



OKLAHOMA

Bridging the 50-State Survey
of Fishing, Hunting, and Wildlife-
Associated Recreation with
Previous National Survey of
Fishing, Hunting, and Wildlife-
Associated Recreation Trends

Final Methodology Overview

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OVERVIEW

In 2016, the Rockville Institute conducted the 50-State Survey of Fishing, Hunting and Wildlife-Associated Recreation (FHWAR); see more details in Rockville Institute (2018). Concurrently, the Census Bureau conducted the 2016 National Survey of FHWAR; see more details in U.S. Department of the Interior, U.S. Fish & Wildlife Service, and U.S. Department of Commerce U.S. Census Bureau (2018). The two surveys were based on samples of addresses intended to be representative of the United States population living in households, and used questionnaires as nearly identical as possible. Both surveys identified likely sports-persons and wildlife watchers within sampled households, and individual participation surveys covered all of calendar year 2016. However, differences in sample design, sample selection process and mode of data collection resulted in estimates that were substantially different between the surveys.

Estimates from the 2016 National Survey of FHWAR are directly comparable to those from previous surveys such as the 2011 National Survey of FHWAR; see U.S. Department of the Interior, U.S. Fish & Wildlife Service, and U.S. Department of Commerce U.S. Census Bureau (2014). Due to its modest sample size, it can only produce reliable estimates at the national and census division level. In contrast, the 50-State Survey of FHWAR produced state-level estimates, but these estimates are not directly comparable to those from previous surveys. The Rockville Institute therefore completed a project to create new state-level estimates that are calibrated to those of the 2016 National Survey of FHWAR. The dual purpose of these calibrated estimates is to maintain the fine level of granularity of the 50-State Survey of FHWAR but enable comparison to previous National Surveys of FHWAR.

Through this bridging project, the Rockville Institute created new state-level tables showing adjusted survey

estimates by state of residency of the participants. These tables show the estimated demographics, participation, days, trips and expenditures, for fishing, hunting and wildlife-related activities for residents of each of the 50 states and DC. The tables correspond to Tables 5, 15, 22, 28, 30, 33, 35, and 36 in the state reports released by the Rockville Institute in 2018, with the exception of Tables 28 and 33, where we report an extended set of statistics compared to those reported in the 50-State Survey of FHWAR report.

The calibration procedure used to create these tables involved a combination of data harmonization and statistical modeling of the differences between the two surveys. The procedure consisted of the following major steps. First, the estimated demographic compositions of both surveys were aligned at the census division level, using survey calibration methods. Second, a statistical model was developed to account for the differences in participation rates in hunting, fishing and wildlife-related activities between the two surveys. This “bridging model” was used to predict state-level participating rates that are consistent with those obtained using the Census Bureau methodology. By combining these predicted participation rates with the harmonized population estimates, calibrated estimates of the numbers of participants in each state were obtained. Third, the characteristics of the participants’ activities, such as the number and type of activities, days of participation and types of associated expenditures, were adjusted by means of estimated products or ratios of these characteristics between the two surveys. Finally, applying these products or ratios to the calibrated estimates of the participant numbers made it possible to produce the calibrated tables of estimates mentioned above. For more details about the bridging project, see Rockville Institute (2020).

References

- Rockville Institute. 2018. *2016 50-State Survey of Fishing, Hunting, and Wildlife-Related Recreation: National*.
- Rockville Institute. 2020. *Bridging the 50-State Surveys of Fishing, Hunting, and Wildlife-Associated Recreation with Previous National Survey of Fishing, Hunting, and Wildlife-Associated Recreation Trends. Final Methodology Report*.
- U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce U.S. Census Bureau. 2014. *2011 National Survey of Fishing, Hunting, and Wildlife-Related Recreation*.
- U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce U.S. Census Bureau. 2018. *2016 National Survey of Fishing, Hunting, and Wildlife-Related Recreation*.

APPENDIX A: POINT ESTIMATES

The tables in Appendix A depict the calibrated point estimates, subject to rounding error. The format of the calibrated tables in this appendix matches closely the format used in the 50-State Survey of FHWAR reports. Summary statistics reported in the calibrated tables are described below, by table.

