	24%	NS
Sportspersons and Wildlife Watchers	\$78,437,886	57%	\$76,619,104	53%	-2%	NS

NS Not significant from previous National Survey estimate at the 95 percent level of significance

Table 10. 2006–2011 Crossover Participants, Days, and Expenditures

(U.S. Population 16 years old and older. Numbers in thousands.)

	2006		2011		2006–2011	Significance
	Number	Percent	Number	Percent	Percent Change	
Participants						
Wildlife-Related Recreationists	87,412	100%	89,855	100%	3%	
Sportsperson only	16,280	19%	18,079	20%	11%	
Wildlife Watchers only	53,496	61%	52,459	58%	-2%	NS
Sportspersons and Wildlife Watchers	17,636	20%	19,317	21%	10%	
All Wildlife Watchers	71,132	81%	71,776	80%	1%	NS
Non-sportspersons	50,089	57%	51,015	57%	2%	NS
Sportspersons	21,043	24%	20,761	23%	-1%	NS
Around-the-home Wildlife Watchers	67,756	78%	68,598	76%	1%	NS
Non-sportspersons	48,050	55%	49,110	55%	2%	NS
Sportspersons	19,706	23%	19,488	22%	-1%	NS
Away-from-home Wildlife Watchers	22,977	26%	22,496	25%	-2%	NS
Non-sportspersons	13,676	16%	14,106	16%	3%	NS
Sportspersons	9,301	11%	8,480	9%	-9%	NS
All Sportspersons	33,916	39%	37,397	42%	10%	
Non-Wildlife Watchers	16,280	19%	18,079	20%	11%	
Wildlife Watchers	17,636	20%	19,317	21%	10%	
All Anglers	29,952	34%	33,112	37%	11%	
Non-Wildlife Watchers	14,332	16%	16,082	18%	12%	
Wildlife Watchers	15,621	18%	17,029	19%	9%	
All Hunters	12,510	14%	13,674	15%	9%	
Non-Wildlife Watchers	5,361	6%	5,869	7%	9%	NS
Wildlife Watchers	7,149	8%	7,805	9%	9%	NS
Days						
All Wildlife Watchers	5,969,414	100%	5,912,345	100%	-1%	NS
Non-sportspersons	4,189,856	70%	3,944,570	67%	-6%	NS
Sportspersons	1,770,558	30%	1,967,755	33%	11%	NS
Expenditures						
Wildlife-Related Recreationists	\$136,464,095	100%	\$144,651,796	100%	6%	NS
Sportspersons only	\$31,692,210	23%	\$29,613,114	20%	-7%	NS
Wildlife Watchers only	\$35,824,596	26%	\$38,419,578	27%	7%	NS
Sportspersons and Wildlife Watchers	\$68,947,288	51%	\$76,619,104	53%	11%	NS

NS Not significant from previous National Survey estimate at the 95 percent level of significance

Table 10 compares 2006 with 2011 in the same way as Table 9 compared 2001 with 2011. The percentages of *sportsperson only*, *wildlife watchers only*, and *watcher-sportspersons* from 2006 to 2011 shows that the largest reduction in crossover participants actually occurred from 2001 to 2006 and that the trend actually reverted closer to the 2001 levels. 2006 was a low water mark for sporting participation, with only 15% of the population 16 years old or older fishing or hunting. Table 9 shows that there was a significant increase in overall sportspersons, 10%, as well as hunters, 9%, and anglers, 11%, regardless of wildlife-watching participation. However, for overall wildlife-watching participation, there was no significant change regardless of sportsperson classification.

Once again, there was no significant change in days or expenditures from 2006 to 2011.

There appears to be conflicting trends depending on the reference year that is being compared to 2011 activity. From 2001 to 2011, crossover participation decreased, and specialization occurred. From 2006, the most specialized year in our three years of comparison, shows that participants started to crossover in their activity closer to a historical norm. Therefore, the 2016 FHWAR will be of particular interest in determining the true direction of the trend.

Figures 7 through 15 show graphically what Tables 9 and 10 show numerically. Some may find it easier to see the changes over time in each faction from 2001 to 2006 to 2011 in each of the bar graphs.

Figure 7. Wildlife-Related Recreationists, by Type of Activity and Year

(Numbers in thousands.)

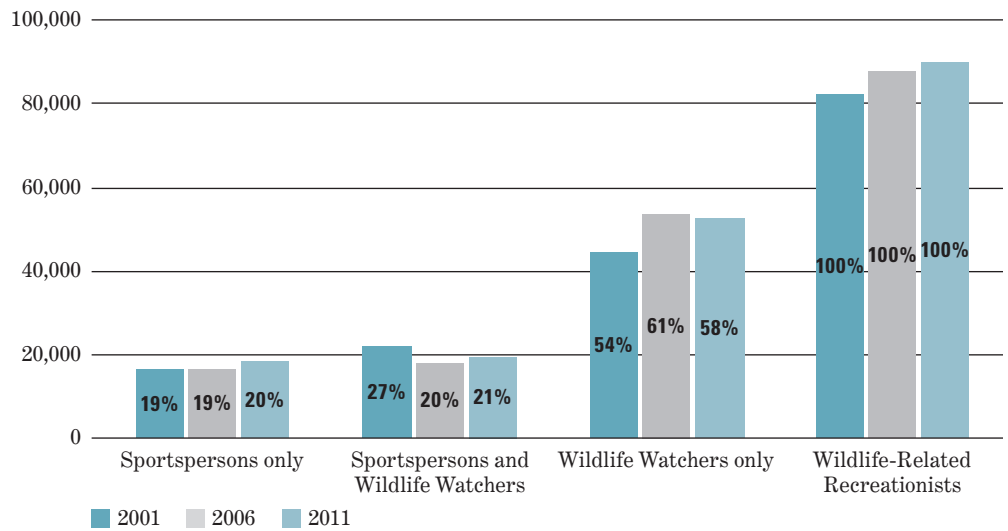


Figure 8. Sportsperson Participation by Wildlife Watchers and Year

(Numbers in thousands.)

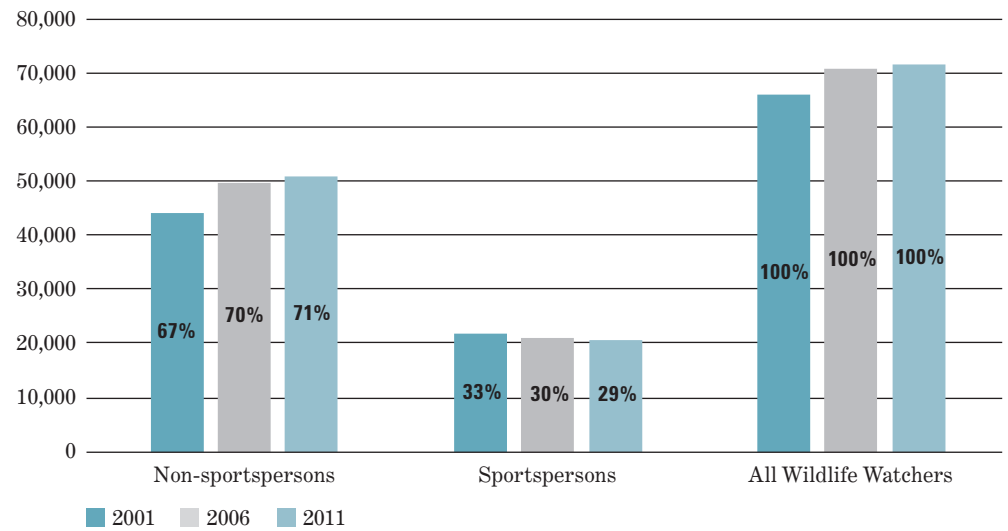


Figure 9. Sportsperson Participation by Around-the-home Wildlife Watchers and Year

(Numbers in thousands.)

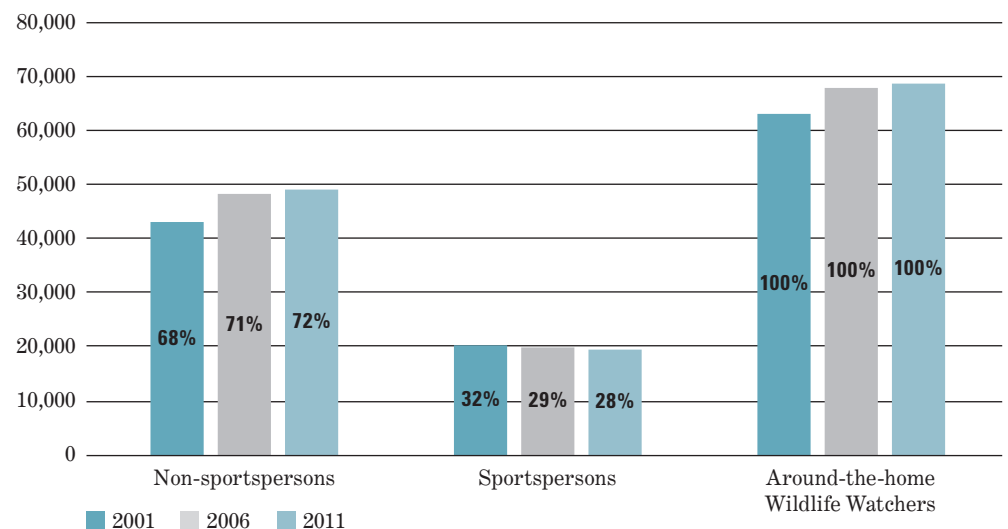


Figure 10. Sportsperson Participation by Away-from-home Wildlife Watchers and Year
(Numbers in thousands.)

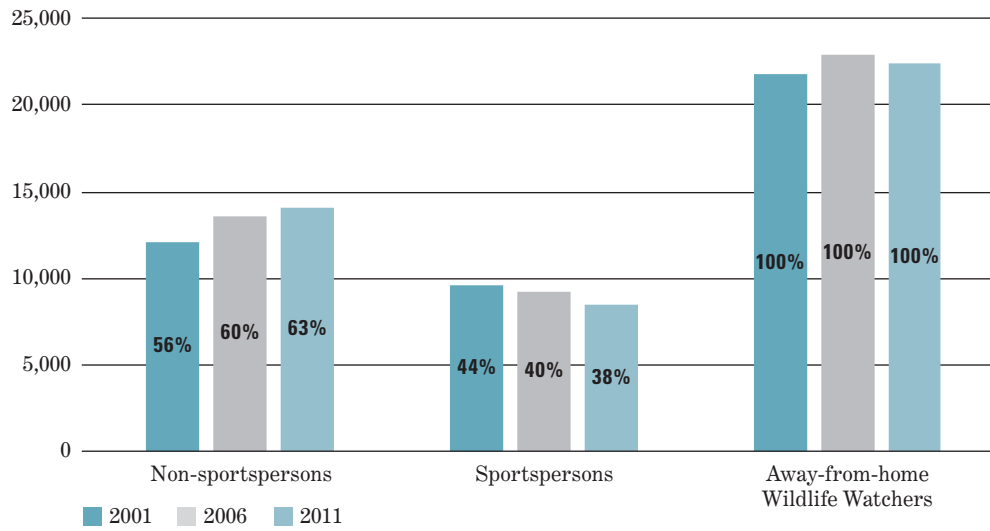


Figure 11. Wildlife Watching Participation by Sportspersons and Year
(Numbers in thousands.)

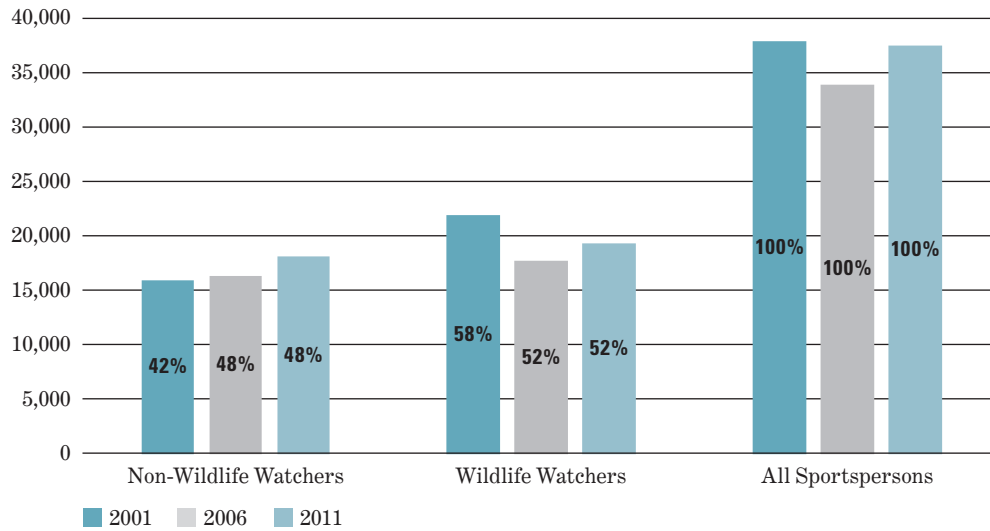


Figure 12. Wildlife Watching Participation by Anglers and Year
(Numbers in thousands.)

