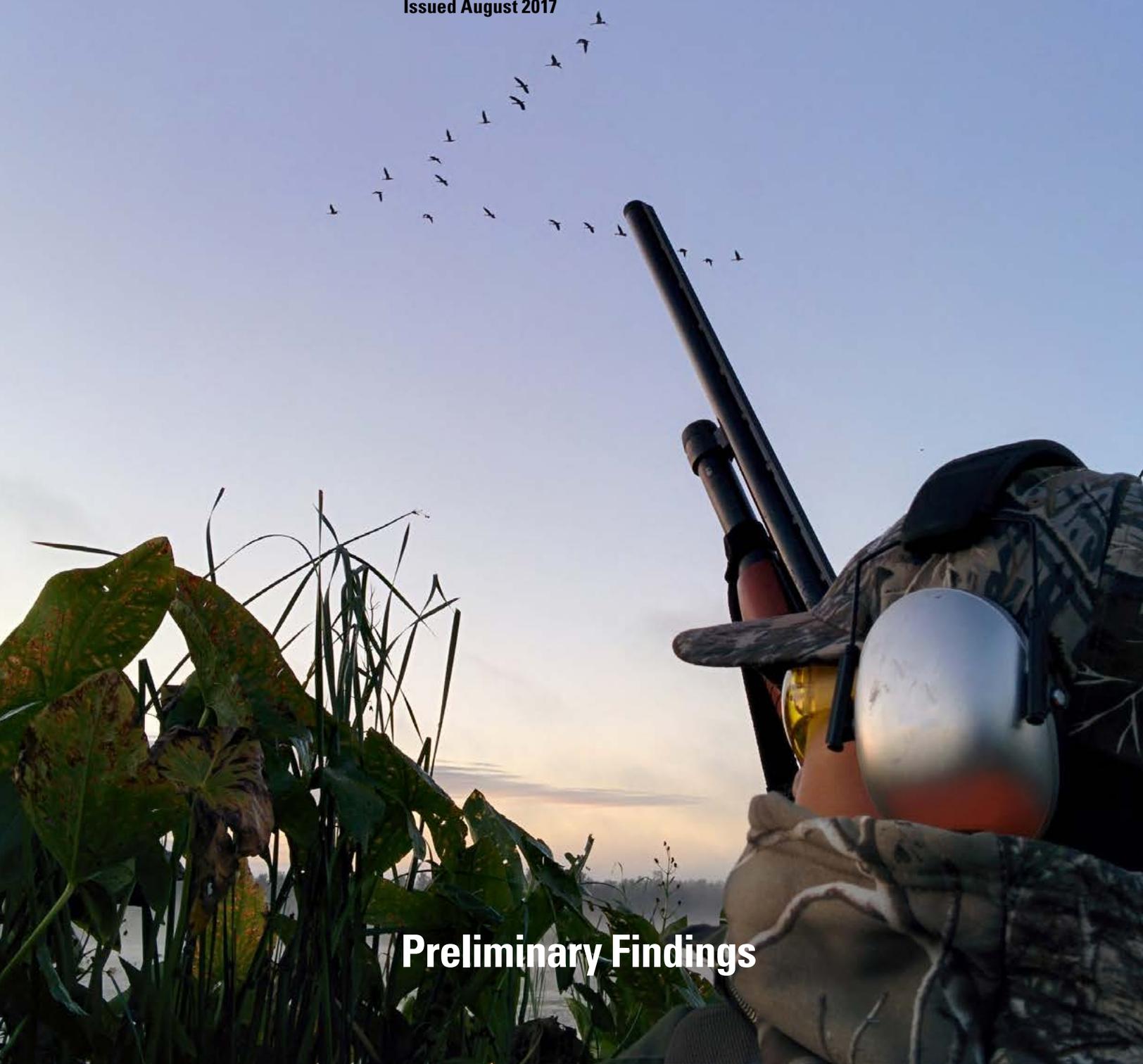


U.S. Fish & Wildlife Service

2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

National Overview

Issued August 2017



Preliminary Findings

Director's Message

From the earliest days of our nation, the love of nature and a connection with the outdoors, have always been an integral part of our identity as Americans. Which is why it's not surprising that even as our society continues to change and diversify in the 21st Century, those values endure.

Our passion for wildlife and wild places, and the lengths to which we go to pursue that passion, are reflected in the preliminary findings of the 2016 National Survey of Fishing, Hunting and Wildlife-Associated Recreation.

As it has since it was first conducted in 1955 – and every five years since – this detailed and rigorous survey is based on interviews with thousands of Americans from all walks of life.

The preliminary 2016 findings should hearten everyone who cares about the health of our wildlife, natural landscapes and people.

In 2016, more than 101 million Americans – a staggering 40 percent of the U.S. population – participated in some form of fishing, hunting or other wildlife-associated recreation such as birdwatching or outdoor photography. And in doing so, we spent an estimated \$156.3 billion on equipment, travel, licenses and fees. These expenditures represent 1 percent of the nation's Gross Domestic Product – creating and supporting thousands of jobs and communities across the nation.

More than 35.8 million Americans went fishing in 2016, while 11.5 million hunted and 86 million watched wildlife. This means that 14 percent of Americans 16 years of age or older fished, 5 percent hunted and 35 percent participated in wildlife watching.

These findings are not just good news for the nation's economy. Revenues from the sale of licenses and tags, as well as excise taxes paid by hunters, anglers and shooters continue to support vital wildlife and habitat conservation efforts in every state and U.S. territory. And on a personal level, a growing body of scientific research suggests that we're all healthier, happier and better off in myriad ways when we spend time in nature.

We will continue to analyze and refine the data gathered in 2016, releasing final numbers and a series of detailed special reports to help the conservation community use this information to connect even more Americans with their natural heritage.

You can do your part too when you drop a line in the water or take friends and family on their first hunt. You'll find a deeper connection with both nature and people, and at the same time help support vital conservation work across the nation.

That's something we can all get behind.



Greg Sheehan
Principal Deputy Director, U.S. Fish and Wildlife Service

2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

National Overview

Issued August 2017

Preliminary Findings

Preface

Preliminary information from the 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation is provided in this report. The final, more detailed National Report will be available December 2017.

The Survey is a partnership effort with state agencies and national conservation organizations and has become one of the most important sources of information on fish and wildlife recreation in the United States. The Survey collects information on participation in and expenditures for hunting, fishing, and wildlife-watching activities such as observing, feeding, and photographing wildlife.

The advance release of preliminary survey results is an effort to make the data available as soon as possible. Please note that the data are subject to revision.



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Foreword

The 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation is the thirteenth in a series of surveys that have been conducted every five years since 1955. The purpose of the Survey is to collect and report information on the number of people who fished, hunted, and wildlife watched, the activities they engaged in, and the money they spent on their activities in 2016.

The Survey is conducted at the request of State wildlife management agencies through the Association of Fish and Wildlife Agencies, and is coordinated by the U.S. Fish and Wildlife Service. Funding comes from the Multistate Conservation Grant Programs authorized by the Wildlife and Sport Fish Restoration Programs Improvement Act of 2000. The Survey was developed with assistance from representatives of State agencies, national conservation organizations, and related industries.

Results are based on data collected by the U.S. Census Bureau. The Census Bureau selected 22,416 households to contact for screening interviews. Samples of 5,782 potential anglers and hunters and 6,231 potential wildlife watchers (5,303 of whom were the same people) were given detailed interviews about their participation and expenditures. The Census Bureau conducted these detailed interviews in three different waves, which began in April and September of 2016 and January of 2017. Interviews were completed in February 2017.