Table 5

Fishing and hunting, participation, days, and trips

- Total fishing participation and total hunting participation: product-type statistics derived using model predictions for percent participation in the population and total population based on adjusted 50-State Survey of FHWAR weights.
- Total freshwater, freshwater except Great Lakes, Great Lakes, and saltwater fishing participation, total big game, small game, migratory birds, and other animals hunting participation: product-type statistics derived using total fishing participation, total hunting participation, percent participation of freshwater, freshwater except Great Lakes, Great Lakes, and saltwater fishing in all fishing, and percent participation of big game, small game, migratory birds, and other animals hunting in all hunting (columns denoted by %).
- Total fishing (all and subcategories) days/trips of participation and total hunting (all and subcategories) days/trips of participation: product-type statistics derived using total number of fishing (all and subcategories) participants, total number of hunting (all and subcategories) participants, and days/trips per participant (not displayed).
- Percent participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the fishing or hunting survey for the fishing and hunting sections, respectively.

Table 15

Fishing and hunting, demographics

- Total population (all and subcategories): composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final weights, using data from both the fishing and the hunting surveys.
- Total number of anglers and total number of hunters: product-type statistics derived using model predictions for percent participation in the population (columns denoted by % Pop.), and total population based on adjusted 50-State Survey of FHWAR final weights.
- Total number of sportspersons: ratio-type statistics derived using total number of anglers and percent anglers in sportspersons (not displayed).
- Total population, sportspersons, anglers, hunters, by demographics: product-type statistics, derived using total population, sportspersons, anglers, hunters participation, and percent demographic-specific participation in total participation (columns denoted by %).
- Percent demographic-specific population, sportspersons, anglers, hunters participation in total participation (columns denoted by %): composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final weights, using data from the fishing and hunting surveys.
- Percent demographic-specific anglers and hunters participation in the total demographic-specific population (columns denoted by % Pop.): ratio-type statistics, derived using total demographic-specific anglers and hunters participation and total demographic-specific population.

- Percent total and demographic-specific sportspersons participation in the total and demographic-specific population (column denoted by % Pop.): ratio-type statistics, derived using total population and sportspersons participation.

Table 22

Fishing and hunting, spenders and expenses

- Total fishing and hunting expenditure (all and subcategories) amount, total fishing expenditure (all and subcategories) amount, total hunting expenditure (all and subcategories) amount, and total unspecified expenditure amount: product-type statistics derived using expenditure amount per participant (columns denoted by Average Per Sportsperson), and total sportspersons participation (all and subcategories), total anglers participation (all and subcategories), total hunters participation (all and subcategories) and total sportspersons participation, respectively.
- Expenditure amount per participant (columns denoted by Average Per Sportsperson) and expenditure amount per spender (columns denoted by Average Per Spender):
 - > Fishing section: statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the fishing survey only.
 - > Hunting section: statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the hunting survey only.
 - > Fishing and hunting, and unspecified sections: except for some expenses and spenders noted in the table footnotes, these are composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final weights, using data from the fishing and hunting surveys.
- Total fishing and hunting (all and subcategories) number of spenders, total fishing (all and subcategories) number of spenders, total hunting (all and subcategories) number of spenders, and total unspecified number of spenders: product-type statistics derived using the percent spenders in total participation (not displayed), and total sportspersons participation (all and subcategories),

total anglers participation (all and subcategories), total hunters participation (all and subcategories) and total sportspersons participation, respectively.

Table 28

Wildlife watching, participation, days, and trips

- Total wildlife watching participation: product-type statistics derived using model predictions for percent participation in the population, and total population based on adjusted 50-State Survey of FHWAR final weights.
- Total away from home (all and subcategories) and around the home (all and subcategories) wildlife watching participation: product-type statistics derived using total wildlife watching participation, and percent participation of away from home (all and subcategories) and around the home (all and subcategories) wildlife watching in all wildlife watching (columns denoted by %).
- Total wildlife watching (all and subcategories) days/trips of participation: product-type statistics derived using total number of wildlife watching (all and subcategories) participants and days/trips per participant (not displayed).
- Percent participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey.
- Percent participation in the total population (column denoted by % Pop.): ratio-type statistics, derived using total population from Table 30 and wildlife watching participation.

Table 30

Wildlife watching, demographics

- Total population (all and subcategories): composite statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey. Note that the total population estimates in Tables 15 and 30 differ due to demographic harmonization without state targets estimated from the National Survey of FHWAR (information not available); see Rockville Institute (2020) for more details about the demographic harmonization.