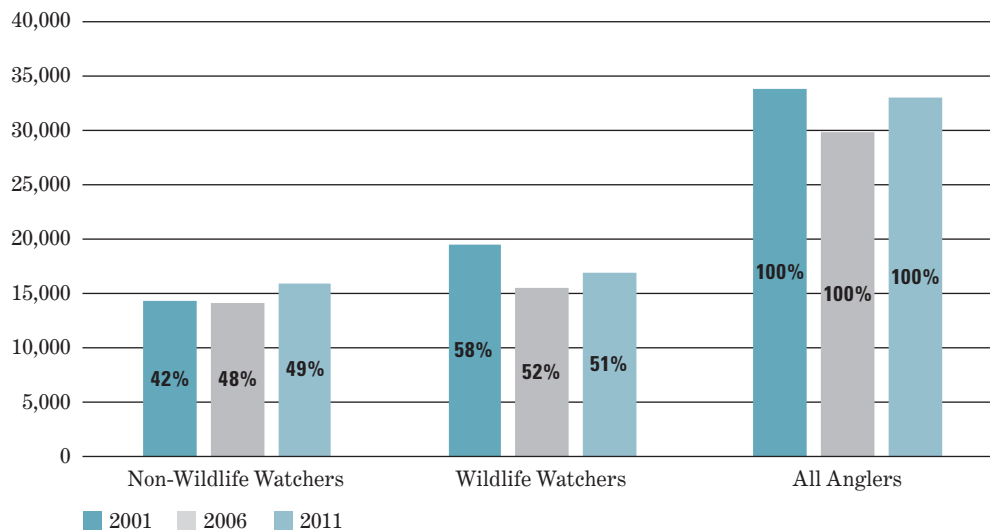


Figure 13. Wildlife Watching Participation by Hunters and Year

(Numbers in thousands.)

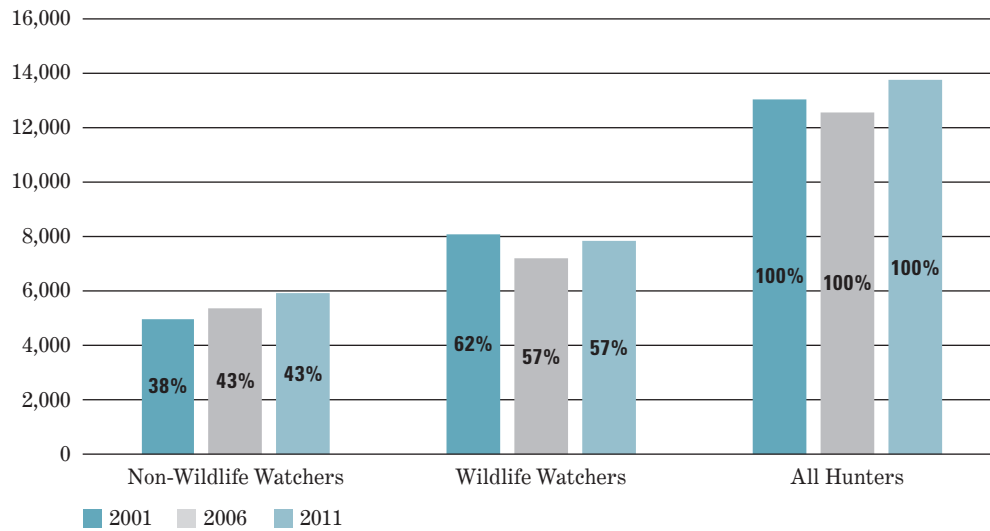


Figure 14. Wildlife-Watching Days, by Type of Activity and Year

(Numbers in thousands.)

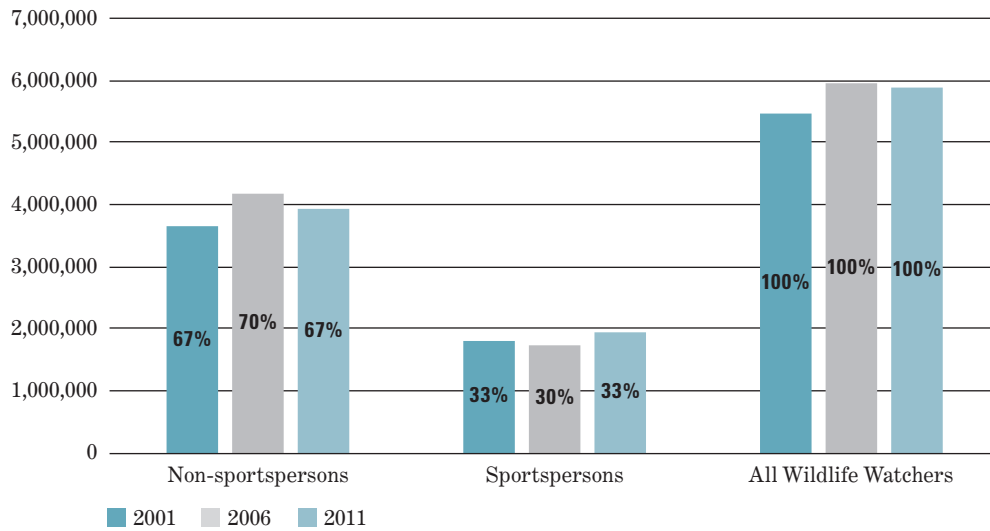
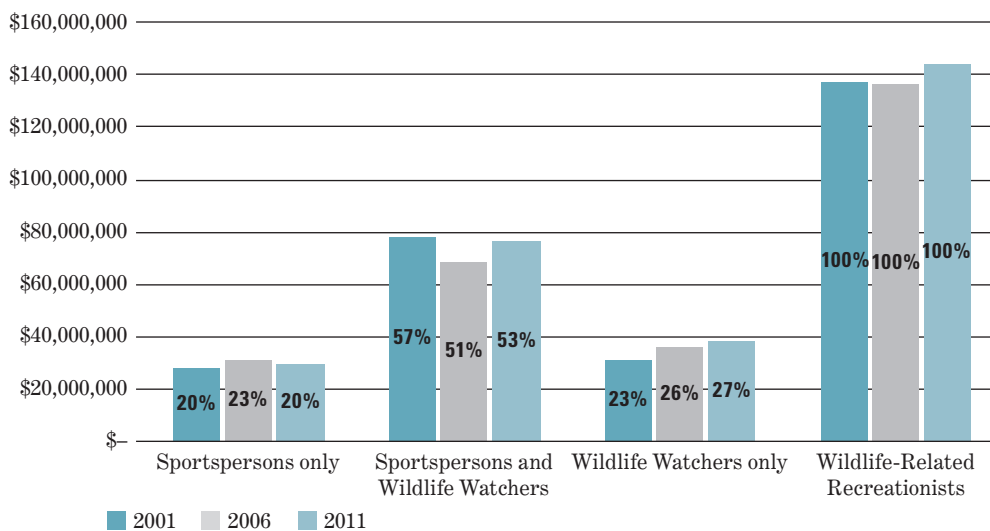


Figure 15. Expenditures, by Type of Activity and Year

(Numbers in thousands of 2011 dollars.)



Implication of Demographic Change on Wildlife-Related Recreation

Under certain conditions, the socioeconomic information discussed in section two can be used to gauge the likely effect of ongoing demographic trends on participation in the different types of wildlife-related recreation. If certain assumptions hold, current demographic trends have implications on the future participation rate of individuals in wildlife-watching and sporting activities. They also have implications about the proportion of all recreationists who will likely participate in both watching and sporting activities.

Major Demographic Trends in the U.S. There are several demographic trends in the U.S. that will likely impact wildlife-related recreation in the years ahead. It is beyond the scope of this report to analyze each trend in detail, but a short summary is warranted.

The percent of the U.S. population living in rural housing continues to fall. In 1960 approximately 30% of U.S. residents lived in rural areas. This percent has since fallen to 27% in 1970, 25% in 1995, 22% in 2000, and 19% in 2010.³

³ 2010 Decennial Census. *U.S. Census Bureau.*

There is the trend of an aging population in the U.S., due to maturing baby boomers. In 1990 the percent of the population over 55 years of age was 20.9%. This percent rose to 21.1% in 2000, 22.6% in 2005,⁴ and 24.9% in 2010.³ This percent is expected to continue climbing for the next couple of decades.

The percent of the U.S. population of Hispanic ethnicity is on the rise. In 1980, 6.4% of U.S. residents were Hispanic. This percent has since risen to 9.0% in 1990, 12.0% in 2000,⁴ and 16.3% in 2010.³ It is expected to continue to rise into the future.

Finally, the percent of the population who are of White and not of Hispanic origin is declining. In 1980, 79.6% of U.S.

⁴ "Statistical Abstract of the United States 2004–2005," *U.S. Census Bureau.*

residents were White and not Hispanic, and this has since fallen to 75.6% in 1990, 69.5% in 2000,⁴ and 63.7% in 2010.³ This percent is expected to fall further in the future.

Major Demographic Trends in Wildlife-Related Recreation

When considering the effects that changing demographics will have on future participation in wildlife-related activities, some assumptions must be made. It is possible to assume that in the case of age, all generations are the same. As each generation moves from age group to age group, they will take on the relative participation rate of that age group. This assumption was postulated in *The Relationship between Wildlife Watchers, Hunters, and Anglers: Addendum to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.*



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The reality is that there appears to be a combination of effects. Table 11 shows how the percent of the population that participates in wildlife watching and sportsperson activities has changed from 2001 to 2006 to 2011. The four different socioeconomic characteristics that were mentioned in Part two that could have an effect on participation are presented here. Population size of residence, age, ethnicity, and race show how some groups are making up the majority of the participants relative to other groups, while some groups are shrinking.

In both wildlife-watching and sporting activities, population size of residence and ethnicity seem to stay relatively stable over time. Race shows only one group that has experienced a large change, and that is all other races, where both wildlife-watching and sporting activity

participation rates have been cut by over half from 2001 to 2011.

Age is much more stable when looking at sporting activities. There has been a slightly larger decrease in the youngest age groups, but the older participants have in some cases experienced growth from 2001 to 2011.

Wildlife-watching activities are much different, however. Those younger than 35 years old continue to participate at a much lower rate from survey to survey. Those 35 to 64 years old have remained relatively stable over time. The biggest change has occurred in the 65 years old and older age group, where the participation rate has increased from 35% in 2001 to 48% in 2011. This is likely due to better health for baby-boomers who are reaching retirement age.

Table 11. Select Characteristics of Wildlife Watchers and Sportsperson by Percent of Population: 2001, 2006, and 2011
(Population 16 years old and older.)

	<i>Wildlife Watcher Percent of Population</i>			<i>Sportsperson Percent of Population</i>		
	<i>2001</i>	<i>2006</i>	<i>2011</i>	<i>2001</i>	<i>2006</i>	<i>2011</i>
Total All Persons	31%	31%	30%	18%	15%	16%
Population Size of Residence						
Metropolitan Statistical Area (MSA)	29%	29%	29%	16%	13%	15%
1,000,000 or more	26%	26%	26%	13%	11%	11%
250,000 to 999,999	31%	33%	34%	18%	14%	16%
50,000 to 249,999	41%	36%	33%	25%	21%	23%
Outside MSA	41%	40%	40%	27%	25%	30%
Age						
16 to 17 years	22%	17%	13%	19%	16%	14%
18 to 24 years	14%	14%	10%	15%	11%	11%
25 to 34 years	25%	21%	19%	20%	15%	16%
35 to 44 years	24%	33%	25%	23%	19%	16%
45 to 54 years	36%	37%	34%	19%	17%	18%
55 to 64 years	40%	41%	42%	18%	16%	18%
65 years and older	35%	36%	48%	9%	9%	12%
Ethnicity						
Hispanic	12%	14%	11%	8%	6%	6%
Non-Hispanic	33%	34%	33%	19%	16%	17%
Race						
White	35%	35%	36%	19%	17%	18%
African American	9%	10%	11%	8%	6%	10%
Asian	9%	13%	9%	5%	3%	6%
All Others	28%	32%	13%	20%	17%	8%

Table 12 shows how the percent of all participants is broken down into *wildlife watcher only*, *sportsperson only*, and *watcher-sportsperson* by select socioeconomic characteristics of population size of interest, age, ethnicity, and race. In other words, Table 12 will show what socioeconomic characteristics are contributing to the trend of specialization, and what characteristics are bucking this trend.

Interestingly, population size of residence is very deterministic in what wildlife-related activities were done by respondents. With nearly six in ten participants being classified as *watcher*

only in 2011, there is a direct relationship between the population size of residence of the respondent and likelihood to be a *watcher only*. The larger the population size of residence, the more likely the respondent is to be a *watcher only*. However, the opposite is true for both *sportsperson only* and *watchers-sportspersons*. Looking back at Table 11 shows that the percent of the population that participates in wildlife-watching activities goes down as the population size of residence goes up. Therefore, the overall trend in wildlife watching is in line with the trend for *watchers-sportspersons*. This trend has persisted from 2001 to 2011.