The survey methodology used in 2016 was similar to that used for the 2011, 2006, 2001, 1996, and 1991 Surveys, so the estimates are comparable.

An outlier analysis was done on the special equipment and land ownership expenditure data. A purchase was



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flagged if it was over \$60,000. If the item was reported by more than one household member or double-reported by a respondent, it was deleted. Also, if the respondent's income level was not high enough to support such a purchase it was assumed the respondent gave us the total value of their recreation equipment instead of the amount spent that year, and the amount was deleted. Eighteen expenditure amounts were deleted.

Preliminary Report

In 2016, 101.6 million Americans 16 years old and older, 40% of the U.S. population, enjoyed some form of fishing, hunting or wildlife-associated recreation. Outdoor recreation is a huge contributor to our nation's economy, and expenditures by hunters, anglers, and wildlife-watchers were \$156.3 billion. This equates to 1% of Gross Domestic Product; one out of every one hundred dollars of all goods and services produced in the U.S. is due to wildlife-related recreation.

Almost 39.6 million Americans participated in fishing, hunting, or both sports in 2016. These sportsmen and women spent \$41.7 billion on equipment, \$30.9 billion on trips, and \$7.8 billion on licenses and fees, membership dues and contributions, land leasing and ownership, and plantings for hunting. On average, each sportsperson spent \$2,034 in 2016.

Although the Survey focuses on collecting information on the number of people 16 years old and older who participated in wildlife-related recreation in 2016, it does include some information on 6-15 year olds. Data available from the Survey screening interviews was used to calculate the number of youths who participated in 2016: 8.1 million anglers and 1.4 million hunters. The number of 6-15 year old wildlife watchers was not available at the time of this report's release.

The Survey measures the number of people who participated in wildlife-related recreation in 2016 and is not intended to reflect the total number of wildlife-related recreationists in the U.S. Many individuals can be considered hunters and anglers even though they did not participate in 2016.



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Fishing

As one of the most popular outdoor recreational activities in the United States, fishing attracted 35.8 million individuals 16 years old and older in 2016. These anglers spent an average of 13 days fishing. Freshwater, excluding Great Lakes, fishing was the most popular type of fishing with 29.5 million anglers devoting 373 million days to the sport. Great Lakes and saltwater fishing were also popular with 1.8 million and 8.3 million anglers, respectively.

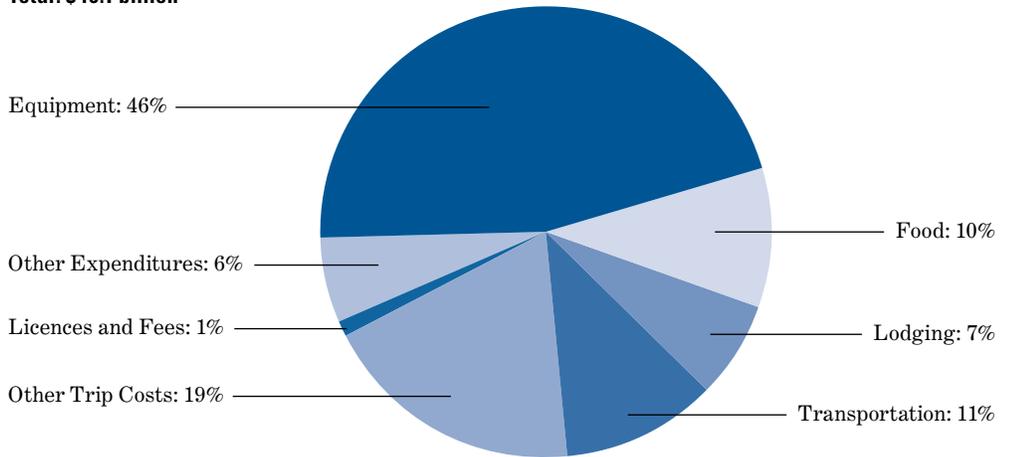
Anglers spent \$46.1 billion on trips, equipment, licenses, and other items to support their fishing activities in 2016. The average expenditure per angler was \$1,290. Trip-related spending on food, lodging, transportation, and other trip costs totaled \$21.7 billion, which is 47% of all angler spending. Spending on equipment was \$21.1 billion and comprised 46% of spending. Magazines, membership dues and contributions, licenses, and other fishing expenditures accounted for 7% at \$3.3 billion.

Comparing results from the 2016 Survey with those of the 2011 Survey reveals the number of anglers increased 8% (although the increase is not statistically significant).¹ The increase by Great Lakes anglers was 10%. The changes for saltwater and non-Great Lakes freshwater angling participation were

¹ Statistical significance is measured at the 95% level. A 95% level of significance means that for 95% of all possible samples of two surveys, the estimate for one survey year can be shown to be different from the estimate for the other survey year.

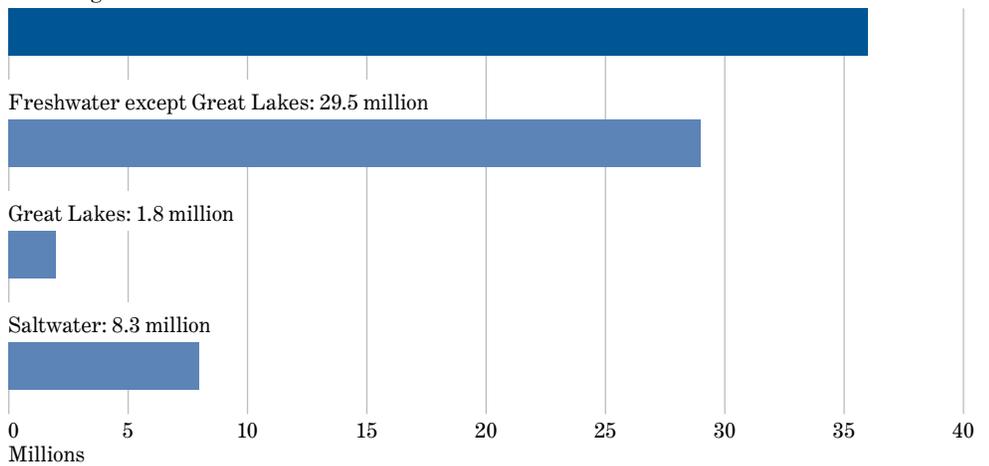
Fishing Expenditures: 2016

Total: \$46.1 billion

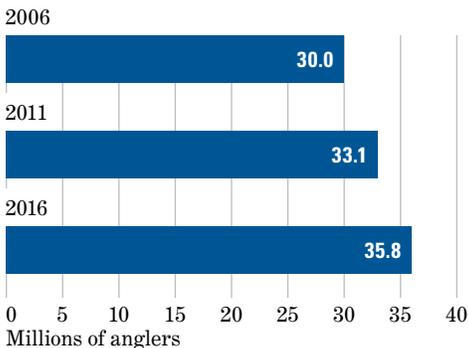


Total Anglers and Anglers by Water Type: 2016

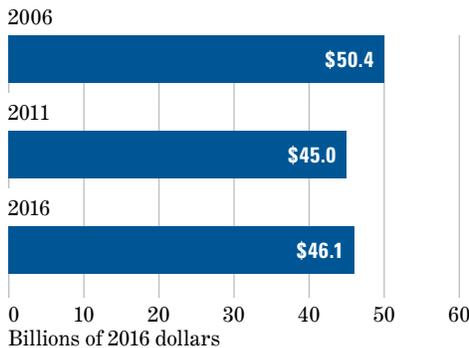
Total Anglers: 35.8 million



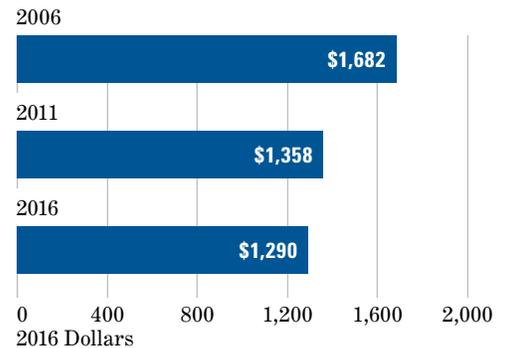
Anglers: 2006–2016



Angler Expenditures: 2006–2016



Average Angler Expenditures: 2006–2016



-6% and 9%, respectively. None of the changes were significant at the 95% level.