- Total number of wildlife watchers: product-type statistics derived using model predictions for percent participation in the population (columns denoted by % Pop.) and total population based on adjusted 50-State Survey of FHWAR weights.
- Total number of away from home or around the home wildlife watchers: product-type statistics derived using total number of wildlife watchers, and percent away from home or around the home wildlife watchers in all wildlife watchers (columns denoted by % Pop. in Table 35; not displayed).
- Total population, wildlife watchers, away from home, around the home, by demographics: product-type statistics, derived using total population, wildlife watchers, away from home, around the home participation, and percent demographic-specific participation in total participation (columns denoted by %).
- Percent demographic-specific population, wildlife watchers, away from home, around the home participation in total participation (columns denoted by %): composite statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey.
- Percent demographic-specific wildlife watchers, participation in the total demographic-specific population (column denoted by % Pop.): ratio-type statistics, derived using total demographic-specific wildlife watchers participation and total demographic-specific population.
- Percent total and demographic-specific away from home and around the home participation in the total and demographic-specific population (columns denoted by % Pop.): ratio-type statistics, derived using total population and away from home and around the home participation, respectively.

Table 33

Wildlife watching, spenders and expenditures — three versions for all wildlife watchers, away from home wildlife watchers, and around the home wildlife watchers

- Total wildlife watching expenditure (all and subcategories) amount: product-type statistics derived using total number of wildlife watching (all and subcategories)

participants and expenditure amount per participant (columns denoted by Average Per Wildlife Watcher).

- Expenditure amount per participant (columns denoted by Average Per Wildlife Watcher) and expenditure amount per spender (columns denoted by Average Per Spender): statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey only.
- Total wildlife watching (all and subcategories) number of spenders: product-type statistics derived using total number of wildlife watching (all and subcategories) participants and the percent spenders in total participation (columns denoted by Percent of Wildlife Watchers).
- Percent spenders in total participation (columns denoted by Percent of Wildlife Watchers): statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey only.

Table 35

Wildlife watchers participating in fishing and hunting

- Total number of wildlife watchers: product-type statistics derived using model predictions for percent participation in the population (columns denoted by % Pop. in Table 30), and total population based on adjusted 50-State Survey of FHWAR final weights (displayed in Table 30).
- Total number of away from home or around the home wildlife watchers: product-type statistics derived using total number of wildlife watchers, and percent away from home or around the home wildlife watchers in all wildlife watchers (columns not displayed).
- Total number of wildlife watchers, away from home, around the home who did not fish or hunt, fished or hunted, fished, hunted: product-type statistics, derived using total number of wildlife watchers, and percent sportsperson-specific category in the corresponding total participation (columns denoted by %).
- Percent sportsperson-specific category in the corresponding total participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final weights, using data from the wildlife watching survey.

Table 36

Sportspersons participating in wildlife watching

- Total number of sportspersons: ratio-type statistics derived using total number of anglers, percent anglers in sportspersons (not displayed).
- Total number of anglers or total number of hunters: product-type statistics derived using model predictions for percent participation in the population (columns denoted by % Pop. in Table 15), and total population based on adjusted 50-State Survey of FHWAR final weights (displayed in Table 15).
- Total number of sportspersons, anglers, or hunters who did not wildlife watch, wildlife watch, wildlife watch away from home, wildlife watch around the home: product-type statistics, derived using total number of sportspersons, anglers, or hunters, and percent wildlife watcher-specific category in the corresponding total participation (columns denoted by %).
- Percent wildlife watcher-specific category in the corresponding total participation (columns denoted by %): composite statistics constructed using 3-way composite factors to adjusted 50-State Survey of FHWAR final weights, using data from the fishing, hunting, and wildlife watching surveys.

Table 5 Oklahoma Resident Anglers and Hunters, Days of Participation and Trips in the United States,
by Type of Fishing and Hunting: 2016
(Population 16 years and older. Numbers in thousands)

	PARTICIPANTS		DAYS OF PARTICIPATION		TRIPS	
	#	%	#	%	#	%
ALL FISHING	512	100	13,996	100	10,624	100
All freshwater	512	100	13,914	99	10,598	100
Freshwater, except Great Lakes	512	100	13,914	99	10,598	100
Great Lakes	—	—	—	—	—	—
Saltwater	9	2	81	1	26	0
ALL HUNTING	203	100	3,825	100	3,399	100
Big game	159	79	1,873	48	1,315	38
Small game	81	40	815	21	700	21
Migratory birds	68	33	1,080	28	1,018	30
Other animals	38	19	434	11	379	11