Oddly enough, while Table 11 shows that participants who are 16 to 17 years old are participating less frequently, Table 12 shows that those that are participating are more likely to participate in sportsperson activities, regardless of whether or not they participate in wildlife-watching activities as well. Additionally, 18 to 54 year olds are specializing in sportsperson activities, and reducing their crossover participation rates. Only those 55 years old and older have a participation rate higher than the overall participation rate of 58% in *wildlife-watching only* participation.

Table 12. Select Characteristics of Wildlife Watchers Only, Sportspersons Only, and Watcher-Sportspersons by Percent of All Participants: 2001, 2006, and 2011

(Population 16 years old and older.)

	<i>Wildlife Watcher Only</i> Percent of All Participants			<i>Sportsperson Only</i> Percent of All Participants			<i>Watcher-Sportsperson</i> Percent of All Participants		
	2001	2006	2011	2001	2006	2011	2001	2006	2011
Total All Persons	54%	61%	58%	20%	19%	20%	27%	20%	21%
Population Size of Residence									
Metropolitan Statistical Area (MSA)	56%	64%	60%	19%	18%	20%	25%	18%	20%
1,000,000 or more	59%	66%	66%	18%	17%	18%	23%	17%	16%
250,000 to 999,999	53%	65%	62%	20%	18%	19%	27%	17%	19%
50,000 to 249,999	51%	55%	47%	21%	21%	24%	28%	24%	29%
Outside MSA	47%	51%	42%	21%	21%	24%	32%	28%	33%
Age									
16 to 17 years	43%	45%	30%	37%	38%	39%	20%	17%	31%
18 to 24 years	33%	46%	36%	39%	33%	42%	28%	21%	22%
25 to 34 years	42%	50%	43%	28%	28%	32%	30%	22%	26%
35 to 44 years	48%	55%	51%	21%	21%	26%	31%	24%	23%
45 to 54 years	55%	62%	57%	16%	17%	20%	29%	21%	23%
55 to 64 years	61%	66%	63%	14%	13%	14%	25%	21%	22%
65 years and older	75%	78%	77%	8%	9%	9%	17%	13%	14%
Ethnicity									
Hispanic	55%	66%	62%	29%	20%	21%	16%	13%	17%
Non-Hispanic	54%	61%	58%	19%	19%	20%	27%	21%	22%
Race									
White	54%	61%	59%	19%	18%	19%	27%	21%	22%
African American	47%	59%	44%	35%	31%	37%	18%	11%	19%
Asian	59%	77%	55%	26%	15%	36%	15%	8%	10%
All Others	45%	21%	56%	25%	22%	23%	30%	22%	21%

Summary

Often the populations of all wildlife-related recreationists are divided into groups of either wildlife watchers or sportspersons. Sometimes these two groups of recreationists are perceived as mutually exclusive or nearly exclusive. However, they are really interrelated from numerous perspectives. This report analyzes several aspects of their interrelationship.

Perhaps the most tangible evidence against the notion of two mutually exclusive groups of recreationists is the magnitude of their intersection. The majority of sportspersons also participate in wildlife watching. Alternatively, 28% of all around-the-home and 38% of all away-from-home wildlife watchers are also sportspersons. Moreover, these percentages rise substantially if an individual's prior historical participation in sporting activities is considered. If a recreationist is still considered a sportsperson if he or she participated in either hunting or fishing within the last five years, sportsperson share of around-the-home and away-from-home watchers increases to 47% and 55% respectively.

From the perspective of spending in the marketplace and subsequent impact on the economy, there is substantial interrelationship between sportspersons and wildlife watchers. This report shows that the majority of wildlife-related recreation expenditures are made by those who participate in *both* wildlife watching and sporting activities. Those who participate in both watching and sporting activities account for 53% of all spending, while those who participate in only wildlife watching spend 27% and those who participate in only sporting activities accounts for 20%.

In *The Relationship between Wildlife Watchers, Hunters, and Anglers: Addendum to the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, the following prediction was made:



USFWS

“In the years ahead the interrelationship of [sportspersons] and [wildlife watchers] will likely experience change due to the distinctive socioeconomic characteristics of each. Demographic trends in the U.S. portend several changes in the participation rates for different types of wildlife recreation. Relatively fast growth in metropolitan populations, relatively slow growth in the population of Whites compared to other races, rapid population growth in Hispanics, and an aging populace will likely have two effects: the overall participation rate for wildlife watching will increase relative to sporting activities, and the share of recreationists who participate in both wildlife watching and sporting activities will likely decline.”

This prediction was especially true when the trends from 2001 to 2006 are taken into account. However, the activities of

sportspersons has rebounded somewhat from 2006 to 2011, and the total number of wildlife watchers has remained steady. It is unclear whether or not the trend of specialization will continue into the future. However, as described above, there is still a significant intersection among the groups of wildlife-related recreationists. The data collected in the *2016 FHWAR* will provide the first evidence into what the future holds.

As for the present, interest groups should remain aware that many of their constituents are the same people, and the overall health of wildlife-related opportunities should remain the focus, regardless of the activity that these groups represent. With more people moving to larger cities, and fewer young people being exposed to wildlife-related recreation, opportunity and better accessibility are paramount in retaining a participant base that funds so much conservation.

Appendix A. Wildlife-Watching Questions

The analysis for this report is based on information collected by the 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The questions used to collect the information are provided below.

An away-from-home wildlife watcher is someone who answered yes to the following question:

“From January 1, 2011 to December 31, 2011 did you take any trips or outings in the United States of at least one mile from home for the primary purpose of observing, photographing, or feeding wildlife? Do not include trips to zoos, circuses, aquariums, museums, or trips for hunting, fishing, or scouting for game.”

An around-the-home wildlife watcher is someone who answered yes to one of the following questions:

“From January 1, 2011 to December 31, 2011 did you take any special interest in wildlife around your home (area within a one-mile radius of your home), other than simply noticing wildlife while doing other activities? By this I mean, did you closely observe wildlife or try to identify types of wildlife you did not know?”

“From January 1, 2011 to December 31, 2011 did you photograph any type of wildlife around your home?”

“From January 1, 2011 to December 31, 2011 did you feed wild birds around your home?”

“From January 1, 2011 to December 31, 2011 did you feed any kind of fish or wildlife, other than birds, around your home?”

“From January 1, 2011 to December 31, 2011 did you visit any public parks or publicly-owned natural areas within a one-mile radius of your home, for the purpose of observing, photographing, or feeding wildlife?”

“During 2011, did you maintain in the area around your home any plantings, such as food or cover plants, for the primary purpose of benefiting fish or wildlife? Include areas in agricultural crops.”

Appendix B. Wildlife-Watching Days by State

Table B-1. Wildlife-Watching Days Away from Home by Sportsperson Classification and State Where Watching Occurred: 2011
(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	*1,525	*1,079	71%	...	29%
Alaska	5,159	2,724	53%	2,435	47%
Arizona	11,907	8,714	73%	*3,193	27%
Arkansas	*1,427	...	51%	*706	49%
California	27,352	19,493	71%	7,859	29%
Colorado	6,937	4,835	70%	2,102	30%
Connecticut	8,964	5,549	62%	3,415	38%
Delaware	1,573	1,445	92%	*128	8%
Florida	16,786	8,776	52%	8,010	48%
Georgia	34,309	*2,276	7%	*32,033	93%
Hawaii	4,660	3,629	78%	*1,031	22%
Idaho	3,757	*3,423	91%	*335	9%
Illinois	6,434	3,826	59%	*2,608	41%
Indiana	*2,924	*1,548	53%	*1,376	47%
Iowa	2,547	*1,308	51%	*1,238	49%
Kansas	1,019	*496	49%	*524	51%
Kentucky	2,890	*950	33%	*1,939	67%
Louisiana	*4,916	*1,689	34%	...	66%
Maine	7,334	6,972	95%	*362	5%
Maryland	4,458	3,176	71%	*1,282	29%
Massachusetts	10,546	8,917	85%	1,629	15%
Michigan	10,343	5,936	57%	*4,406	43%
Minnesota	6,974	*4,989	72%	*1,985	28%
Mississippi	*3,946	*2,098	53%	*1,847	47%
Missouri	8,200	4,567	56%	*3,633	44%
Montana	1,395	725	52%	*670	48%
Nebraska	2,361	*1,077	46%	*1,284	54%
Nevada	1,619	1,075	66%	*544	34%
New Hampshire	1,896	1,117	59%	*779	41%
New Jersey	6,210	5,239	84%	*971	16%
New Mexico	5,962	5,206	87%	*755	13%
New York	22,814	17,366	76%	*5,448	24%
North Carolina	9,275	5,049	54%	*4,225	46%
North Dakota	(NA)	(NA)	(NA)	(NA)	(NA)
Ohio	6,251	*4,409	71%	*1,842	29%
Oklahoma	*3,084	...	50%	*1,530	50%
Oregon	7,268	5,800	80%	*1,468	20%
Pennsylvania	9,554	6,512	68%	*3,042	32%
Rhode Island	1,230	538	44%	692	56%
South Carolina	4,254	*1,358	32%	*2,896	68%
South Dakota	1,559	1,004	64%	*555	36%
Tennessee	6,424	2,042	32%	4,382	68%
Texas	11,840	*7,633	64%	*4,207	36%
Utah	5,169	2,972	57%	2,197	43%
Vermont	2,602	1,637	63%	*965	37%
Virginia	4,552	3,037	67%	1,515	33%
Washington	9,641	7,215	75%	2,426	25%
West Virginia	3,648	*2,192	60%	*1,456	40%
Wisconsin	6,080	4,656	77%	...	23%
Wyoming	3,125	1,178	38%	1,947	62%

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

(NA) Not Available

Table B-2. Wildlife-Watching Days Around the Home by Sportsperson Classification and State of Residence: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	81,705	49,285	60%	*32,420	40%
Alaska	14,453	*6,720	46%	*7,733	54%
Arizona	103,892	76,685	74%	27,207	26%
Arkansas	69,632	*56,390	81%	*13,243	19%
California	430,512	377,139	88%	53,372	12%
Colorado	77,438	60,557	78%	16,880	22%
Connecticut	117,745	92,935	79%	24,810	21%
Delaware	17,876	12,129	68%	5,748	32%
Florida	287,200	209,154	73%	78,046	27%
Georgia	213,457	*70,928	33%	*142,529	67%
Hawaii	5,980	5,557	93%	...	7%
Idaho	44,449	*24,896	56%	*19,553	44%
Illinois	223,969	159,022	71%	64,947	29%
Indiana	153,312	110,282	72%	*43,030	28%
Iowa	68,260	52,979	78%	15,281	22%
Kansas	56,983	40,783	72%	*16,201	28%
Kentucky	78,211	50,565	65%	*27,646	35%
Louisiana	63,201	*44,568	71%	*18,633	29%
Maine	38,748	30,336	78%	*8,412	22%
Maryland	90,722	69,531	77%	21,190	23%
Massachusetts	118,915	98,056	82%	20,860	18%
Michigan	219,740	166,811	76%	*52,928	24%
Minnesota	93,987	71,932	77%	*22,055	23%
Mississippi	71,219	*27,739	39%	*43,481	61%
Missouri	123,604	88,563	72%	35,041	28%
Montana	23,866	*14,131	59%	*9,735	41%
Nebraska	23,595	18,675	79%	*4,920	21%
Nevada	42,301	37,224	88%	*5,077	12%
New Hampshire	37,178	29,873	80%	*7,305	20%
New Jersey	116,820	93,572	80%	23,247	20%
New Mexico	45,598	36,717	81%	8,881	19%
New York	350,108	236,928	68%	113,180	32%
North Carolina	160,961	118,888	74%	42,073	26%
North Dakota	(NA)	(NA)	(NA)	(NA)	(NA)
Ohio	207,470	118,857	57%	*88,613	43%
Oklahoma	91,267	56,016	61%	*35,251	39%
Oregon	91,306	68,150	75%	*23,156	25%
Pennsylvania	189,972	143,684	76%	*46,288	24%
Rhode Island	22,650	16,791	74%	5,859	26%
South Carolina	31,544	*21,325	68%	*10,219	32%
South Dakota	19,061	*7,598	40%	*11,463	60%
Tennessee	143,432	83,894	58%	*59,538	42%
Texas	537,508	247,075	46%	*290,434	54%
Utah	21,934	*8,409	38%	*13,525	62%
Vermont	22,537	16,580	74%	5,957	26%
Virginia	120,372	81,800	68%	38,572	32%
Washington	149,313	103,971	70%	45,342	30%
West Virginia	64,764	*27,259	42%	*37,504	58%
Wisconsin	169,846	87,903	52%	81,943	48%
Wyoming	16,524	*8,089	49%	*8,435	51%