While participation in fishing increased 8% from 2011 to 2016, total fishing-related expenditures increased 3% (not statistically significant). Trip-related expenditures declined 7% (not statistically significant). All pre-2016 expenditures in this report were adjusted to be in 2016 dollars.

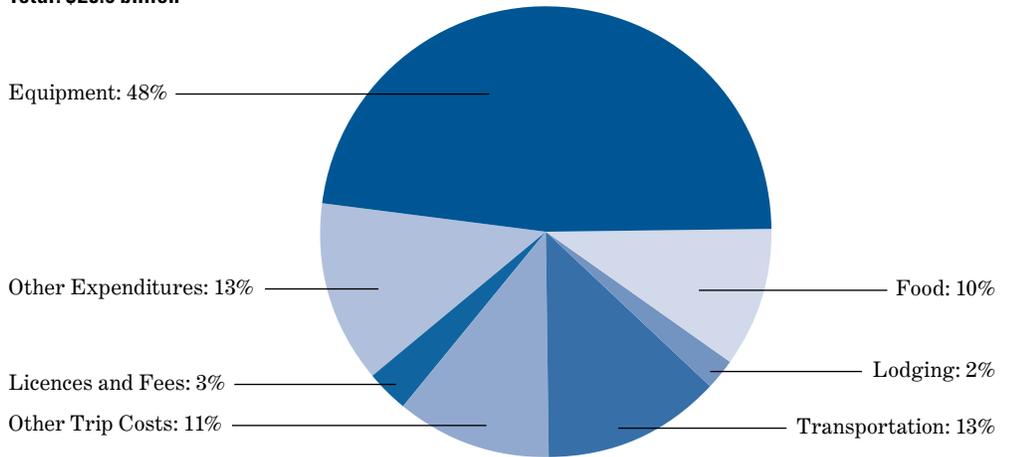
Comparing the 2006 and 2016 Survey estimates reveals an increase of 19% in the number of anglers 16 years old and older and -8% change (not statistically significant) in their spending. The greatest increase in participation was by freshwater anglers with a 19% increase. The category of spending that experienced the greatest increase (over three times) was auxiliary equipment, which are items such as camping equipment and special clothing. Trip-related expenditures increased 2% (not statistically significant).

Hunting

In 2016, 11.5 million people, 5% of the U.S. population 16 years old and older, went hunting. Hunters in the U.S. spent an average of 16 days pursuing wild game. Big game like elk, deer and wild turkey attracted 9.2 million hunters (80%) who spent 133 million days afield. Over 3.5 million (31%) pursued small game including squirrels, rabbits, quails, and pheasants on 38 million days. Migratory birds, such as geese, ducks and doves, attracted 2.4 million hunters (21%) who spent 16 million days hunting. Hunting for other animals such as coyotes, groundhogs and raccoons attracted 1.3 million hunters (11%) who spent 13 million days afield.

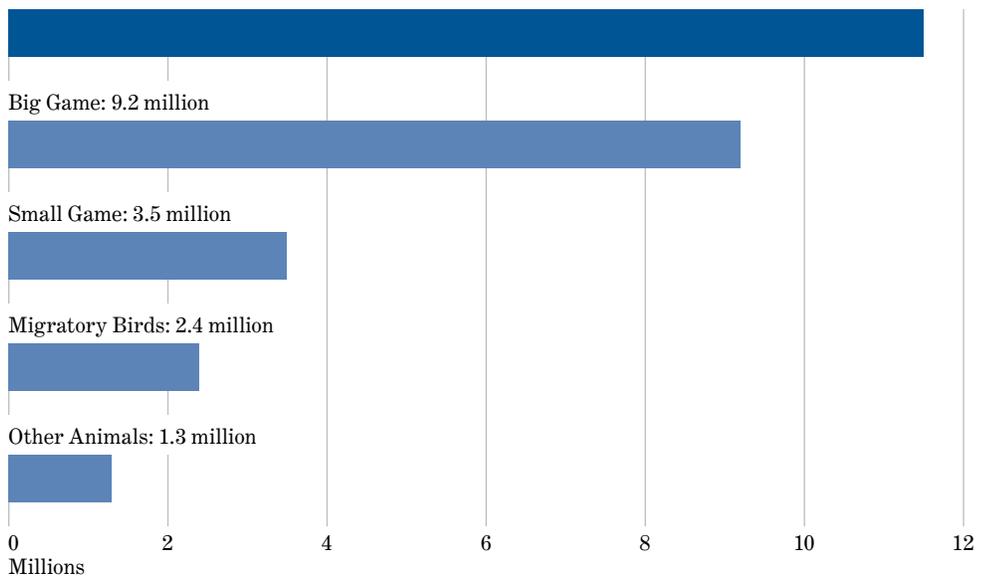
Hunting Expenditures: 2016

Total: \$25.6 billion

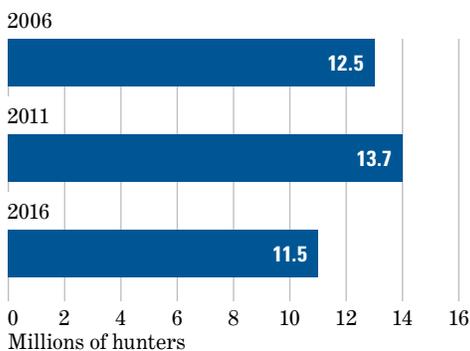


Total Hunters and Type of Hunting: 2016

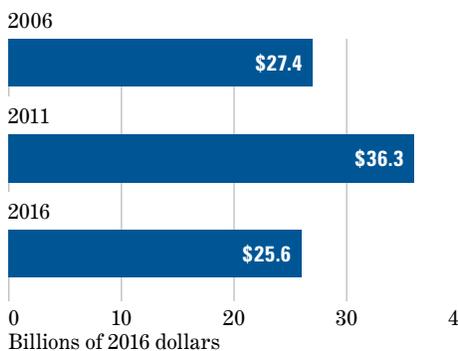
Total Hunters: 11.5 million



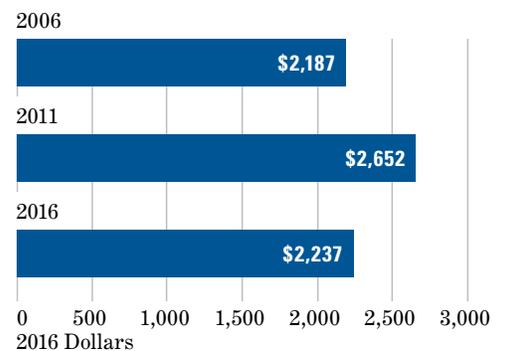
Hunters: 2006-2016



Hunter Expenditures: 2006-2016



Average Hunter Expenditures: 2006-2016



Hunters spent \$25.6 billion on trips, equipment, licenses, and other items to support their hunting activities in 2016. The average expenditure per hunter was \$2,237. Total trip-related expenditures comprised 36% of all spending at \$9.2 billion. Other expenditures, such as licenses, stamps, land leasing and ownership, and plantings totaled \$4.2 billion, 17% of all spending. Spending on equipment such as guns, camping equipment, and 4-wheel-drive vehicles comprised 48% of spending with \$12.2 billion.