— No sample data

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

Table 15 Oklahoma Resident Anglers and Hunters, by Selected Characteristics: 2016
(State population 16 years and older. Numbers in thousands)

	POPULATION		SPORTSPERSONS			ANGLERS			HUNTERS		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
TOTAL	2,613	100	633	24	100	512	20	100	203	8	100
RESIDENCE DENSITY											
Urban	1,776	68	373	21	59	308	17	60	116	7	57
Rural	837	32	260	31	41	204	24	40	86	10	43
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	2,071	79	471	23	74	381	18	74	144	7	71
1,000,000 or more	990	38	227	23	36	174	18	34	59	6	29
250,000 to 999,999	788	30	171	22	27	148	19	29	68	9	34
50,000 to 249,999	293	11	73	25	12	59	20	12	16	6	8
Outside MSA	542	21	162	30	26	131	24	26	58	11	29
SEX											
Male	1,277	49	408	32	64	339	27	66	153	12	75
Female	1,336	51	225	17	36	173	13	34	50	4	25
AGE											
16 to 17 years	110	4	25	23	4	23	21	4	2	2	1
18 to 24 years	263	10	58	22	9	36	14	7	28	11	14
25 to 34 years	444	17	163	37	26	129	29	25	43	10	21
35 to 44 years	496	19	115	23	18	96	19	19	46	9	23
45 to 54 years	432	17	107	25	17	91	21	18	28	6	14
55 to 64 years	378	14	88	23	14	75	20	15	33	9	16
65 years and older	490	19	77	16	12	62	13	12	22	5	11
65 to 74 years	308	12	48	16	8	37	12	7	18	6	9
75 and older	182	7	29	16	5	25	14	5	5	3	2
ETHNICITY											
Hispanic	371	14	29	8	5	25	7	5	21	6	10
Non-Hispanic	2,242	86	604	27	95	486	22	95	182	8	90
RACE											
White	1,919	73	487	25	77	385	20	75	152	8	75
African American	341	13	57	17	9	51	15	10	13	4	6
All Others	353	14	90	25	14	75	21	15	37	11	18

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Table 15 Oklahoma Resident Anglers and Hunters, by Selected Characteristics: 2016 (continued)
(State population 16 years and older. Numbers in thousands)

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	POPULATION		SPORTSPERSONS			ANGLERS			HUNTERS		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
ANNUAL HOUSEHOLD INCOME											
Less than \$20,000	336	13	82	24	13	71	21	14	6	2	3
\$20,000 to \$29,999	245	9	69	28	11	50	20	10	21	9	10
\$30,000 to \$39,999	262	10	78	30	12	68	26	13	17	6	8
\$40,000 to \$49,999	248	9	57	23	9	50	20	10	12	5	6
\$50,000 to \$74,999	426	16	119	28	19	88	21	17	36	8	18
\$75,000 to \$99,999	232	9	42	18	7	31	13	6	14	6	7
\$100,000 to \$149,999	334	13	74	22	12	56	17	11	40	12	20
\$150,000 or more	186	7	79	43	13	69	37	13	39	21	19
Not reported	344	13	34	10	5	30	9	6	18	5	9
EDUCATION											
8 years or less	133	5	12	9	2	9	7	2	7	5	3
9 to 12 years	950	36	182	19	29	152	16	30	41	4	20
1 to 3 years of college	721	28	233	32	37	191	26	37	60	8	30
4 years or more of college	809	31	206	25	33	159	20	31	95	12	47

NOTE: Detail does not add to total because of multiple responses. Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population living in urban areas who fished, etc.). Columns labeled "% under Sportspersons, Anglers, and Hunters show the percentage of each column's participants who are described by the row heading (the percentage of anglers who lived in urban areas, etc.).