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

(NA) Not Available

Appendix C. Selected Characteristics of Wildlife Watchers

Table C-1. Selected Characteristics of Away-from-Home Wildlife Watchers by Sportsperson Classification: 2011
(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Total All Persons	22,496	14,016	62%	8,480	38%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	20,651	13,162	64%	7,490	36%
1,000,000 or more	10,672	7,488	70%	3,183	30%
250,000 to 999,999	4,634	3,146	68%	1,487	32%
50,000 to 249,999	5,346	2,527	47%	2,819	53%
Outside MSA	1,845	855	46%	991	54%
Census Geographic Region					
New England	1,187	856	72%	332	28%
Middle Atlantic	2,561	1,756	69%	806	31%
East North Central	3,168	1,951	62%	1,217	38%
West North Central	1,783	1,079	61%	704	39%
South Atlantic	4,393	2,621	60%	1,772	40%
East South Central	1,456	719	49%	737	51%
West South Central	1,728	902	52%	826	48%
Mountain	2,230	1,381	62%	849	38%
Pacific	3,990	2,751	69%	1,239	31%
Age					
16 to 17 years	339	*133	39%	*206	61%
18 to 24 years	773	412	53%	361	47%
25 to 34 years	3,117	1,548	50%	1,570	50%
35 to 44 years	4,326	2,659	61%	1,666	39%
45 to 54 years	5,768	3,494	61%	2,275	39%
55 to 64 years	4,740	2,996	63%	1,744	37%
65 years and older	3,433	2,774	81%	659	19%
Sex					
Male	11,472	5,616	49%	5,855	51%
Female	11,025	8,400	76%	2,625	24%
Ethnicity					
Hispanic	1,442	999	69%	443	31%
Non-Hispanic	21,054	13,017	62%	8,037	38%
Race					
White	20,644	12,787	62%	7,857	38%
African American	610	339	56%	*271	44%
Asian	253	*219	87%	...	13%
All Others	989	671	68%	318	32%

continues

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

Table C-1. Selected Characteristics of Away-from-Home Wildlife Watchers by Sportsperson Classification: 2011 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Annual Household Income					
Less than \$20,000	1,622	991	61%	631	39%
\$20,000 to \$24,999	838	696	83%	*142	17%
\$25,000 to \$29,999	663	519	78%	*144	22%
\$30,000 to \$34,999	756	454	60%	302	40%
\$35,000 to \$39,999	1,018	570	56%	448	44%
\$40,000 to \$49,999	1,691	927	55%	765	45%
\$50,000 to \$74,999	4,773	3,142	66%	1,631	34%
\$75,000 to \$99,999	3,769	1,947	52%	1,822	48%
\$100,000 to \$149,999	2,775	1,613	58%	1,162	42%
\$150,000 or more	2,088	1,481	71%	607	29%
Not Reported	2,502	1,675	67%	826	33%
Education					
11 years or less	1,237	459	37%	778	63%
12 years	5,224	3,033	58%	2,191	42%
1 to 3 years of college	5,337	3,338	63%	1,999	37%
4 years of college	5,436	3,386	62%	2,050	38%
5 years or more of college	5,263	3,801	72%	1,462	28%

* Estimate based on a sample size of 10–29.

Table C-2. Selected Characteristics of Around-the-Home Wildlife Watchers by Sportsperson Classification: 2011

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Total All Persons	68,598	49,109	72%	19,488	28%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	62,759	45,758	73%	17,001	27%
1,000,000 or more	31,459	24,042	76%	7,417	24%
250,000 to 999,999	15,879	11,958	75%	3,921	25%
50,000 to 249,999	15,421	9,757	63%	5,664	37%
Outside MSA	5,839	3,352	57%	2,487	43%
Census Geographic Region					
New England	3,858	3,020	78%	838	22%
Middle Atlantic	8,744	6,947	79%	1,797	21%
East North Central	12,492	8,782	70%	3,710	30%
West North Central	5,201	3,494	67%	1,706	33%
South Atlantic	12,767	8,989	70%	3,778	30%
East South Central	4,394	2,936	67%	1,458	33%
West South Central	7,087	4,237	60%	2,850	40%
Mountain	4,716	3,378	72%	1,337	28%
Pacific	9,337	7,326	78%	2,012	22%
Age					
16 to 17 years	903	397	44%	506	56%
18 to 24 years	2,360	1,546	66%	814	34%
25 to 34 years	7,282	4,646	64%	2,636	36%
35 to 44 years	9,260	6,103	66%	3,157	34%
45 to 54 years	14,917	10,342	69%	4,575	31%
55 to 64 years	15,801	11,921	75%	3,879	25%
65 years and older	18,074	14,154	78%	3,921	22%
Sex					
Male	31,322	18,291	58%	13,031	42%
Female	37,276	30,818	83%	6,457	17%
Ethnicity					
Hispanic	3,398	2,642	78%	756	22%
Non-Hispanic	65,200	46,467	71%	18,733	29%
Race					
White	62,487	44,662	71%	17,825	29%
African American	2,567	1,921	75%	645	25%
Asian	951	712	75%	*239	25%
All Others	2,593	1,815	70%	779	30%

continues

* Estimate based on a sample size of 10–29.

Table C-2. Selected Characteristics of Around-the-Home Wildlife Watchers by Sportsperson Classification: 2011 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Annual Household Income					
Less than \$20,000	6,584	4,923	75%	1,661	25%
\$20,000 to \$24,999	3,447	2,531	73%	916	27%
\$25,000 to \$29,999	2,247	1,757	78%	490	22%
\$30,000 to \$34,999	4,024	2,277	57%	1,747	43%
\$35,000 to \$39,999	3,224	2,276	71%	949	29%
\$40,000 to \$49,999	4,942	3,511	71%	1,431	29%
\$50,000 to \$74,999	11,696	8,365	72%	3,332	28%
\$75,000 to \$99,999	8,599	5,414	63%	3,185	37%
\$100,000 to \$149,999	8,295	6,097	74%	2,197	26%
\$150,000 or more	6,111	4,237	69%	1,873	31%
Not Reported	9,429	7,722	82%	1,707	18%
Education					
11 years or less	5,418	3,489	64%	1,929	36%
12 years	20,281	13,201	65%	7,080	35%
1 to 3 years of college	15,257	11,313	74%	3,945	26%
4 years of college	15,526	11,562	74%	3,965	26%
5 years or more of college	12,115	9,544	79%	2,571	21%

Appendix D. Expenditures for Wildlife Watching and Sporting Activities

Table D-1. Wildlife-Watching Expenditures by Sportsperson Classification: 2011
(Population 16 years old and older. Numbers in thousands of dollars except averages.)

	<i>All</i>	<i>Non-Sportspersons</i>	<i>Average Non-Sportsperson</i>	<i>Sportspersons</i>	<i>Average Sportsperson</i>
Total, All Items	54,890,272	38,419,578	989	16,470,695	925
Trip-Related Expenditures					
Total trip-related	17,274,675	11,291,473	820	5,983,202	783
Food and lodging, total	9,349,439	6,124,255	446	3,225,184	423
Food	5,465,019	3,336,288	250	2,128,731	282
Lodging	3,884,420	2,787,968	204	1,096,453	144
Transportation, total	6,006,860	4,007,569	291	1,999,291	262
Public	2,521,247	1,954,605	142	566,642	74
Private	3,485,613	2,052,964	154	1,432,649	192
Other trip costs, total	1,918,376	1,159,648	84	758,727	99
Guide fees, pack trips or package fees	775,074	693,384	50	81,691	11
Public land use fees	239,021	154,099	11	84,921	11
Private land use fees	113,207	24,699	2	88,508	12
Equipment rental	141,017	46,279	3	94,738	12
Boating costs	547,875	174,060	13	373,815	49
Heating and cooking fuel	102,182	67,128	5	35,054	5
Equipment and Other Expenses					
Total	37,615,597	27,128,105	742	10,487,493	655
Wildlife-watching equipment, total	11,323,179	7,325,625	221	3,997,554	270
Binoculars, spotting scopes	918,567	471,388	134	447,179	293
Photographic equipment	2,799,579	1,743,593	322	1,055,986	365
Film and photo processing	528,057	353,393	87	174,664	105
Commercially prepared and packaged wild bird food	3,133,968	2,225,295	94	908,672	85
Other bulk foods used to feed wild birds	934,194	694,620	74	239,574	63
Feed for other wildlife	1,012,964	496,772	90	516,192	116
Nest boxes, bird houses, feeders, baths	969,708	657,901	49	311,808	54
Day packs, carrying cases, and special clothing	855,196	551,992	142	303,205	117
Other wildlife-watching equipment	170,946	130,672	39	40,274	27
Auxiliary equipment, total	1,555,374	811,740	197	743,634	319
Tents, tarps	289,781	149,684	96	140,098	100
Frame packs and backpacking equipment	216,231	150,434	124	65,798	87
Other camping equipment	294,173	187,300	117	106,873	122
Other auxiliary equipment	755,188	324,323	254	430,866	589
Special equipment, total	14,272,368	10,842,875	7,749	3,429,493	4,186
Off-the-road vehicle	6,475,469	5,915,928	17,765	*559,541	3,660
Travel or tent trailer, pickup, camper, van, motor home, house trailer, recreational vehicle (RV)	5,868,982	3,674,541	9,247	*2,194,441	18,197
Boats, boat accessories	1,703,305	1,035,394	1,570	667,911	1,295
Cabins
Other	217,988	*210,389	1,020	...	190
Magazines, books, DVDs	420,395	279,924	52	140,471	45
Land leasing and ownership	5,676,794	4,521,976	5,591	1,154,818	2,722
Membership dues and contributions	2,163,568	1,680,824	204	482,743	193
Plantings	2,203,920	1,665,140	254	538,779	238

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

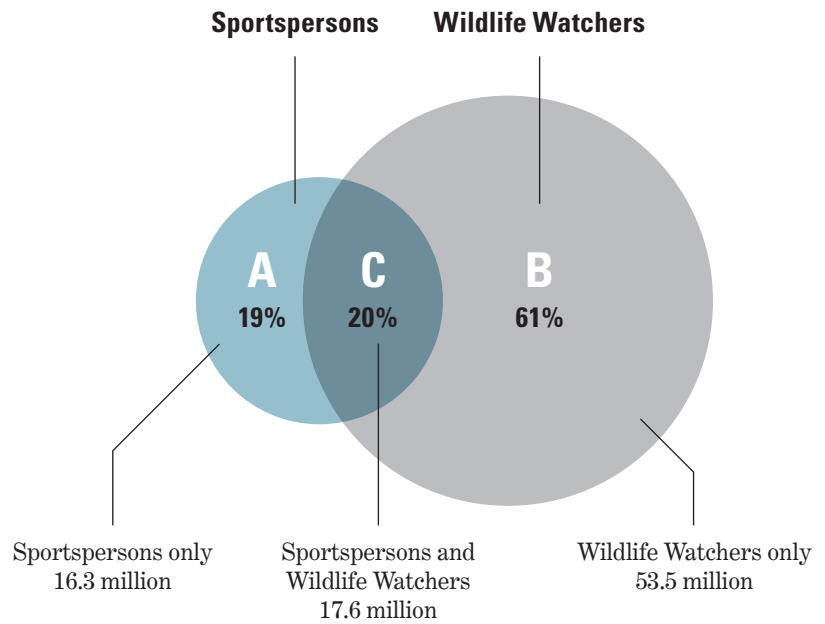
Table D-2. Sporting Expenditures by Wildlife-Watching Classification: 2011

(Population 16 years old and older. Numbers in thousands of dollars except averages.)

	<i>All</i>	<i>Non-Watchers</i>	<i>Average Non-Watcher</i>	<i>Wildlife Watchers</i>	<i>Average Wildlife Watcher</i>
Total, All Items	89,761,524	29,613,114	1,635	60,148,410	3,114
Trip-Related Expenditures					
Total trip-related	32,210,653	12,704,031	722	19,506,622	1,019
Food and lodging, total	11,592,622	4,498,057	256	7,094,565	371
Food	8,653,068	3,559,995	205	5,093,073	270
Lodging	2,939,554	938,063	53	2,001,491	105
Transportation, total	11,029,451	4,404,935	250	6,624,516	346
Public	1,107,975	531,709	30	576,266	30
Private	9,921,476	3,873,225	223	6,048,251	320
Other trip costs, total	9,588,580	3,801,039	216	5,787,541	302
Guide fees, pack trips or package fees	1,596,289	766,371	44	829,918	43
Public land use fees	278,334	105,050	6	173,284	9
Private land use fees	98,792	438,636	25	560,156	29
Equipment rental	308,294	106,027	6	202,267	11
Boating costs	4,029,636	1,400,163	417	2,629,473	474
Heating and cooking fuel	370,297	156,017	9	214,280	11
Bait	1,497,445	595,766	39	901,679	55
Ice	509,494	233,010	15	276,484	17
Equipment and Other Expenses					
Total	57,550,871	16,909,083	934	40,641,788	2,104
Hunting equipment	8,182,297	2,562,065	598	5,620,232	770
Fishing equipment	6,179,132	2,352,071	247	3,827,061	309
Auxiliary equipment	3,736,648	1,065,307	285	2,671,341	358
Camping equipment	818,392	228,976	199	589,416	226
Binoculars, field glasses, telescopes, etc.	488,017	111,760	182	376,257	225
Special hunting and fishing clothing, boots, foul weather gear	1,157,848	389,794	164	768,054	165
Processing and taxidermy costs	813,477	229,772	330	583,705	356
Other auxiliary	458,915	105,005	269	353,910	281
Special equipment, total	25,129,326	7,451,797	5,543	17,677,529	6,681
Magazines, books, and DVDs	319,781	97,766	55	222,015	52
Land leasing and ownership	10,563,362	2,332,883	2,519	8,230,479	4,098
Membership dues and contributions	1,122,787	291,954	186	830,833	217
Licenses, stamps, tags, and permits	1,614,937	693,146	38	921,791	48
Plantings	702,601	62,094	226	640,507	641

Appendix E. 2006 Crossover Tables and Figures

Figure E-1. Wildlife-Related Recreationists, by type of Activity: 2006
(Population 16 years of age and older.)