Overall hunting participation decreased 16% (not statistically significant) from 2011 to 2016. The numbers of big game hunters fell 20%, and hunters seeking “other animals” decreased by 39%.

Total hunting-related spending decreased 29% between 2011 and 2016 (not statistically significant). Hunting equipment purchases decreased 18% (not statistically significant). The category with the biggest decrease was land leasing and ownership with a 62% drop.

Comparison of the 2006 and 2016 Surveys shows a decrease in the number of hunters and a decrease in their expenditures (both were not statistically significant). Small game had a decline of 27%. “Other animal” hunting increased 17% (not statistically significant). Total hunting expenditures decreased 6% (not statistically significant).

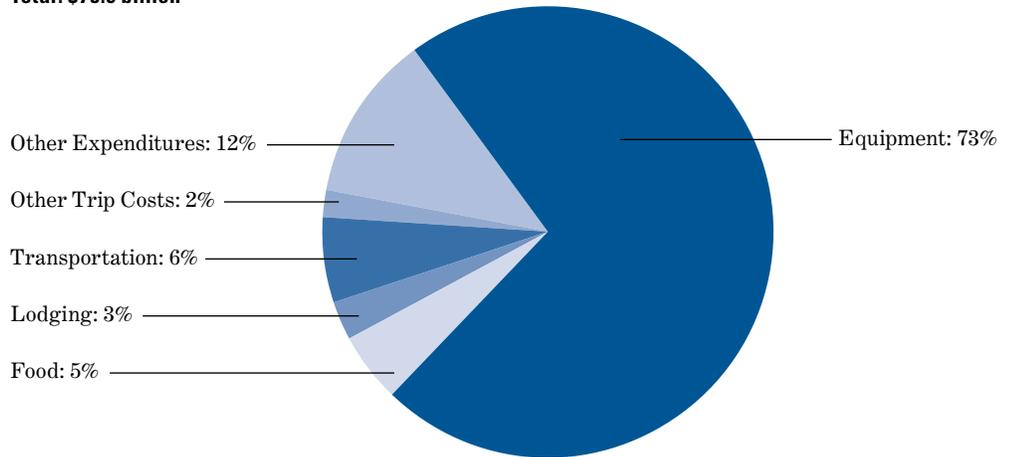
Wildlife Watching

Wildlife watching is a favorite pastime for millions in the U.S. Over 86 million people 16 years old and older fed, photographed, and observed wildlife in 2016. They spent \$75.9 billion on their activities. The Survey defines wildlife watching as participants either taking a “special interest” in wildlife around their homes or taking a trip for the “primary purpose” of wildlife watching. Wildlife-watching activities such as incidentally observing wildlife while gardening are not included.

Of the 86.0 million people who engaged in wildlife watching in 2016, 23.7 million (28%) participated by taking trips away from home and 81.1 million (94%) participated around their home. Away-from-home participants are defined as those who travel a mile or more from home to engage in wildlife watching, and around-the-home participants are those who engage in wildlife watching less than a mile from home.

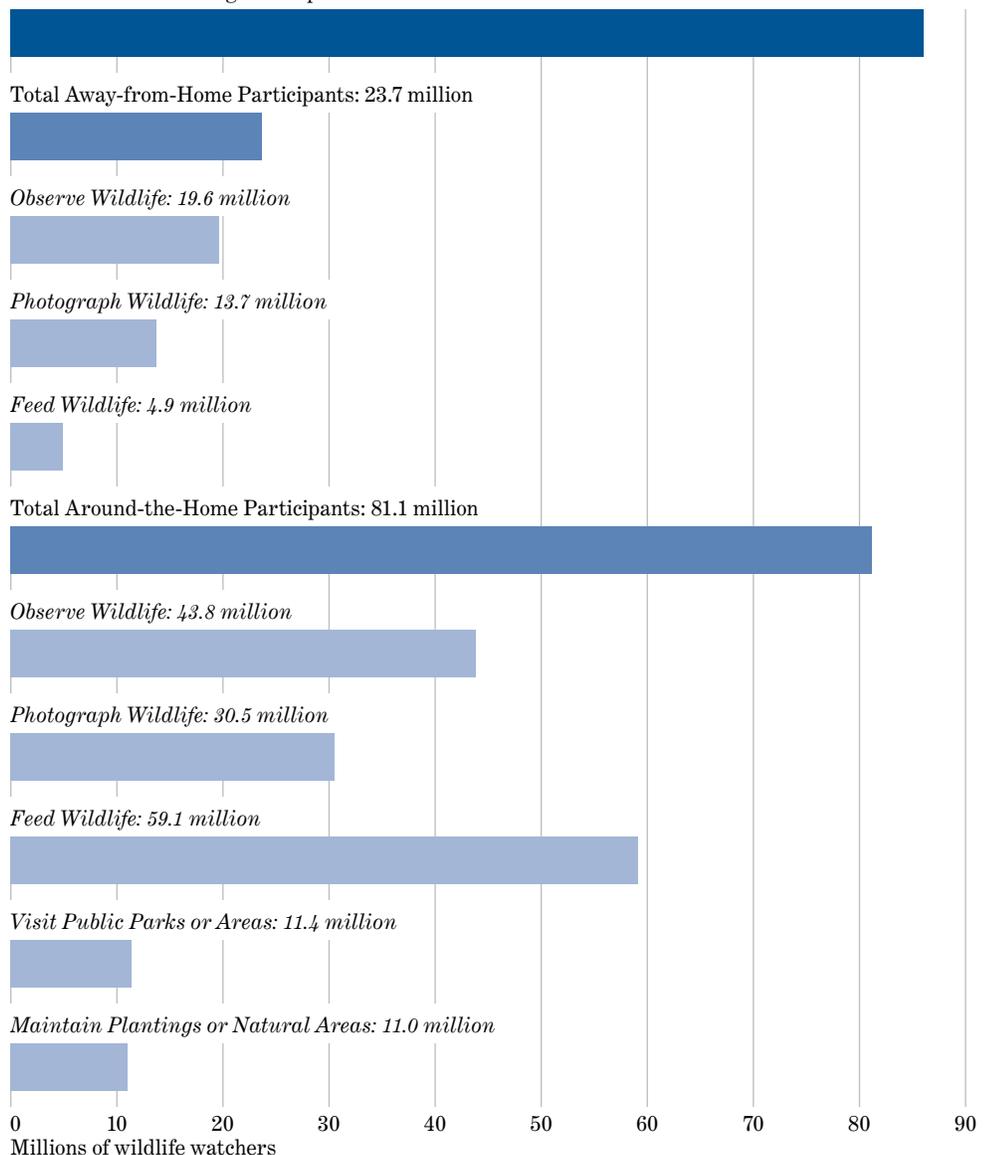
Wildlife Watching Expenditures: 2016

Total: \$75.9 billion



Total Wildlife Watchers and Type of Participants: 2016

Total Wildlife-Watching Participants: 86.0 million



Nearly all people who wildlife watched did so around the home. Of the 81.1 million around-the-home participants, feeding wildlife was the most popular activity. Almost 59.1 million individuals, 69% of all wildlife watchers, fed wildlife around their home. Over 43.8 million people (51%) observed wildlife and 30.5 million (35%) photographed wildlife around their home. Nearly 11.4 million (13%) visited parks or natural areas to view wildlife and 11.0 million (13%) maintained plantings or natural areas for the benefit of wildlife within a mile of their home.