Table 22 Expenditures by Oklahoma Residents for Fishing and Hunting Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER SPORTSPERSON (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)
FISHING AND HUNTING	2,572,040	4,062	4,206	612
Food and lodging	431,465	681	826	522
Transportation	272,360	430	545	500
Other trip costs ²	424,384	670	984	431
Equipment (fishing, hunting)	549,527	868	1,021	538
Auxiliary equipment ³	128,088	202	759	169
Special equipment ⁴	533,253	842	7,712	69
Magazines, books, and DVDs	1,690	3	23	75
Membership dues/contributions	20,199	32	179	113
Other ⁵	211,074	333	532	397
FISHING	1,745,408	3,411	3,551	491
Food and lodging	336,795	658	778	433
Transportation	199,433	390	468	426
Other trip costs ²	369,979	723	912	406
Fishing equipment	310,368	607	693	448
Auxiliary equipment ³	73,474	144	878	84
Special equipment ⁴	375,004	733	6,321	59
Magazines, books, and DVDs	607	1	22	28
Membership dues/contributions	5,603	11	101	56
Other ⁵	74,145	145	293	253
HUNTING	385,137	1,902	1,902	203
Food and lodging	46,846	231	294	160
Transportation	39,346	194	272	145
Other trip costs ²	17,338	86	230	75
Hunting equipment	147,702	729	849	174
Auxiliary equipment ³	31,207	154	323	97
Special equipment ⁴	7,497	37	625	12
Magazines, books, and DVDs	287	1	81	4
Membership dues/contributions	4,801	24	188	26
Other ⁵	90,114	445	448	201
UNSPECIFIED ⁶	129,006	204	1,364	95

1 Average expenditures are annual estimates.

2 Includes boating costs, equipment rental, guide fees, access fees, heating and cooking fuel, and ice and bait (for fishing only).

3 Includes sleeping bags, packs, duffel bags, tents, binoculars and field glasses, special fishing and hunting clothing, foul weather gear, boots and waders, maintenance and repair of equipment, processing and taxidermy costs, and electronic equipment such as a GPS device.

4 Includes big-ticket items bought primarily for hunting and fishing, including 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.

5 Includes land leasing and ownership, licenses, stamps, tags, permits, and plantings (for hunting only).

6 Respondent could not specify whether expenditure was primarily for either fishing or hunting.

NOTE: Individual estimates do not add to total because of multiple responses, nonresponse, the independent bridging of fishing and hunting participation, and the bridging of sportspersons participation relative to fishing participation.

Table 28 Oklahoma Resident Wildlife Watchers Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	PARTICIPANTS			DAYS OF PARTICIPATION		TRIPS	
	#	%	% Pop.	#	%	#	%
WILDLIFE WATCHERS	974	100	35	89,203	100	5,141	100
Away from home	388	40	14	11,058	12	5,141	100
Observe wildlife	369	38	13	7,083	8	x	x
Photograph wildlife	201	21	7	2,146	2	x	x
Feed wildlife	208	21	7	6,643	7	x	x
Around the home	922	95	33	78,145	88	x	x
Observe wildlife	594	61	21	61,324	69	x	x
Photograph wildlife	384	39	14	8,277	9	x	x
Feed wildlife	706	73	25	x	x	x	x
Visit parks or natural areas ¹	244	25	9	8,544	10	x	x
Maintain plantings or natural areas	164	17	6	x	x	x	x

x Not applicable

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. Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population who observed wildlife away from home, etc.). Columns labeled "%" show the percentage of each column's participants who are described by the row heading (the percentage of wildlife watchers who observed wildlife away from home, etc.).

Table 30 Oklahoma Resident Wildlife Watchers, by Selected Characteristics: 2016
(State population 16 years and older. Numbers in thousands)

	POPULATION		TOTAL			AWAY FROM HOME			AROUND THE HOME		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
TOTAL	2,807	100	974	35	100	388	14	100	922	33	100
RESIDENCE DENSITY											
Urban	1,991	71	655	33	67	206	10	53	655	33	71
Rural	816	29	318	39	33	182	22	47	267	33	29
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	2,302	82	812	35	83	283	12	73	775	34	84
1,000,000 or more	1,267	45	425	34	44	94	7	24	404	32	44
250,000 to 999,999	649	23	268	41	28	134	21	35	252	39	27
50,000 to 249,999	385	14	119	31	12	55	14	14	119	31	13
Outside MSA	505	18	161	32	17	104	21	27	147	29	16
SEX											
Male	1,372	49	468	34	48	199	15	51	417	30	45
Female	1,435	51	506	35	52	188	13	49	506	35	55
AGE											
16 to 17 years	—	—	—	—	—	—	—	—	—	—	—
18 to 24 years	381	14	43	11	4	43	11	11	43	11	5
25 to 34 years	457	16	161	35	17	14	3	4	161	35	17
35 to 44 years	455	16	153	34	16	135	30	35	113	25	12
45 to 54 years	395	14	168	43	17	79	20	20	168	43	18
55 to 64 years	539	19	230	43	24	55	10	14	230	43	25
65 years and older	581	21	219	38	22	63	11	16	208	36	23
65 to 74 years	388	14	157	40	16	31	8	8	154	40	17
75 and older	192	7	62	32	6	32	17	8	53	28	6
ETHNICITY											
Hispanic	157	6	43	27	4	25	16	6	43	27	5
Non-Hispanic	2,650	94	931	35	96	363	14	94	880	33	95
RACE											
White	2,108	75	756	36	78	344	16	89	737	35	80
African American	291	10	121	42	12	—	—	—	121	42	13
All Others	409	15	97	24	10	43	11	11	64	16	7