Note: Sportspersons are hunters and anglers. Wildlife watchers are observers, photographers, and feeders of wildlife.

Table E-1. Wildlife-Watching Participants and Days by Type of Activity and Sportsperson Classification: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Participants					
All Wildlife Watching	71,132	50,089	70%	21,043	30%
Away from Home	22,977	13,676	60%	9,301	40%
Observe Wildlife	21,546	13,180	61%	8,366	39%
Photograph Wildlife	11,708	7,192	61%	4,516	39%
Feed Wildlife	7,084	3,945	56%	3,139	44%
Around the Home	67,756	48,050	71%	19,706	29%
Observe Wildlife	44,467	30,868	69%	13,599	31%
Photograph Wildlife	18,763	12,273	65%	6,490	35%
Feed Wildlife	55,512	38,975	70%	16,537	30%
Visit Parks or Natural Areas	13,271	9,229	70%	4,042	30%
Maintain Plantings or Natural Areas	14,508	9,954	69%	4,554	31%
Average Days of Participation					
All Wildlife Watching	84	84		84	
Away from Home	15	15		16	
Observe Wildlife	14	13		15	
Photograph Wildlife	9	8		10	
Feed Wildlife	11	9		13	
Around the Home	83	83		82	
Observe Wildlife	117	121		108	
Photograph Wildlife	18	16		21	
Visit Parks or Natural Areas	25	26		22	
Total Days					
All Wildlife Watching	5,969,414	4,198,856	70%	1,770,558	30%
Away from Home	352,070	200,915	57%	151,155	43%
Observe Wildlife	291,027	165,059	57%	125,968	43%
Photograph Wildlife	103,872	58,817	57%	45,055	43%
Feed Wildlife	77,329	37,465	48%	39,864	52%
Around the Home	5,617,344	3,997,941	71%	1,619,403	29%
Observe Wildlife	5,202,536	3,734,531	72%	1,468,005	28%
Photograph Wildlife	332,975	195,317	59%	137,658	41%
Visit Parks or Natural Areas	326,520	239,486	73%	87,034	27%

Table E-2. Participants in Wildlife Watching by Species and Sportsperson Classification: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Away from Home, Total	22,977	13,676	60%	9,301	40%
Total Birds	20,025	12,499	62%	7,526	38%
Birds of Prey	14,018	8,293	59%	5,725	41%
Waterfowl	15,362	9,703	63%	5,659	37%
Water Birds	11,535	7,225	63%	4,310	37%
Songbirds	13,715	8,457	62%	5,258	38%
Other Birds	8,805	4,905	56%	3,900	44%
Total Land Mammals	16,192	9,627	59%	6,565	41%
Large Land Mammals	12,761	7,184	56%	5,577	44%
Small Land Mammals	13,446	8,286	62%	5,160	38%
Fish	6,754	3,749	56%	3,005	44%
Marine Mammals	3,384	2,272	67%	1,112	33%
Other Wildlife	10,358	6,525	63%	3,833	37%
Around the Home, Total	67,756	48,050	71%	19,706	29%
Birds	41,821	29,358	70%	12,463	30%
Large Land Mammals	21,295	13,466	63%	7,829	37%
Small Land Mammals	33,934	23,424	69%	10,510	31%
Reptiles and Amphibians	12,750	8,241	65%	4,509	35%
Insects	15,983	11,156	70%	4,827	30%
Fish and Other Wildlife	9,067	5,214	58%	3,853	42%

Table E-3. Away-from-Home Wildlife Watchers by Sportsperson Classification and State Where Activity Occurred: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Away- from-Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	471	240	51%	231	49%
Alaska	354	187	53%	167	47%
Arizona	644	458	71%	186	29%
Arkansas	435	205	47%	230	53%
California	2,894	2,355	81%	539	19%
Colorado	873	570	65%	303	35%
Connecticut	266	194	73%	72	27%
Delaware	109	75	69%	34	31%
Florida	1,560	876	56%	684	44%
Georgia	438	273	62%	165	38%
Hawaii	154	126	82%	28	18%
Idaho	506	312	62%	194	38%
Illinois	837	534	64%	303	36%
Indiana	755	482	64%	273	36%
Iowa	404	250	62%	154	38%
Kansas	248	141	57%	107	43%
Kentucky	572	359	63%	213	37%
Louisiana	225	116	52%	109	48%
Maine	399	250	63%	149	37%
Maryland	419	276	66%	143	34%
Massachusetts	655	515	79%	140	21%
Michigan	1,034	572	55%	462	45%
Minnesota	641	314	49%	327	51%
Mississippi	246	92	37%	154	63%
Missouri	842	388	46%	454	54%
Montana	512	284	55%	228	45%
Nebraska	176	114	65%	62	35%
Nevada	416	328	79%	88	21%
New Hampshire	347	252	73%	95	27%
New Jersey	615	368	60%	247	40%
New Mexico	507	312	62%	195	38%
New York	1,293	749	58%	544	42%
North Carolina	686	384	56%	302	44%
North Dakota	39	15	38%	24	62%
Ohio	1,055	679	64%	376	36%
Oklahoma	372	176	47%	196	53%
Oregon	675	419	62%	256	38%
Pennsylvania	1,168	665	57%	503	43%
Rhode Island	203	173	85%	30	15%
South Carolina	447	283	63%	164	37%
South Dakota	270	173	64%	97	36%
Tennessee	1,007	610	61%	397	39%
Texas	956	450	47%	506	53%
Utah	518	391	75%	127	25%
Vermont	265	213	80%	52	20%
Virginia	728	465	64%	263	36%
Washington	959	655	68%	304	32%
West Virginia	282	145	51%	137	49%
Wisconsin	685	325	47%	360	53%
Wyoming	521	312	60%	209	40%

Table E-4. Around-the-Home Wildlife Watchers by Sportsperson Classification and State of Residence: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around- the-Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	989	688	70%	301	30%
Alaska	202	135	67%	67	33%
Arizona	950	776	82%	174	18%
Arkansas	811	398	49%	413	51%
California	5,259	4,450	85%	809	15%
Colorado	1,393	906	65%	487	35%
Connecticut	1,063	832	78%	231	22%
Delaware	206	160	78%	46	22%
Florida	3,274	2,107	64%	1,167	36%
Georgia	1,798	1,201	67%	597	33%
Hawaii	145	105	72%	40	28%
Idaho	395	258	65%	137	35%
Illinois	2,258	1,612	71%	646	29%
Indiana	1,786	1,238	69%	548	31%
Iowa	1,059	716	68%	343	32%
Kansas	723	495	68%	228	32%
Kentucky	1,235	860	70%	375	30%
Louisiana	671	381	57%	290	43%
Maine	576	388	67%	188	33%
Maryland	1,322	904	68%	418	32%
Massachusetts	1,647	1,342	81%	305	19%
Michigan	2,826	2,084	74%	742	26%
Minnesota	1,908	1,118	59%	790	41%
Mississippi	606	289	48%	317	52%
Missouri	1,966	1,219	62%	747	38%
Montana	389	210	54%	179	46%
Nebraska	407	279	69%	128	31%
Nevada	371	313	84%	58	16%
New Hampshire	451	339	75%	112	25%
New Jersey	1,483	1,187	80%	296	20%
New Mexico	437	331	76%	106	24%
New York	3,465	2,684	77%	781	23%
North Carolina	2,237	1,565	70%	672	30%
North Dakota	128	76	59%	52	41%
Ohio	3,272	2,362	72%	910	28%
Oklahoma	976	722	74%	254	26%
Oregon	1,129	872	77%	257	23%
Pennsylvania	3,502	2,572	73%	930	27%
Rhode Island	298	245	82%	53	18%
South Carolina	924	735	80%	189	20%
South Dakota	257	156	61%	101	39%
Tennessee	1,853	1,492	81%	361	19%
Texas	3,861	2,451	63%	1,410	37%
Utah	491	293	60%	198	40%
Vermont	274	226	82%	48	18%
Virginia	2,082	1,483	71%	599	29%
Washington	1,927	1,368	71%	559	29%
West Virginia	559	280	50%	279	50%
Wisconsin	1,703	995	58%	708	42%
Wyoming	180	119	66%	61	34%

Figure E-2. Percent Away-from-Home Wildlife Watchers Who Were also Sportspersons

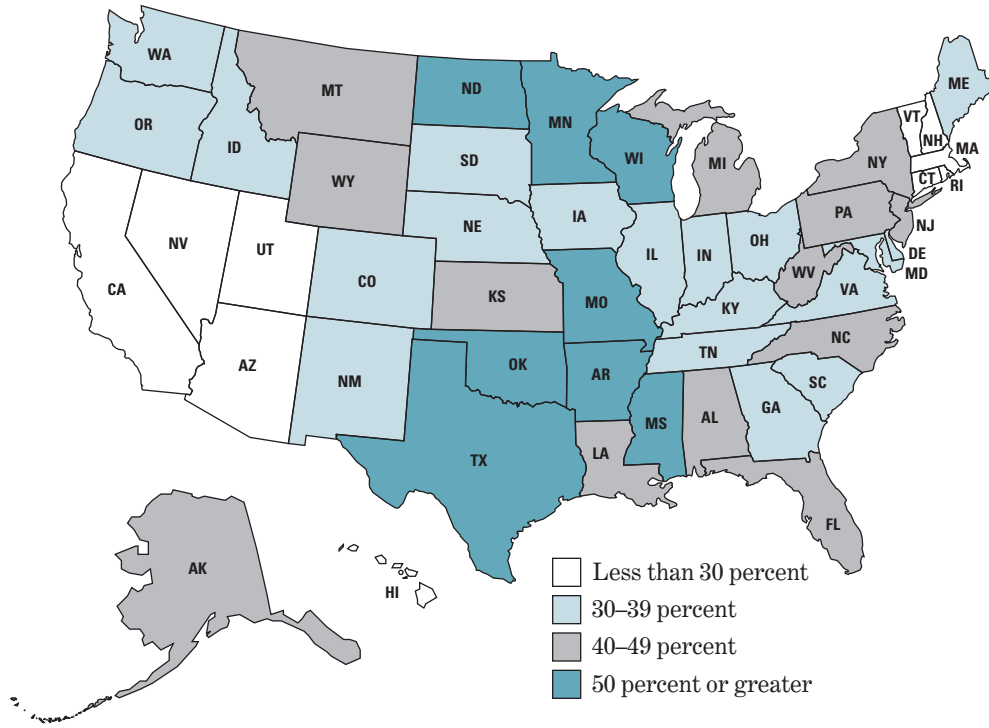


Figure E-3. Percent Around-the-Home Wildlife Watchers Who Were also Sportspersons