About a fourth of all wildlife watchers took trips a mile or more from home to observe, photograph, or feed wildlife. Observing wildlife was the most popular activity, with 19.6 million participants, 83% of all away-from-home wildlife watchers. Over 13.7 million people (58%) photographed wildlife away from home; 4.9 million (21%) enjoyed feeding wildlife while on trips.

Comparing the 2016 Survey with the two previous surveys shows significant increases from 2006 and 2011, 21% and 20% respectively, in overall wildlife-watching participation. From 2011 to 2016

there was an 18% increase in the number of around-the-home participants and a 5% increase (not statistically significant) in away-from-home wildlife watching. From 2006 to 2016 the number of around-the-home participants increased by 20% and the number of away-from-home participants increased 3% (not statistically significant).

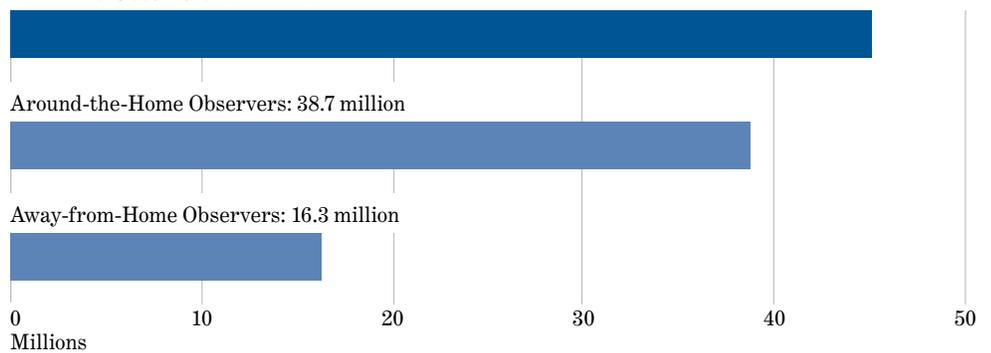
Overall expenditures due to wildlife watching increased 28% from 2011 to 2016 and 39% from 2006 to 2016 (both changes were statistically not significant).

The amount of trip-related expenditures decreased 38% from 2011 to 2016 and 25% from 2006 to 2016. From 2011 to 2016 and from 2006 to 2016 spending for wildlife-watching equipment did not change significantly (-1% and 3%, respectively). The category that explains the overall increase is special equipment² expenditures, which went up 173% from 2011 to 2016 and 186% from 2006 to 2016.

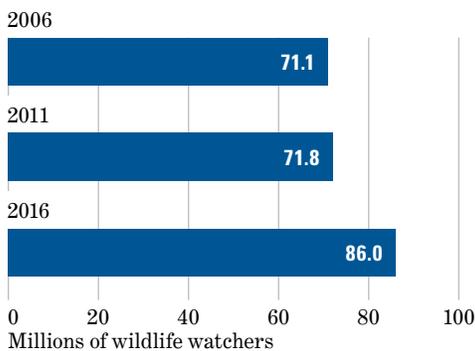
² Special equipment is high cost items such as ATVs, campers, and boats.

Bird Observers: 2016

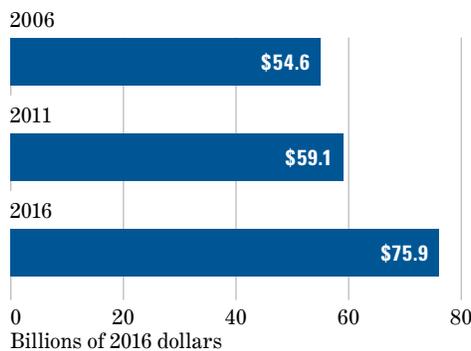
Total Bird Observers: 45.1 million



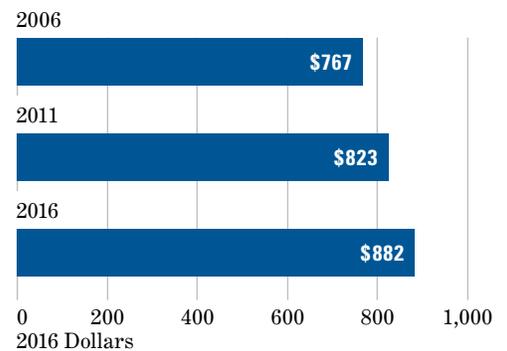
Wildlife Watchers: 2006–2016



Wildlife Watcher Expenditures: 2006–2016



Average Wildlife Watcher Expenditures: 2006–2016



Target Shooting and Archery in 2015

A new area of estimation for the Survey was the number of target shooters with firearms and the number of archers in 2015. Questions were included in a screening questionnaire which was administered beginning in January 2016, when a household respondent was asked about the demographics and activity of all household members 6 years old and older. The recall period for the screening survey is one year, compared to four to eight months for the detailed hunting, fishing, and wildlife-watching surveys.

The Survey estimates there were over 32 million target shooters using firearms in 2015. Nearly nine out of ten, 88%, of them were 16 years old and older, a total of 28.2 million. In addition, 3.8 million 6 to 15-year-olds target shot, 12% of all target shooters.

The Survey estimates that 12.4 million people 6 years old and older used archery equipment recreationally in 2015. Most of them, 9.8 million, or 79% were 16 years old and older. The remaining 2.6 million, or 21% were 6 to 15-years-old.



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Summary

With 101.6 million Americans 16 years of age and older participating in 2016, wildlife-related recreation is clearly an important leisure activity in the U.S. This means an average of four out of ten people you meet participate in some type of wildlife recreation. In comparison, there were 64 million runners in 2016 (Source: www.statista.com).

Wildlife recreation is not only an important leisure pastime but it is also a catalyst for economic activity. Hunters, anglers, and wildlife watchers spent \$156.3 billion on wildlife-related recreation in 2016. This spending contributed to local economies throughout the country, which improved employment, raised economic output, and generated tax revenue.

The next report of findings will contain final estimates and will be available in December 2017. The fish and wildlife Survey reports will also be available on our web page at <http://wsfrprograms.fws.gov/home.html>



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Table 1. Anglers and Hunters, Days of Participation, and Trips of Fishing and Hunting: 2016

(Population 16 years old and older)

<i>Type of fishing and hunting</i>	<i>Participants</i>		<i>Days of participation</i>		<i>Trips</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Total sportspersons	39,553	100	643,362	100	530,167	100
Fishing						
Total, all fishing	35,754	100	459,341	100	383,296	100
Total, all freshwater	30,137	84	383,192	83	322,266	84
Freshwater, except Great Lakes	29,490	82	372,660	81	311,237	81
Great Lakes	1,824	5	13,440	3	11,029	3
Saltwater	8,320	23	75,392	16	61,030	16
Hunting						
Total, all hunting	11,453	100	184,021	100	146,871	100
Big game	9,208	80	132,665	72	88,561	60
Small game	3,505	31	38,306	21	31,772	22
Migratory birds	2,353	21	15,621	8	14,548	10
Other animals	1,315	11	13,275	7	11,989	8

Note: Detail does not add to total because of multiple responses.