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Table 30 Oklahoma Resident Wildlife Watchers, by Selected Characteristics: 2016 (continued)
(State population 16 years and older. Numbers in thousands)

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	POPULATION		TOTAL			AWAY FROM HOME			AROUND THE HOME		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
ANNUAL HOUSEHOLD INCOME											
Less than \$20,000	491	17	184	37	19	36	7	9	172	35	19
\$20,000 to \$29,999	131	5	66	50	7	27	20	7	66	50	7
\$30,000 to \$39,999	235	8	78	33	8	52	22	13	57	24	6
\$40,000 to \$49,999	137	5	43	31	4	25	18	6	43	31	5
\$50,000 to \$74,999	640	23	225	35	23	68	11	17	222	35	24
\$75,000 to \$99,999	227	8	102	45	10	55	24	14	94	42	10
\$100,000 to \$149,999	280	10	101	36	10	65	23	17	101	36	11
\$150,000 or more	356	13	49	14	5	4	1	1	49	14	5
Not reported	311	11	127	41	13	58	19	15	118	38	13
EDUCATION											
8 years or less	77	3	26	34	3	23	29	6	26	34	3
9 to 12 years	827	29	306	37	31	124	15	32	287	35	31
1 to 3 years of college	1,028	37	266	26	27	141	14	36	264	26	29
4 years or more of college	875	31	375	43	39	100	11	26	346	40	38

— No sample data

NOTE: Detail does not add to total because of multiple responses and nonresponse. Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population living in urban areas who participated, etc.). Columns labeled "% under TOTAL, Away From Home, and Around the Home show the percentage of each column's participants who are described by the row heading (the percentage of those who lived in urban areas, etc.).

Table 33A Expenditures by Oklahoma Residents for All Wildlife Watching Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	919,800	945	1,294	711	73
TRIP-RELATED EXPENDITURES	436,597	448	1,237	353	36
Food and lodging	234,567	241	730	321	33
Food	87,150	90	273	319	33
Lodging	147,418	151	1,140	129	13
Transportation	145,732	150	473	308	32
Other trip costs ²	56,297	58	547	103	11
EQUIPMENT AND OTHER EXPENDITURES	483,202	496	839	576	59
Wildlife-watching equipment	210,654	216	370	570	59
Binoculars, spotting scopes	40,280	41	226	178	18
Film and photo processing	2,183	2	69	32	3
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	36,631	38	287	128	13
Day packs, carrying cases, and special clothing	25,315	26	222	114	12
Bird food	64,929	67	146	445	46
Food for other wildlife	17,358	18	101	173	18
Nest boxes, bird houses, bird feeders, and bird baths	23,301	24	75	311	32
Other equipment (including field guides)	658	1	23	29	3
Auxiliary equipment ³	30,235	31	425	71	7
Special equipment ⁴	209,570	215	4,470	47	5
Magazines, books, and DVDs	4,173	4	37	114	12
Membership dues and contributions	7,631	8	91	84	9
Land leasing and ownership	2,373	2	358	7	1
Plantings	18,568	19	191	97	10

¹ Average expenditures are annual estimates.

² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.

³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.

⁴ 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 and nonresponse.