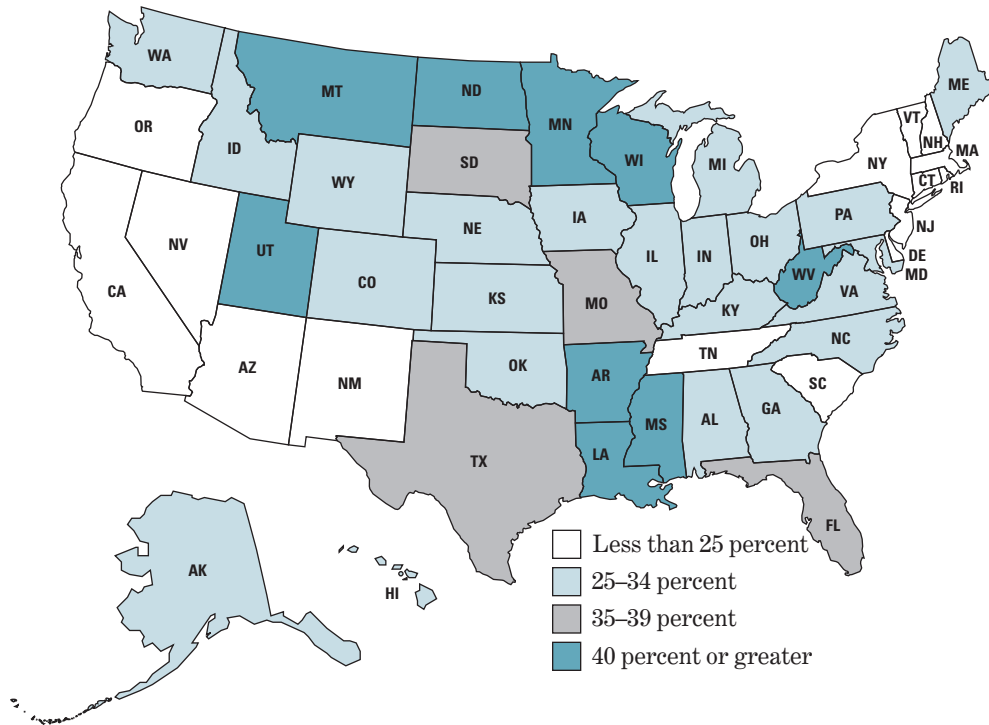


Table E-5. Participation in Wildlife-Related Recreation by Recreationists and State of Residence: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Alabama	1,418	711	50%	412	29%	295	21%
Alaska	288	139	48%	81	28%	68	24%
Arizona	1,234	815	66%	246	20%	173	14%
Arkansas	1,081	530	49%	222	21%	329	30%
California	6,804	5,022	74%	1,005	15%	777	11%
Colorado	1,735	1,143	66%	276	16%	316	18%
Connecticut	1,224	927	76%	122	10%	175	14%
Delaware	256	171	67%	44	17%	41	16%
Florida	4,626	2,622	57%	1,106	24%	898	19%
Georgia	2,415	1,253	52%	596	25%	566	23%
Hawaii	226	126	56%	66	29%	34	15%
Idaho	564	305	54%	132	23%	127	23%
Illinois	2,886	1,777	62%	531	18%	578	20%
Indiana	2,279	1,457	64%	454	20%	368	16%
Iowa	1,306	787	60%	195	15%	324	25%
Kansas	980	554	57%	193	20%	233	24%
Kentucky	1,667	996	60%	326	20%	345	21%
Louisiana	1,106	428	39%	394	36%	284	26%
Maine	717	451	63%	117	16%	149	21%
Maryland	1,548	1,027	66%	214	14%	307	20%
Massachusetts	1,931	1,460	76%	206	11%	265	14%
Michigan	3,651	2,281	62%	704	19%	666	18%
Minnesota	2,479	1,199	48%	533	22%	747	30%
Mississippi	895	358	40%	277	31%	260	29%
Missouri	2,497	1,401	56%	438	18%	658	26%
Montana	510	278	55%	98	19%	134	26%
Nebraska	552	317	57%	114	21%	121	22%
Nevada	530	348	66%	110	21%	72	14%
New Hampshire	528	387	73%	57	11%	84	16%
New Jersey	1,825	1,263	69%	288	16%	274	15%
New Mexico	601	378	63%	111	18%	112	19%
New York	4,103	2,866	70%	555	14%	682	17%
North Carolina	2,816	1,778	63%	549	19%	489	17%
North Dakota	232	87	38%	98	42%	47	20%
Ohio	4,023	2,535	63%	644	16%	844	21%
Oklahoma	1,371	769	56%	289	21%	313	23%
Oregon	1,531	981	64%	265	17%	285	19%
Pennsylvania	4,166	2,751	66%	528	13%	887	21%
Rhode Island	355	269	76%	43	12%	43	12%
South Carolina	1,283	688	54%	340	27%	255	20%
South Dakota	326	190	58%	60	18%	76	23%
Tennessee	2,287	1,512	66%	321	14%	454	20%
Texas	5,481	2,813	51%	1,370	25%	1,298	24%
Utah	764	413	54%	190	25%	161	21%
Vermont	311	220	71%	32	10%	59	19%
Virginia	2,500	1,643	66%	374	15%	483	19%
Washington	2,316	1,552	67%	309	13%	455	20%
West Virginia	734	370	50%	149	20%	215	29%
Wisconsin	2,216	1,031	47%	506	23%	679	31%
Wyoming	229	115	50%	35	15%	79	34%

Table E-6. Selected Characteristics of Wildlife Watchers and Sportspersons: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>U.S. Population</i>	<i>Wildlife Watchers</i>	<i>Percent of Population</i>	<i>Sportspersons</i>	<i>Percent of Population</i>
Total All Persons	229,245	71,132	31%	33,916	15%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	190,425	55,477	29%	24,178	13%
1,000,000 or more	120,356	31,523	26%	12,732	11%
250,000 to 999,999	46,506	15,483	33%	6,569	14%
50,000 to 249,999	23,562	8,471	36%	4,878	21%
Outside MSA	38,820	15,655	40%	9,738	25%
Census Geographic Region					
New England	11,233	4,489	40%	1,353	12%
Middle Atlantic	31,518	8,723	28%	3,214	10%
East North Central	35,609	12,215	34%	5,975	17%
West North Central	15,458	6,741	44%	3,836	25%
South Atlantic	43,965	12,862	29%	6,633	15%
East South Central	13,722	4,931	36%	2,689	20%
West South Central	25,407	6,764	27%	4,499	18%
Mountain	15,651	4,968	32%	2,372	15%
Pacific	36,681	9,439	26%	3,345	9%
Age					
16 to 17 years	8,272	1,441	17%	1,284	16%
18 to 24 years	23,292	3,279	14%	2,655	11%
25 to 34 years	37,468	7,813	21%	5,441	15%
35 to 44 years	45,112	14,881	33%	8,382	19%
45 to 54 years	44,209	16,542	37%	7,608	17%
55 to 64 years	32,867	13,544	41%	5,229	16%
65 years and older	38,024	13,633	36%	3,317	9%
Sex					
Male	110,273	33,397	30%	25,855	23%
Female	118,972	37,735	32%	8,061	7%
Ethnicity					
Hispanic	28,218	4,055	14%	1,732	6%
Non-Hispanic	200,027	67,077	34%	32,184	16%
Race					
White	189,255	65,961	35%	31,316	17%
African American	25,925	2,630	10%	1,577	6%
Asian	10,104	1,276	13%	344	3%
All Others	3,960	1,264	32%	680	17%

continues

Table E-6. Selected Characteristics of Wildlife Watchers and Sportspersons: 2006 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>U.S. Population</i>	<i>Wildlife Watchers</i>	<i>Percent of Population</i>	<i>Sportspersons</i>	<i>Percent of Population</i>
Annual Household Income					
Less than \$20,000	26,046	6,104	23%	2,396	9%
\$20,000 to \$24,999	11,374	2,616	23%	1,555	14%
\$25,000 to \$29,999	10,524	3,233	31%	1,503	14%
\$30,000 to \$34,999	11,161	3,115	28%	1,759	16%
\$35,000 to \$39,999	10,349	3,430	33%	1,794	17%
\$40,000 to \$49,999	17,699	6,623	37%	3,167	18%
\$50,000 to \$74,999	33,434	13,345	40%	6,811	20%
\$75,000 to \$99,999	21,519	8,623	40%	4,676	22%
\$100,000 or more	29,159	12,433	43%	5,671	19%
Not Reported	57,981	11,609	20%	4,583	8%
Education					
11 years or less	34,621	6,920	20%	4,587	13%
12 years	78,073	21,818	28%	11,837	15%
1 to 3 years of college	53,019	18,022	34%	8,595	16%
4 years of college	39,506	13,781	35%	5,652	14%
5 years or more of college	24,025	10,591	44%	3,245	14%

Table E-7. Socioeconomic Characteristics of Different Types of Wildlife-Related Recreationists: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Wildlife Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Total All Persons	87,412	53,496	61%	16,280	19%	17,636	20%
Population Size of Residence							
Metropolitan Statistical Area (MSA)	67,519	43,340	64%	12,042	18%	12,137	18%
1,000,000 or more	37,976	25,244	66%	6,453	17%	6,279	17%
250,000 to 999,999	18,768	12,199	65%	3,285	18%	3,284	17%
50,000 to 249,999	10,775	5,898	55%	2,304	21%	2,573	24%
Outside MSA	19,894	10,156	51%	4,239	21%	5,499	28%
Census Geographic Region							
New England	5,066	3,713	73%	577	11%	776	15%
Middle Atlantic	10,093	6,879	68%	1,370	14%	1,844	18%
East North Central	15,052	9,077	60%	2,837	19%	3,138	21%
West North Central	8,371	4,536	54%	1,630	19%	2,205	26%
South Atlantic	16,207	9,575	59%	3,345	21%	3,287	20%
East South Central	6,263	3,573	57%	1,332	21%	1,358	22%
West South Central	9,034	4,534	50%	2,270	25%	2,230	25%
Mountain	6,162	3,790	62%	1,194	19%	1,178	19%
Pacific	11,165	7,819	70%	1,726	15%	1,620	15%
Age							
16 to 17 years	2,330	1,046	45%	889	38%	395	17%
18 to 24 years	4,923	2,268	46%	1,644	33%	1,011	21%
25 to 34 years	10,824	5,383	50%	3,011	28%	2,430	22%
35 to 44 years	18,819	10,437	55%	3,938	21%	4,444	24%
45 to 54 years	19,891	12,284	62%	3,349	17%	4,258	21%
55 to 64 years	15,566	10,337	66%	2,022	13%	3,207	21%
65 years and older	15,059	11,743	78%	1,426	9%	1,890	13%
Sex							
Male	46,219	20,364	44%	12,822	28%	13,033	28%
Female	41,193	33,132	80%	3,458	8%	4,603	11%
Ethnicity							
Hispanic	5,099	3,367	66%	1,044	20%	688	13%
Non-Hispanic	82,313	50,129	61%	15,236	19%	16,948	21%
Race							
White	80,523	49,207	61%	14,562	18%	16,754	21%
African American	3,803	2,226	59%	1,173	31%	404	11%
Asian	1,496	1,152	77%	220	15%	124	8%
All Others	1,590	910	21%	326	22%	354	22%

continues

Table E-7. Socioeconomic Characteristics of Different Types of Wildlife-Related Recreationists: 2006 – continued

(Population 16 years old and older. Numbers in thousands.)

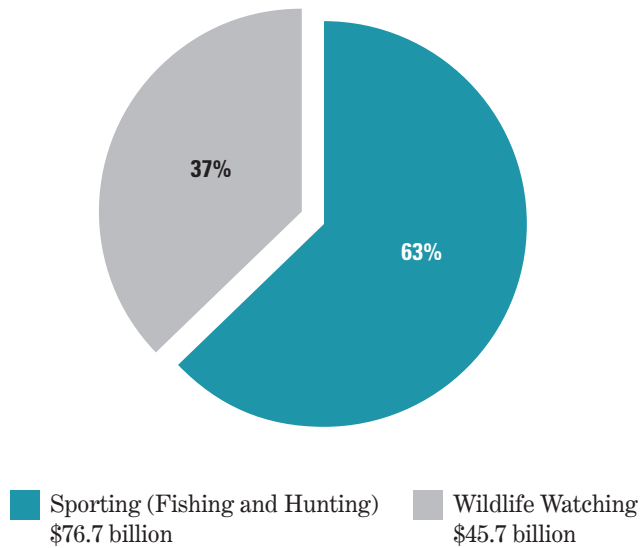
	<i>All Wildlife Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Annual Household Income							
Less than \$20,000	7,416	5,019	68%	1,312	18%	1,085	15%
\$20,000 to \$24,999	3,497	1,943	56%	881	25%	673	19%
\$25,000 to \$29,999	3,859	2,356	61%	626	16%	877	23%
\$30,000 to \$34,999	3,939	2,179	55%	824	21%	936	24%
\$35,000 to \$39,999	4,288	2,494	58%	858	20%	936	22%
\$40,000 to \$49,999	8,117	4,950	61%	1,494	18%	1,673	21%
\$50,000 to \$74,999	16,361	9,550	58%	3,016	18%	3,795	23%
\$75,000 to \$99,999	10,750	6,074	57%	2,127	20%	2,549	24%
\$100,000 or more	15,035	9,364	62%	2,602	17%	3,069	20%
Not Reported	14,149	9,566	68%	2,540	18%	2,043	14%
Education							
11 years or less	9,644	5,057	52%	2,724	28%	1,863	19%
12 years	27,666	15,829	57%	5,848	21%	5,989	22%
1 to 3 years of college	21,797	13,202	61%	3,775	17%	4,820	22%
4 years of college	16,431	10,779	66%	2,650	16%	3,002	18%
5 years or more of college	11,874	8,629	73%	1,283	11%	1,962	17%

Figure E-4. Expenditures for Wildlife-Related Recreation

(Total Expenditures \$122.3 billion.)

Distribution of Wildlife-Related Recreation Expenditures by Type of Activity

Total: \$122.3 billion



Distribution of Wildlife-Related Recreation Expenditures by Type of Recreationist

Total: \$122.3 billion

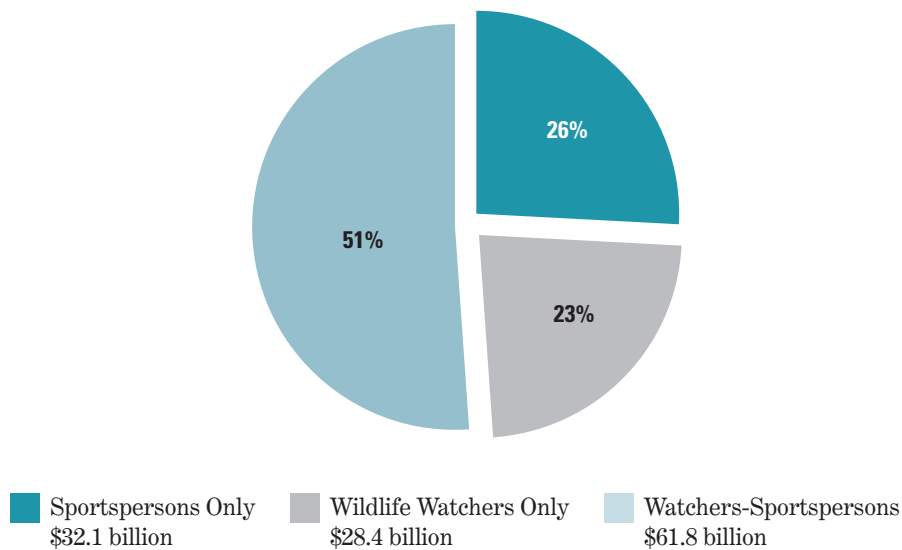


Table E-8. Expenditures for all Wildlife-Related Recreation by Recreationist Type: 2006

(Population 16 years old and older. Numbers in thousands of dollars.)