Table 2. Summary of Expenditures for Fishing and Hunting: 2016

(Population 16 years old and older)

<i>Expenditure item</i>	<i>Expenditures</i>		<i>Spenders</i>		
	<i>Amount (thousands of dollars)</i>	<i>Average per sportsperson (dollars)¹</i>	<i>Number (thousands)</i>	<i>Percent of sportspersons</i>	<i>Average per spender (dollars)¹</i>
Total, all items	80,461,445	2,034	37,045	94	2,172
Trip-Related Expenditures					
Total trip-related	30,926,023	782	35,300	89	876
Food and lodging, total	10,962,927	277	30,859	78	355
Food	7,266,256	184	30,598	77	237
Lodging	3,696,672	93	9,922	25	373
Transportation, total	8,233,085	208	30,215	76	272
Public	736,002	19	3,667	9	201
Private	7,497,083	190	29,583	75	253
Other trip costs ²	11,730,011	297	27,574	70	425
Equipment Expenditures					
Fishing equipment	7,445,695	188	22,584	57	330
Hunting equipment	7,422,161	188	10,128	26	733
Auxiliary equipment ³	6,082,746	154	9,723	25	626
Special equipment ⁴	20,791,143	526	3,943	10	5,273
Other Expenditures					
Magazines, books, DVDs	383,617	10	5,382	14	71
Membership dues and contributions	574,450	15	4,305	11	133
Land leasing and ownership	5,257,433	133	2,434	6	2,160
Licenses, stamps, tags, and permits	1,412,745	36	21,942	55	64
Plantings (for hunting)	*165,432	*4	*1,020	*3	*162

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

¹ Average expenditures are annual estimates.² Other trip costs include guide fees, pack trip or package fees, public and private land use fees, equipment rental, boating costs (which include launching, mooring, storage, maintenance, insurance, pumpout fees, and fuel), bait, ice, and heating and cooking fuel.³ Auxiliary equipment includes camping equipment, binoculars, special fishing and hunting clothing, processing and taxidermy costs, foul weather gear, boots, waders, field glasses, telescopes, and electronic equipment such as a GPS device.⁴ Special equipment includes boats, campers, cabins, trail bikes, dune buggies, 4 x 4 vehicles, ATVs, 4-wheelers, snowmobiles, pickups, vans, travel and tent trailers, motor homes, house trailers, recreational vehicles (RVs), and other special equipment.

Note: Detail does not add to total because of multiple responses. Detail in subsequent tables may not add to totals shown here because the primary purpose of the purchase is both fishing and hunting and cannot be attributed to just fishing or hunting.

Table 3. Expenditures for Fishing: 2016

(Population 16 years old and older)

<i>Expenditure Item</i>	<i>Expenditures</i>		<i>Spenders</i>		
	<i>Amount (thousands of dollars)</i>	<i>Average per angler (dollars)¹</i>	<i>Number (thousands)</i>	<i>Percent of anglers</i>	<i>Average per spender (dollars)¹</i>
Total, all items	46,115,118	1,290	32,511	91	1,418
Trip-Related Expenditures					
Total trip-related	21,729,778	608	31,260	87	695
Food and lodging, total	7,848,993	220	27,127	76	289
Food	4,759,403	133	26,867	75	177
Lodging	3,089,591	86	8,625	24	358
Transportation, total	5,048,606	141	26,337	74	192
Public	542,917	15	2,852	8	190
Private	4,505,689	126	25,622	72	176
Other trip costs, total	8,832,179	247	26,212	73	337
Guide fees, pack trip or package fees	924,974	26	3,431	10	270
Public land use fees	305,360	9	6,304	18	48
Private land use fees	493,951	14	2,901	8	170
Equipment rental	308,162	9	3,045	9	101
Boating costs ²	4,536,646	127	5,876	16	772
Bait	1,517,912	42	20,681	58	73
Ice	585,384	16	13,535	38	43
Heating and cooking fuel	159,791	4	4,187	12	38
Equipment Expenditures					
Fishing equipment, total	7,430,662	208	22,393	63	332
Rods, reels, poles, and rodmaking components	2,463,525	69	11,021	31	224
Lines and leaders	782,801	22	13,682	38	57
Artificial lures, flies, baits, and dressing for flies or lines	1,078,932	30	16,024	45	67
Hooks, sinkers, swivels, and other items attached to a line except lures and baits	584,280	16	15,408	43	38
Tackle boxes	296,906	8	4,215	12	70
Creels, stringers, fish bags, landing nets, and gaff hooks	146,478	4	2,433	7	60
Minnow traps, seines, and bait containers	137,447	4	2,769	8	50
Depth finders, fish finders, and other electronic fishing devices	1,092,287	31	1,593	4	686
Ice fishing equipment	181,867	5	693	2	263
Other fishing equipment	666,140	19	4,208	12	158
Auxiliary equipment, total	3,163,575	88	4,522	13	700
Camping equipment	2,581,833	72	1,878	5	1,375
Binoculars, field glasses, telescopes, etc.	*38,378	*1	*295	*1	*130
Special fishing clothing, rubber boots, waders, and foul weather gear	457,369	13	2,923	8	156
Processing and taxidermy costs	...	...	...	...	...
Other	*79,344	*2	*415	*1	*191
Special equipment³	10,483,401	293	2,291	6	4,576
Other Expenditures					
Magazines, books, DVDs	147,465	4	3,142	9	47
Membership dues and contributions	214,485	6	1,741	5	123
Land leasing and ownership	2,358,811	66	1,019	3	2,315
Licenses, stamps, tags, and permits, total	586,941	16	15,647	44	38
Licenses	535,256	15	15,052	42	36
Stamps, tags, and permits	51,685	1	3,035	8	17

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

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

¹ Average expenditures are annual estimates.² Boating costs include launching, mooring, storage, maintenance, insurance, pumpout fees, and fuel.³ Special equipment includes boats, campers, cabins, trail bikes, dune buggies, 4 x 4 vehicles, ATVs, 4-wheelers, snowmobiles, pickups, vans, travel and tent trailers, motor homes, house trailers, recreational vehicles (RVs), and other special equipment.

Note: Detail does not add to total because of multiple responses.

Table 4. Expenditures for Hunting: 2016

(Population 16 years old and older)