Table 33B

Expenditures by Oklahoma Residents for Away-from-home Wildlife Watching Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	663,087	1,710	1,836	361	93
TRIP-RELATED EXPENDITURES	609,399	1,572	1,687	361	93
Food and lodging	311,615	804	910	342	88
Food	105,168	271	312	337	87
Lodging	206,448	532	730	283	73
Transportation	244,307	630	676	361	93
Other trip costs ²	53,476	138	468	114	29
EQUIPMENT AND OTHER EXPENDITURES	53,688	138	284	189	49
Wildlife-watching equipment	38,892	100	206	189	49
Binoculars, spotting scopes	7,733	20	500	15	4
Film and photo processing	—	—	—	—	—
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	7,733	20	500	15	4
Day packs, carrying cases, and special clothing	4,647	12	200	23	6
Bird food	5,939	15	39	151	39
Food for other wildlife	2,514	6	18	141	36
Nest boxes, bird houses, bird feeders, and bird baths	9,921	26	125	79	20
Other equipment (including field guides)	404	1	12	35	9
Auxiliary equipment ³	13,941	36	600	23	6
Special equipment ⁴	—	—	—	—	—
Magazines, books, and DVDs	—	—	—	—	—
Membership dues and contributions	855	2	75	11	3
Land leasing and ownership	—	—	—	—	—
Plantings	—	—	—	—	—

— No sample data

¹ Average expenditures are annual estimates.

² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.

³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.

⁴ 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 and nonresponse.

Table 33C

Expenditures by Oklahoma Residents for Around-the-home Wildlife Watching Both In and Out of Oklahoma: 2016

(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	300,642	326	592	508	55
TRIP-RELATED EXPENDITURES	x	x	x	x	x
Food and lodging	x	x	x	x	x
Food	x	x	x	x	x
Lodging	x	x	x	x	x
Transportation	x	x	x	x	x
Other trip costs ²	x	x	x	x	x
EQUIPMENT AND OTHER EXPENDITURES	300,642	326	592	508	55
Wildlife-watching equipment	119,844	130	240	499	54
Binoculars, spotting scopes	33,411	36	224	149	16
Film and photo processing	281	0	20	14	2
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	5,492	6	155	35	4
Day packs, carrying cases, and special clothing	9,348	10	128	73	8
Bird food	59,115	64	133	443	48
Food for other wildlife	2,367	3	38	62	7
Nest boxes, bird houses, bird feeders, and bird baths	9,830	11	44	223	24
Other equipment (including field guides)	—	—	—	—	—
Auxiliary equipment ³	4,260	5	137	31	3
Special equipment ⁴	149,407	162	7,273	21	2
Magazines, books, and DVDs	2,605	3	30	86	9
Membership dues and contributions	4,694	5	91	52	6
Land leasing and ownership	—	—	—	—	—
Plantings	19,832	22	227	87	9

— No sample data x Not applicable

¹ Average expenditures are annual estimates.² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.⁴ 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 and nonresponse.

Table 35 Oklahoma Resident Wildlife Watchers Participating in Fishing or Hunting: 2016
(State population 16 years and older. Numbers in thousands)

	TOTAL		AWAY FROM HOME		AROUND THE HOME	
	#	%	#	%	#	%
ALL WILDLIFE WATCHERS	974	100	388	100	922	100
Did not fish or hunt	675	69	225	58	665	72
Fished or hunted	298	31	163	42	258	28
Fished	239	25	144	37	198	21
Hunted	145	15	57	15	139	15

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

Table 36 Oklahoma Resident Sportspersons Participating in Wildlife Watching: 2016
(State population 16 years and older. Numbers in thousands)

	SPORTSPERSONS		ANGLERS		HUNTERS	
	#	%	#	%	#	%
ALL SPORTSPERSONS	633	100	512	100	203	100
Did not watch wildlife	167	26	102	20	65	32
Watched wildlife	466	74	409	80	137	68
Away from home	287	45	256	50	81	40
Around the home	419	66	365	71	127	63

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

APPENDIX B: STANDARD ERRORS

The tables in Appendix B depict the standard errors, subject to rounding error, corresponding to the calibrated point estimates reported in the tables in Appendix A. Summary statistics reported in these calibrated tables are described below, by table.