	<i>All Recreationists</i>	<i>Watchers Only</i>	<i>Percent of All</i>	<i>Sportspersons Only</i>	<i>Percent of All</i>	<i>Watchers- Sportspersons</i>	<i>Percent of All</i>
Total, All Items	122,304,987	32,107,543	26%	28,403,921	23%	61,793,523	51%
Trip-Related Expenditures							
Total trip-related	37,432,326	8,095,819	22%	10,357,025	28%	18,979,482	51%
Food and lodging, total	16,610,050	4,885,056	29%	3,764,240	23%	7,960,754	48%
Food	10,802,722	2,686,076	25%	2,629,626	24%	5,487,020	51%
Lodging	5,807,328	2,198,980	38%	1,134,614	20%	2,473,734	43%
Transportation, total	12,114,768	2,698,392	22%	3,219,025	27%	6,197,351	51%
Public	2,305,206	1,139,578	49%	338,699	15%	826,929	36%
Private	9,809,562	1,558,814	16%	2,880,325	29%	5,370,423	55%
Other trip costs, total	8,707,508	512,371	6%	3,373,761	39%	4,821,376	55%
Guide fees, pack trips or package fees	1,499,053	187,528	13%	517,345	35%	794,180	53%
Public land use fees	364,579	85,774	24%	111,841	31%	166,964	46%
Private land use fees	606,498	39,024	6%	241,402	40%	326,072	54%
Equipment rental	606,769	95,962	16%	222,154	37%	288,653	48%
Boating costs	3,735,858	69,768	2%	1,524,039	41%	2,142,051	57%
Heating and cooking fuel	333,227	34,314	10%	93,296	28%	205,617	62%
Bait	1,183,332	(X)	(X)	504,100	43%	679,232	57%
Ice	378,190	(X)	(X)	159,585	42%	218,605	58%
Equipment and Other Expenses							
Total	84,872,661	24,011,724	28%	18,046,896	21%	42,814,041	50%
Hunting equipment	5,716,758	(X)	(X)	2,029,845	36%	3,686,913	64%
Fishing equipment	5,365,933	(X)	(X)	2,262,497	42%	3,103,436	58%
Auxiliary hunting and fishing equipment	2,969,992	(X)	(X)	776,503	26%	2,193,489	74%
Wildlife-watching equipment	9,869,727	6,749,079	68%	(X)	(X)	3,120,648	32%
Auxiliary wildlife-watching equipment	1,033,060	678,876	66%	(X)	(X)	354,184	34%
Special equipment	39,181,708	8,686,303	22%	9,859,040	25%	20,636,365	53%
Magazines, books, and DVDs	663,862	226,641	34%	87,523	13%	349,698	53%
Land leasing and ownership	15,537,859	5,715,056	37%	2,343,240	15%	7,479,563	48%
Membership dues and contributions	1,645,738	796,693	48%	156,350	10%	692,695	42%
Licenses, stamps, tags, and permits	1,245,963	(X)	(X)	531,898	43%	714,065	57%
Plantings	1,642,061	1,159,075	71%	(X)	(X)	482,986	29%

Figure E-5. Distribution of Away-from-Home Wildlife Watchers by Hunting and Fishing Activity

(No proxy responses included.)

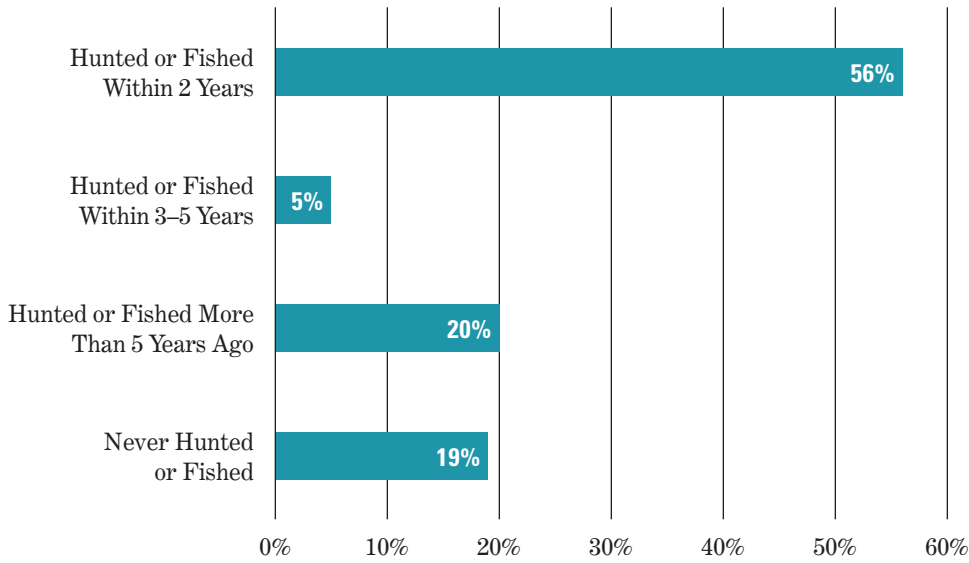


Figure E-6. Distribution of Around-the-Home Wildlife Watchers by Hunting and Fishing Activity

(No proxy responses included.)

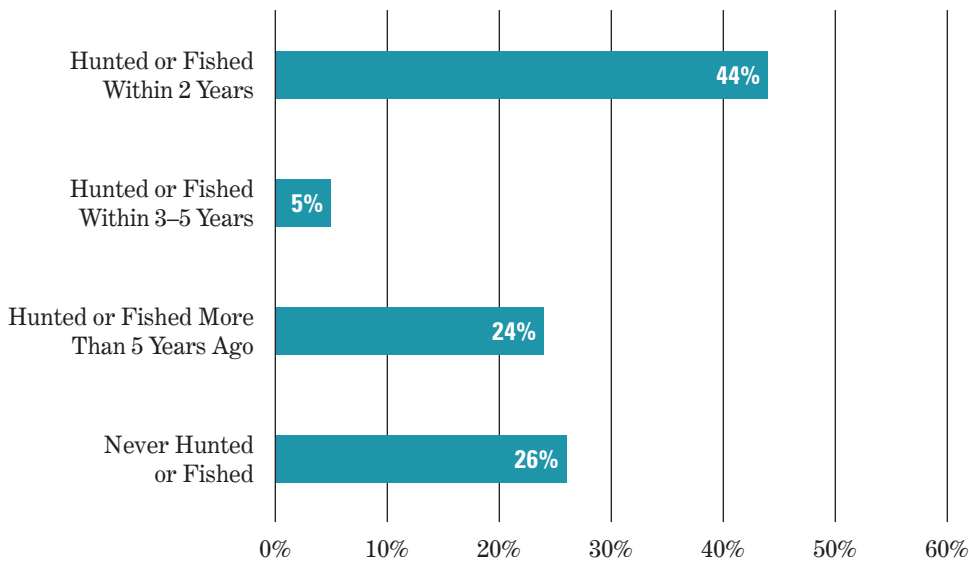


Table E-9. Wildlife-Watching Days Away from Home by Sportsperson Classification and State Where Watching Occurred: 2006
(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	7,292	*4,793	66%	*2,499	34%
Alaska	4,126	1,869	45%	*2,256	55%
Arizona	5,281	3,773	71%	1,508	29%
Arkansas	4,148	764	18%	*3,384	82%
California	45,010	37,317	83%	7,692	17%
Colorado	9,404	7,009	75%	2,394	25%
Connecticut	4,184	3,135	75%	*1,049	25%
Delaware	855	715	84%	*140	16%
Florida	16,551	5,914	36%	10,638	64%
Georgia	4,097	*1,499	37%	*2,598	63%
Hawaii	1,109	*863	78%	*245	22%
Idaho	5,165	3,260	63%	1,904	37%
Illinois	5,686	2,498	44%	*3,188	56%
Indiana	24,013	18,898	79%	5,115	21%
Iowa	4,013	1,635	41%	*2,378	59%
Kansas	3,244	*1,250	39%	*1,994	61%
Kentucky	4,155	1,816	44%	*2,339	56%
Louisiana	*3,199	*1,297	41%	*1,902	59%
Maine	4,778	2,469	52%	2,309	48%
Maryland	4,782	2,119	44%	*2,663	56%
Massachusetts	8,461	6,867	81%	1,593	19%
Michigan	10,043	5,371	53%	*4,673	47%
Minnesota	8,040	*2,529	31%	*5,511	69%
Mississippi	1,302	*226	17%	*1,076	83%
Missouri	14,757	8,596	58%	6,162	42%
Montana	3,081	1,154	37%	1,927	63%
Nebraska	906	632	70%	*274	30%
Nevada	2,298	1,646	72%	*652	28%
New Hampshire	3,165	1,928	61%	*1,237	39%
New Jersey	7,965	6,326	79%	1,639	21%
New Mexico	5,429	2,739	50%	2,690	50%
New York	13,521	5,901	44%	7,621	56%
North Carolina	4,868	1,922	39%	2,946	61%
North Dakota	*264	...	13%	*229	87%
Ohio	7,816	5,590	72%	*2,226	28%
Oklahoma	7,098	*1,716	24%	*5,382	76%
Oregon	8,162	6,714	82%	1,448	18%
Pennsylvania	11,972	3,525	29%	8,447	71%
Rhode Island	2,948	2,520	85%	*428	15%
South Carolina	4,759	3,069	64%	*1,690	36%
South Dakota	1,382	995	72%	*388	28%
Tennessee	15,486	6,324	41%	9,162	59%
Texas	13,120	3,154	24%	*9,965	76%
Utah	3,927	2,115	54%	1,812	46%
Vermont	2,459	1,600	65%	*859	35%
Virginia	5,745	2,863	50%	*2,881	50%
Washington	9,104	5,648	62%	3,456	38%
West Virginia	4,005	*724	18%	*3,281	82%
Wisconsin	5,547	*3,659	66%	1,888	34%
Wyoming	3,009	1,602	53%	1,408	47%

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

Table E-10. Wildlife-Watching Days Around the Home by Sportsperson Classification and State of Residence: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non-Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Alabama	90,960	68,203	75%	*22,757	25%
Alaska	18,055	11,641	64%	*6,414	36%
Arizona	97,273	76,783	79%	20,490	21%
Arkansas	78,820	*42,530	54%	36,290	46%
California	403,630	356,236	88%	47,394	12%
Colorado	83,754	67,228	80%	*16,526	20%
Connecticut	112,475	90,527	80%	21,948	20%
Delaware	15,640	11,611	74%	*4,029	26%
Florida	245,610	170,009	69%	75,600	31%
Georgia	110,621	71,202	64%	39,419	36%
Hawaii	14,877	11,829	80%	*3,048	20%
Idaho	29,707	*17,898	60%	*11,809	40%
Illinois	178,712	120,920	68%	57,792	32%
Indiana	140,633	95,821	68%	44,811	32%
Iowa	99,670	67,396	68%	32,274	32%
Kansas	57,008	36,090	63%	20,917	37%
Kentucky	112,039	82,869	74%	*29,170	26%
Louisiana	68,079	*45,386	67%	*22,693	33%
Maine	72,293	49,343	68%	22,950	32%
Maryland	95,438	66,247	69%	29,191	31%
Massachusetts	153,992	126,324	82%	27,667	18%
Michigan	173,713	111,752	64%	*61,961	36%
Minnesota	122,294	74,996	61%	47,298	39%
Mississippi	52,113	*28,359	54%	*23,754	46%
Missouri	187,396	109,728	59%	77,668	41%
Montana	44,025	22,938	52%	21,086	48%
Nebraska	42,162	28,483	68%	13,678	32%
Nevada	29,123	25,167	86%	*3,957	14%
New Hampshire	44,855	33,977	76%	10,878	24%
New Jersey	111,996	85,509	76%	26,487	24%
New Mexico	48,472	34,034	70%	14,438	30%
New York	270,391	189,651	70%	80,740	30%
North Carolina	147,430	109,410	74%	38,019	26%
North Dakota	*6,679	*4,223	63%	*2,456	37%
Ohio	302,799	218,159	72%	84,641	28%
Oklahoma	82,039	68,638	84%	*13,400	16%
Oregon	122,415	98,395	80%	*24,020	20%
Pennsylvania	296,315	195,652	66%	100,663	34%
Rhode Island	24,899	21,678	87%	3,221	13%
South Carolina	79,481	58,660	74%	*20,821	26%
South Dakota	18,718	11,527	62%	*7,191	38%
Tennessee	199,134	154,411	78%	*44,723	22%
Texas	315,149	206,194	65%	*108,955	35%
Utah	31,244	21,607	69%	9,637	31%
Vermont	23,828	20,405	86%	*3,423	14%
Virginia	183,092	137,383	75%	45,709	25%
Washington	180,412	118,715	66%	61,697	34%
West Virginia	43,756	*26,064	60%	*17,691	40%
Wisconsin	141,655	87,123	62%	54,532	38%
Wyoming	12,475	9,009	72%	*3,466	28%

* Estimate based on a sample size of 10–29.