<i>Expenditure Item</i>	<i>Expenditures</i>		<i>Spenders</i>		
	<i>Amount (thousands of dollars)</i>	<i>Average per hunter (dollars)¹</i>	<i>Number (thousands)</i>	<i>Percent of hunters</i>	<i>Average per spender (dollars)¹</i>
Total, all items	25,616,517	2,237	10,992	96	2,330
Trip-Related Expenditures					
Total trip-related	9,196,245	803	9,984	87	921
Food and lodging, total	3,113,934	272	9,065	79	344
Food	2,506,853	219	9,053	79	277
Lodging	607,081	53	1,775	16	342
Transportation, total	3,184,479	278	9,047	79	352
Public	193,085	17	912	8	212
Private	2,991,394	261	8,937	78	335
Other trip costs, total	2,897,832	253	3,664	32	791
Guide fees, pack trip or package fees	658,436	57	943	8	698
Public land use fees	18,577	2	685	6	27
Private land use fees	1,813,913	158	1,024	9	1,771
Equipment rental	*204,577	*18	*617	*5	*332
Boating costs ²	*99,058	*9	*344	*3	*288
Heating and cooking fuel	103,271	9	1,872	16	55
Equipment Expenditures					
Hunting equipment, total	6,809,901	595	8,413	73	809
Firearms	2,913,826	254	2,557	22	1,140
Rifles	1,190,129	104	885	8	1,345
Shotguns	553,149	48	1,120	10	494
Muzzleloaders, primitive firearms	*109,984	*10	*183	*2	*601
Pistols, handguns	1,060,564	93	1,533	13	692
Bows, arrows, archery equipment	1,039,720	91	2,088	18	498
Telescopic sights	220,273	19	677	6	325
Decoys and game calls	204,297	18	2,069	18	99
Ammunition	1,413,839	123	6,652	58	213
Hand loading equipment	228,889	20	783	7	292
Hunting dogs and associated costs	448,563	39	1,070	9	419
Other	340,494	30	2,742	24	124
Auxiliary equipment, total	2,018,696	176	4,436	39	455
Camping equipment	466,096	41	612	5	762
Binoculars, field glasses, telescopes, etc.	165,382	14	637	6	260
Special hunting clothing, rubber boots, waders, and foul weather gear	589,103	51	2,488	22	237
Processing and taxidermy costs	684,858	60	1,694	15	404
Other	*113,257	*10	*561	*5	*202
Special equipment³	*3,353,350	*293	*396	*3	*8,468
Other Expenditures					
Magazines, books, DVDs	166,451	15	1,130	10	147
Membership dues and contributions	182,016	16	1,403	12	130
Land leasing and ownership	2,898,622	253	1,845	16	1,571
Licenses, stamps, tags, and permits, total	825,805	72	8,668	76	95
Licenses	698,254	61	8,172	71	85
Federal duck stamps	37,136	3	1,485	13	25
Stamps, tags, and permits	90,415	8	2,164	19	42
Plantings	*165,432	*14	*1,020	*9	*162

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

¹ Average expenditures are annual estimates.² Boating costs include launching, mooring, storage, maintenance, insurance, pumpout fees, and fuel.³ Special equipment includes boats, campers, cabins, trail bikes, dune buggies, 4 x 4 vehicles, ATVs, 4-wheelers, snowmobiles, pickups, vans, travel and tent trailers, motor homes, house trailers, recreational vehicles (RVs), and other special equipment.

Note: Detail does not add to total because of multiple responses.

Table 5. Wildlife-Watching Participants by Type of Activity: 2016

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

<i>Activity</i>	<i>Number</i>	<i>Percent</i>
Total participants	86,042	100
Away from home	23,720	28
Observe wildlife	19,583	23
Photograph wildlife	13,721	16
Feed wildlife	4,869	6
Around the home	81,128	94
Observe wildlife	43,829	51
Photograph wildlife	30,473	35
Feed wildlife	59,083	69
Visit parks or natural areas ¹	11,359	13
Maintain plantings or natural areas	11,024	13

¹ Includes visits only to parks or natural areas within one mile of home.

Note: Detail does not add to total because of multiple responses.

Table 6. Away-From-Home Wildlife Watchers by Wildlife Observed, Photographed, or Fed and Place in the U.S.: 2016

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

<i>Wildlife observed, photographed, or fed</i>	<i>Total participants</i>		<i>Participation by place</i>					
			<i>Total</i>		<i>In state of residence</i>		<i>In other states</i>	
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>
Total, all wildlife	23,720	100	23,720	100	18,772	79	7,396	31
Total birds	17,015	72	17,015	100	14,216	84	6,542	38
Songbirds (cardinals, robins, etc.)	10,507	44	10,507	100	9,474	90	3,502	33
Birds of prey (hawks, eagles, etc.)	11,452	48	11,452	100	10,079	88	3,629	32
Waterfowl (ducks, geese, etc.)	11,488	48	11,488	100	10,087	88	3,682	32
Other water birds (shorebirds, herons, cranes, etc.)	8,798	37	8,798	100	7,717	88	2,804	32
Other birds (pheasants, turkeys, road runners, etc.)	7,123	30	7,123	100	5,372	75	2,461	35
Total land mammals	14,018	59	14,018	100	12,289	88	4,644	33
Large land mammals (deer, bear, etc.)	11,828	50	11,828	100	9,699	82	4,072	34
Small land mammals (squirrel, prairie dog, etc.)	10,586	45	10,586	100	9,138	86	3,274	31
Fish (salmon, shark, etc.)	4,270	18	4,270	100	2,910	68	1,759	41
Marine mammals (whales, dolphins, etc.)	2,485	10	2,485	100	1,365	55	1,224	49
Other wildlife (turtles, butterflies, etc.)	8,713	37	8,713	100	6,616	76	4,099	47

Note: Detail does not add to total because of multiple responses. Column showing percent of total participants is based on the "Total, all wildlife" numbers.

"Participation by place" percent columns are based on the total numbers of participants for each type of wildlife.

Table 7. Wild Bird Observers and Days of Observation: 2016

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

<i>Observers and days of observation</i>	<i>Number</i>	<i>Percent</i>
Observers		
Total bird observers	45,104	100
Around-the-home observers	38,741	86
Away-from-home observers	16,275	36
Days		
Total days observing birds	4,324,668	100
Around the home	4,067,994	94
Away from home	256,673	6

Note: Detail does not add to total because of multiple responses.

Table 8. Expenditures for Wildlife Watching: 2016

(Population 16 years old and older)

<i>Expenditure Item</i>	<i>Expenditures (thousands of dollars)</i>	<i>Spenders</i>		
		<i>Number (thousands)</i>	<i>Percent of wildlife-watching participants¹</i>	<i>Average per spender (dollars)²</i>
Total, all items³	75,867,134	63,578	74	1,193
Trip-Related Expenditures				
Total trip-related	11,587,870	20,235	85	573
Food and lodging, total	6,068,131	17,058	72	356
Food	3,809,811	16,955	71	225
Lodging	2,258,320	6,331	27	357
Transportation, total	4,228,568	19,018	80	222
Public	1,232,678	3,052	13	404
Private	2,995,890	17,766	75	169
Other trip costs, total	1,291,171	8,609	36	150
Guide fees, pack trip or package fees	108,341	1,876	8	58
Public land use fees	169,750	5,461	23	31
Private land use fees	29,857	1,515	6	20
Equipment rental	274,867	2,814	12	98
Boating costs ⁴	283,150	1,704	7	166
Heating and cooking fuel	425,205	2,985	13	142
Equipment and Other Expenses				
Total	64,279,264	57,496	67	1,118
Wildlife-watching equipment, total	12,105,745	50,302	58	241
Binoculars, spotting scopes	1,835,510	4,765	6	385
Cameras, video cameras, special lenses, and other photographic equipment	3,575,323	7,152	8	500
Film and photo processing	73,561	1,679	2	44
Bird food, total	4,035,357	37,609	44	107
Commercially prepared and packaged wild bird food	3,269,158	36,026	42	91
Other bulk foods used to feed wild birds	766,200	12,673	15	60
Feed for other wildlife	816,527	9,570	11	85
Nest boxes, bird houses, feeders, baths	959,643	17,868	21	54
Day packs, carrying cases, and special clothing	674,710	5,133	6	131
Other wildlife-watching equipment (such as field guides and maps)	135,113	4,317	5	31
Auxiliary equipment, total	1,043,932	6,669	8	157
Tents, tarps	364,298	3,176	4	115
Frame packs and backpacking equipment	225,326	2,471	3	91
Other camping equipment	209,087	1,911	2	109
Other auxiliary equipment (such as blinds and GPS devices)	245,221	765	1	321
Special equipment, total	41,933,623	3,037	4	13,810
Off-the-road vehicle	...	...	...	...
Travel or tent trailer, pickup, camper, van, motor home, house trailer, recreational vehicle (RV)	*35,684,266	*1,843	*2	*19,366
Boats, boat accessories	1,526,530	900	1	1,697
Cabins	...	...	...	...
Other	*56,439	*281	*(Z)	*201
Magazines, books, DVDs	236,696	7,022	8	34
Land leasing and ownership	4,196,305	1,195	1	3,512
Membership dues and contributions	3,817,276	10,076	12	379
Plantings	945,688	7,289	8	130

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

... Sample size too small (less than 10) to report data reliably. (Z) Less than 0.5 percent

¹ Percent of wildlife-watching participants column is based on away-from-home participants for trip-related expenditures. For equipment and other expenditures the percent of wildlife-watching participants is based on total participants.² Average expenditures are annual estimates.³ Information on trip-related expenditures was collected for away-from-home participants only. Equipment and other expenditures are based on information collected from both away-from-home and around-the-home participants.⁴ Boating costs include launching, mooring, storage, maintenance, insurance, pumpout fees, and fuel.