Table E-11. Selected Characteristics of Away-from-Home Wildlife Watchers by Sportsperson Classification: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Total All Persons	22,977	13,676	60%	9,301	40%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	17,892	11,400	64%	6,493	36%
1,000,000 or more	10,294	6,987	68%	3,307	32%
250,000 to 999,999	4,870	2,927	60%	1,943	40%
50,000 to 249,999	2,729	1,486	54%	1,243	46%
Outside MSA	5,085	2,276	45%	2,809	55%
Census Geographic Region					
New England	1,340	921	69%	419	31%
Middle Atlantic	2,729	1,591	58%	1,138	42%
East North Central	3,792	2,158	57%	1,634	43%
West North Central	2,163	1,076	50%	1,087	50%
South Atlantic	3,208	1,659	52%	1,548	48%
East South Central	1,758	1,084	62%	675	38%
West South Central	2,127	1,073	50%	1,054	50%
Mountain	2,004	1,212	60%	792	40%
Pacific	3,856	2,902	75%	955	25%
Age					
16 to 17 years	583	*281	48%	303	52%
18 to 24 years	1,083	584	54%	499	46%
25 to 34 years	3,053	1,705	56%	1,348	44%
35 to 44 years	6,045	3,382	56%	2,662	44%
45 to 54 years	5,225	2,947	56%	2,278	44%
55 to 64 years	4,437	2,927	66%	1,510	34%
65 years and older	2,551	1,849	72%	702	28%
Sex					
Male	11,819	5,395	46%	6,423	54%
Female	11,159	8,281	74%	2,878	26%
Ethnicity					
Hispanic	1,422	881	62%	541	38%
Non-Hispanic	21,556	12,795	59%	8,761	41%
Race					
White	21,525	12,763	59%	8,762	41%
African American	686	451	66%	*235	34%
Asian	414	*330	80%	*83	20%
All Others	353	*132	37%	221	63%

continues

* Estimate based on a sample size of 10–29.

Table E-11. Selected Characteristics of Away-from-Home Wildlife Watchers by Sportsperson Classification: 2006 – continued
(Population 16 years old and older. Numbers in thousands.)

	<i>All Away from Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Annual Household Income					
Less than \$20,000	1,542	1,001	65%	541	35%
\$20,000 to \$24,999	776	363	47%	413	53%
\$25,000 to \$29,999	881	571	65%	311	35%
\$30,000 to \$34,999	1,115	547	49%	569	51%
\$35,000 to \$39,999	1,030	577	56%	453	44%
\$40,000 to \$49,999	2,145	1,405	66%	740	34%
\$50,000 to \$74,999	4,716	2,607	55%	2,109	45%
\$75,000 to \$99,999	3,449	1,807	52%	1,642	48%
\$100,000 or more	4,620	2,951	64%	1,669	36%
Not Reported	2,704	1,849	68%	855	32%
Education					
11 years or less	1,406	709	50%	698	50%
12 years	6,102	2,825	46%	3,277	54%
1 to 3 years of college	6,155	3,824	62%	2,331	38%
4 years of college	4,905	3,124	64%	1,781	36%
5 years or more of college	4,409	3,194	72%	1,215	28%

Table E-12. Selected Characteristics of Around-the-Home Wildlife Watchers by Sportsperson Classification: 2006

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Total All Persons	67,756	48,050	71%	19,706	29%
Population Size of Residence					
Metropolitan Statistical Area (MSA)	52,820	38,598	73%	14,222	27%
1,000,000 or more	30,000	22,624	75%	7,375	25%
250,000 to 999,999	14,763	10,732	73%	4,031	27%
50,000 to 249,999	8,057	5,242	65%	2,815	35%
Outside MSA	14,936	9,452	63%	5,484	37%
Census Geographic Region					
New England	4,310	3,372	78%	938	22%
Middle Atlantic	8,451	6,445	76%	2,006	24%
East North Central	11,845	8,292	70%	3,554	30%
West North Central	6,447	4,058	63%	2,390	37%
South Atlantic	12,432	8,467	68%	3,965	32%
East South Central	4,683	3,328	71%	1,355	29%
West South Central	6,319	3,952	63%	2,366	37%
Mountain	4,605	3,204	70%	1,402	30%
Pacific	8,664	6,932	80%	1,732	20%
Age					
16 to 17 years	1,285	783	61%	502	39%
18 to 24 years	2,969	1,898	64%	1,070	36%
25 to 34 years	7,149	4,529	63%	2,620	37%
35 to 44 years	13,800	8,933	65%	4,867	35%
45 to 54 years	16,051	11,058	69%	4,994	31%
55 to 64 years	13,042	9,645	74%	3,397	26%
65 years and older	13,460	11,204	83%	2,257	17%
Sex					
Male	31,456	17,666	56%	13,790	44%
Female	36,300	30,384	84%	5,916	16%
Ethnicity					
Hispanic	3,604	2,852	79%	752	21%
Non-Hispanic	64,152	45,197	70%	18,954	30%
Race					
White	62,872	44,417	71%	18,455	29%
African American	2,482	1,911	77%	571	23%
Asian	1,259	958	76%	*300	24%
All Others	1,144	764	67%	380	33%

continues

* Estimate based on a sample size of 10–29.

Table E-12. Selected Characteristics of Around-the-Home Wildlife Watchers by Sportsperson Classification: 2006 – continued

(Population 16 years old and older. Numbers in thousands.)

	<i>All Around the Home</i>	<i>Non- Sportspersons</i>	<i>Percent of All</i>	<i>Sportspersons</i>	<i>Percent of All</i>
Annual Household Income					
Less than \$20,000	5,941	4,607	78%	1,334	22%
\$20,000 to \$24,999	2,538	1,812	71%	726	29%
\$25,000 to \$29,999	3,107	2,296	74%	811	26%
\$30,000 to \$34,999	2,893	1,891	65%	1,001	35%
\$35,000 to \$39,999	3,189	2,272	71%	916	29%
\$40,000 to \$49,999	6,415	4,670	73%	1,745	27%
\$50,000 to \$74,999	12,599	8,421	67%	4,178	33%
\$75,000 to \$99,999	7,996	5,188	65%	2,808	35%
\$100,000 or more	11,757	7,926	67%	3,831	33%
Not Reported	11,322	8,967	79%	2,355	21%
Education					
11 years or less	6,621	4,724	71%	1,898	29%
12 years	20,876	14,124	68%	6,752	32%
1 to 3 years of college	17,018	12,022	71%	4,996	29%
4 years of college	13,246	9,525	72%	3,721	28%
5 years or more of college	9,995	7,655	77%	2,340	23%

Table E-13. Wildlife-Watching Expenditures by Sportsperson Classification: 2006

(Population 16 years old and older. Numbers in thousands of dollars except averages.)

	<i>All</i>	<i>Non-Sportspersons</i>	<i>Average Non-Sportsperson</i>	<i>Sportspersons</i>	<i>Average Sportsperson</i>
Total, All Items	45,654,960	32,107,543	814	13,547,416	752
Trip-Related Expenditures					
Total trip-related	12,875,152	8,095,819	602	4,779,333	553
Food and lodging, total	7,516,281	4,885,056	367	2,631,225	304
Food	4,298,403	2,686,076	203	1,612,328	189
Lodging	3,217,878	2,198,980	165	1,018,897	118
Transportation, total	4,456,013	2,698,392	201	1,757,621	203
Public	1,566,963	1,139,578	85	427,385	49
Private	2,889,050	1,558,814	118	1,330,236	155
Other trip costs, total	902,858	512,371	38	390,487	45
Guide fees, pack trips or package fees	250,047	187,528	14	62,519	7
Public land use fees	140,508	85,774	6	54,734	6
Private land use fees	66,145	39,024	3	27,121	3
Equipment rental	148,706	95,962	7	52,744	6
Boating costs	224,981	69,768	5	155,213	18
Heating and cooking fuel	72,470	34,314	3	38,156	4
Equipment and Other Expenses					
Total	32,779,808	24,011,724	655	8,768,084	542
Wildlife-watching equipment, total	9,869,727	6,749,079	198	3,120,648	205
Binoculars, spotting scopes	656,462	384,547	110	271,915	143
Photographic equipment	3,078,089	2,258,485	493	819,604	347
Film and photo processing	767,465	496,029	75	271,436	77
Commercially prepared and packaged wild bird food	2,707,601	1,928,508	73	779,093	70
Other bulk foods used to feed wild birds	642,531	458,718	53	183,813	47
Feed for other wildlife	664,554	353,435	51	311,119	75
Nest boxes, bird houses, feeders, baths	789,918	528,578	44	261,340	50
Day packs, carrying cases, and special clothing	451,524	270,372	125	181,153	135
Other wildlife-watching equipment	111,582	70,406	28	41,176	32
Auxiliary equipment, total	1,033,060	678,876	232	354,184	178
Tents, tarps	243,670	174,988	119	68,682	75
Frame packs and backpacking equipment	140,371	97,340	126	43,031	97
Other camping equipment	368,281	193,999	138	174,282	178
Other auxiliary equipment	280,739	212,549	414	68,189	227
Special equipment, total	12,271,266	8,686,303	7,752	3,584,963	4,518
Off-the-road vehicle	3,819,030	2,796,299	8,014	*1,022,731	4,319
Travel or tent trailer, pickup, camper, van, motor home, house trailer, recreational vehicle (RV)	5,329,261	3,534,529	9,197	1,794,731	9,834
Boats, boat accessories	1,824,071	1,223,921	2,897	600,150	1,683
Cabins	11,333	...	8,547
Other	*851,940	*804,878	8,147	*47,062	443
Magazines, books, DVDs	359,681	226,641	36	133,039	37
Land leasing and ownership	6,551,517	5,715,056	8,615	836,460	1,872
Membership dues and contributions	1,052,496	796,693	136	255,803	110
Plantings	1,642,061	1,159,075	189	482,986	164

* Estimate based on a sample size of 10–29.

... Sample size too small (less than 10) to report data reliably.

Table E-14. Sporting Expenditures by Wildlife-Watching Classification: 2006

(Population 16 years old and older. Numbers in thousands of dollars except averages.)

	<i>All</i>	<i>Non-Watchers</i>	<i>Average Non-Watcher</i>	<i>Wildlife Watchers</i>	<i>Average Wildlife Watcher</i>
Total, All Items	76,650,027	28,403,921	1,743	48,246,406	2,736
Trip-Related Expenditures					
Total trip-related	24,557,174	10,357,025	651	14,200,149	816
Food and lodging, total	9,093,769	3,764,240	237	5,329,530	306
Food	6,504,319	2,629,626	167	3,874,694	223
Lodging	2,589,450	1,134,614	72	1,454,836	84
Transportation, total	7,658,755	3,219,025	202	4,439,730	255
Public	738,243	338,699	21	399,544	23
Private	6,920,512	2,880,325	182	4,040,186	233
Other trip costs, total	7,804,650	3,373,761	212	4,430,889	255
Guide fees, pack trips or package fees	1,249,006	517,345	33	731,661	42
Public land use fees	224,071	111,841	7	112,230	6
Private land use fees	540,353	241,402	15	298,952	17
Equipment rental	458,063	222,154	14	235,909	14
Boating costs	3,510,877	1,524,039	430	1,986,838	417
Heating and cooking fuel	260,757	93,296	6	167,461	10
Bait	1,183,332	504,100	36	679,232	45
Ice	378,190	159,585	12	218,605	14
Equipment and Other Expenses					
Total	52,092,853	18,046,896	1,108	34,046,257	1,931
Hunting equipment	5,716,758	2,029,845	508	3,686,914	600
Fishing equipment	5,365,933	2,262,497	265	3,103,712	285
Auxiliary equipment	2,969,992	776,503	233	2,193,488	339
Camping equipment	991,590	210,763	182	780,827	321
Binoculars, field glasses, telescopes, etc.	332,840	110,928	174	221,912	142
Special hunting and fishing clothing, boots, foul weather gear	885,663	252,064	142	633,598	159
Processing and taxidermy costs	561,205	146,134	250	415,071	343
Other auxiliary	198,694	56,614	170	142,080	212
Special equipment, total	26,910,442	9,859,040	8,888	17,051,402	7,821
Magazines, books, and DVDs	304,181	87,523	38	216,683	46
Land leasing and ownership	8,986,342	2,343,240	2,248	6,643,102	3,775
Membership dues and contributions	593,242	156,350	121	436,891	137
Licenses, stamps, tags, and permits	1,245,963	531,898	33	714,065	40

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



November 2015