Note: Detail does not add to total because of multiple responses and nonresponse.

Table 9. Participants in Target Shooting and Archery, by Age Group: 2015

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

<i>Shooting Activity</i>	<i>Recreational Participants</i>	
	<i>Number</i>	<i>Percent</i>
Total target shooters using a firearm	32,047	100
6 to 15 years old	3,841	12
16 years old and older	28,206	88
Total archers	12,398	100
6 to 15 years old	2,642	21
16 years old and older	9,756	79

Note: Data reported on this table are from screening interviews in which one adult household member responded for all household members. The screening interview required the respondent to recall 12 months worth of activity.

Table 10. Comparison of Wildlife-Related Recreation Participation: 2011 and 2016

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

<i>Type of Participation</i>	<i>2011</i>		<i>2016</i>		<i>2011–2016 % Change</i>
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	
Total Sportspersons	37,397	100	39,553	100	6%*
Anglers, Total	33,112	100	35,754	100	8%*
All freshwater	27,547	83	30,137	84	9%*
Freshwater, except Great Lakes	27,060	82	29,490	82	9%*
Great Lakes	1,665	5	1,824	5	10%*
Saltwater	8,889	27	8,320	23	-6%*
Hunter, Total	13,674	100	11,453	100	-16%*
Big game	11,570	85	9,208	80	-20%
Small game	4,506	33	3,505	31	-22%*
Migratory birds	2,583	19	2,353	21	-9%*
Other animals	2,168	16	1,315	11	-39%
Wildlife-Watching Participants, Total	71,776	100	86,042	100	20%
Around-the-home	68,598	96	81,128	94	18%
Away-from-home	22,496	31	23,720	28	5%*

Note: Detail does not add to total because of multiple responses and nonresponse.

* Not a significant difference at the 95% level.

Table 11. Comparison of Wildlife-Related Recreation Participation: 2006 and 2016

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

<i>Type of Participation</i>	<i>2006</i>		<i>2016</i>		<i>2006–2016 % Change</i>
	<i>Number</i>	<i>Percent</i>	<i>Number</i>	<i>Percent</i>	
Total Sportspersons	33,916	100	39,553	100	17%
Anglers, Total	29,952	100	35,754	100	19%
All freshwater	25,431	85	30,137	84	19%
Freshwater, except Great Lakes	25,035	84	29,490	82	18%
Great Lakes	1,420	5	1,824	5	28%*
Saltwater	7,717	26	8,320	23	8%*
Hunter, Total	12,510	100	11,453	100	-8%*
Big game	10,682	85	9,208	80	-14%*
Small game	4,797	38	3,505	31	-27%
Migratory birds	2,293	18	2,353	21	3%*
Other animals	1,128	9	1,315	11	17%*
Wildlife-Watching Participants, Total	71,132	100	86,042	100	21%
Around-the-home	67,756	95	81,128	94	20%
Away-from-home	22,977	32	23,720	28	3%*

* Not a significant difference at the 95% level.

Table 12. Comparison of Wildlife-Related Recreation Expenditures: 2011 and 2016

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

Activity and Type of Expenditure	2011		2016		2011–2016 % Change
	Dollars	Percent	Dollars	Percent	
Total Sportsperson	96,583,400	100	80,461,445	100	-17%*
Fishing, Total	44,964,895	100	46,115,118	100	3%*
Trip-Related	23,445,464	52	21,729,778	47	-7%*
Equipment	16,684,922	37	21,077,638	46	26%*
Fishing equipment	6,608,679	15	7,430,662	16	12%*
Auxiliary equipment	1,190,987	3	3,163,575	7	166%
Special equipment	8,885,256	20	10,483,401	23	18%*
Other	4,834,508	11	3,307,702	7	-32%
Hunting, Total	36,263,370	100	25,616,517	100	-29%*
Trip-Related	11,213,199	31	9,196,245	36	-18%*
Equipment	15,034,399	41	12,181,947	48	-19%*
Hunting equipment	8,326,437	23	6,809,901	27	-18%*
Auxiliary equipment	1,985,091	5	2,018,696	8	2%*
Special equipment	4,722,872	13	3,353,350	13	-29%*
Other	10,015,774	28	4,238,326	17	-58%
Wildlife Watching, Total	59,061,933	100	75,867,134	100	28%*
Trip-Related	18,587,550	31	11,587,870	15	-38%
Equipment	29,214,391	49	55,083,300	73	89%
Wildlife-Watching equipment	12,183,741	21	12,105,745	16	-1%*
Auxiliary equipment	1,673,582	3	1,043,932	1	-38%*
Special equipment	15,357,068	26	41,933,923	55	173%
Other	11,259,992	19	9,195,965	12	-18%*

* Not a significant difference at the 95% level.

Note: 2011 estimates are in 2016 dollars

Table 13. Comparison of Wildlife-Related Recreation Expenditures: 2006 and 2016

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

Activity and Type of Expenditure	2006		2016		2006–2016 % Change
	Dollars	Percent	Dollars	Percent	
Total Sportsperson	91,560,379	100	80,461,445	100	–12%*
Fishing, Total	50,376,530	100	46,115,118	100	–8%*
Trip-Related	21,364,879	42	21,729,778	47	2%*
Equipment	22,415,057	44	21,077,638	46	–6%*
Fishing equipment	6,372,219	13	7,430,662	16	17%*
Auxiliary equipment	930,594	2	3,163,575	7	240%
Special equipment	15,112,244	30	10,483,401	23	–31%*
Other	6,596,594	13	3,307,702	7	–50%
Hunting, Total	27,357,321	100	25,616,517	100	–6%*
Trip-Related	7,980,944	29	9,196,245	36	15%*
Equipment	12,824,144	47	12,181,947	48	–5%*
Hunting equipment	6,412,797	23	6,809,901	27	6%*
Auxiliary equipment	1,589,608	6	2,018,696	8	27%*
Special equipment	4,821,739	18	3,353,350	13	–30%*
Other	6,552,234	24	4,238,326	17	–35%
Wildlife Watching, Total	54,557,677	100	75,867,134	100	39%*
Trip-Related	15,385,807	28	11,587,870	15	–25%*
Equipment	27,692,993	51	55,083,300	73	99%
Wildlife-Watching equipment	11,794,324	22	12,105,745	16	3%*
Auxiliary equipment	1,234,507	2	1,043,932	1	–15%*
Special equipment	14,664,163	27	41,933,923	55	186%
Other	11,478,877	21	9,195,965	12	–20%*

Note: 2016's expenditures do not include plantings for hunting, since that item was not asked in 2006.

* Not a significant difference at the 95% level.

Note: 2011 estimates are in 2016 dollars

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