Table 5

Fishing and hunting, participation, days, and trips

- Standard errors of total fishing participation and total hunting participation: product-type statistics derived using model point estimates and standard errors of percent participation in the population and survey point estimates and standard errors of total population based on adjusted 50-State Survey of FHWAR weights.
- Standard errors of total freshwater, freshwater except Great Lakes, Great Lakes, and saltwater fishing participation, total big game, small game, migratory birds, and other animals hunting participation: product-type statistics derived using point estimates and standard errors of total fishing participation, point estimates and standard errors of total hunting participation, point estimates and standard errors of percent participation of freshwater, freshwater except Great Lakes, Great Lakes, and saltwater fishing in all fishing, and point estimates and standard errors of percent participation of big game, small game, migratory birds, and other animals hunting in all hunting (columns denoted by %).
- Standard errors of total fishing (all and subcategories) days/trips of participation and total hunting (all and subcategories) days/trips of participation: product-type statistics derived using point estimates and standard errors of total number of fishing (all and subcategories) participants, point estimates and standard errors of total number of hunting (all and subcategories) participants, and point estimates and standard errors of days/trips per participant (not displayed).

- Standard errors of percent participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the fishing or hunting survey for the fishing and hunting sections, respectively.

Table 15

Fishing and hunting, demographics

- Standard errors of total population (all and subcategories): composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final and replicate weights, using data from both the fishing and the hunting surveys.
- Standard errors of total number of anglers and total number of hunters: product-type statistics derived using model point estimates and standard errors for percent participation in the population (columns denoted by % Pop.) and survey point estimates and standard errors of total population based on adjusted 50-State Survey of FHWAR final and replicate weights.
- Standard errors of total number of sportspersons: ratio-type statistics derived using point estimates and standard errors of total number of anglers and point estimates and standard errors of percent anglers in sportspersons (not displayed).
- Standard errors of total population, sportspersons, anglers, hunters, by demographics: product-type statistics, derived using point estimates and standard errors of total population, sportspersons, anglers, hunters participation, and point estimates and standard errors of percent demographic-specific participation in total participation (columns denoted by %).

- Standard errors of percent demographic-specific population, sportspersons, anglers, hunters participation in total participation (columns denoted by %): composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final and replicate weights, using data from the fishing and hunting surveys.
- Standard errors of percent demographic-specific anglers and hunters participation in the total demographic-specific population (columns denoted by % Pop.): ratio-type statistics, derived using point estimates and standard errors of total demographic-specific anglers and hunters participation and total demographic-specific population.
- Standard errors of percent total and demographic-specific sportspersons participation in the total and demographic-specific population (column denoted by % Pop.): ratio-type statistics, derived using point estimates and standard errors of total population and sportspersons participation.

Table 22

Fishing and hunting, spenders and expenses

- Standard errors of total fishing and hunting expenditure (all and subcategories) amount, total fishing expenditure (all and subcategories) amount, total hunting expenditure (all and subcategories) amount, and total unspecified expenditure amount: product-type statistics derived using point estimates and standard errors of expenditure amount per participant (columns denoted by Average Per Sportsperson), and point estimates and standard errors of total sportspersons participation (all and subcategories), point estimates and standard errors of total anglers participation (all and subcategories), point estimates and standard errors of total hunters participation (all and subcategories) and point estimates and standard errors of total sportspersons participation, respectively.
- Standard errors of expenditure amount per participant (columns denoted by Average Per Sportsperson) and expenditure amount per spender (columns denoted by Average Per Spender):
 - > Fishing section: statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the fishing survey only.

- > Hunting section: statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the hunting survey only.
- > Fishing and hunting, and unspecified sections: except for some expenses and spenders noted in the table footnotes, these are composite statistics constructed using 2-way composite factors to adjusted 50-State Survey of FHWAR final and replicate weights, using data from the fishing and hunting surveys.
- Standard errors of total fishing and hunting (all and subcategories) number of spenders, total fishing (all and subcategories) number of spenders, total hunting (all and subcategories) number of spenders, and total unspecified number of spenders: product-type statistics derived using the point estimates and standard errors of percent spenders in total participation (not displayed), and point estimates and standard errors of total sportspersons participation (all and subcategories), point estimates and standard errors of total anglers participation (all and subcategories), point estimates and standard errors of total hunters participation (all and subcategories) and point estimates and standard errors of total sportspersons participation, respectively.

Table 28

Wildlife watching, participation, days, and trips

- Standard errors of total wildlife watching participation: product-type statistics derived using model point estimates and standard errors of percent participation in the population, and survey point estimates and standard errors of total population based on adjusted 50-State Survey of FHWAR final and replicate weights.
- Standard errors of total away from home (all and subcategories) and around the home (all and subcategories) wildlife watching participation: product-type statistics derived using point estimates and standard errors of total wildlife watching participation, point estimates and standard errors of percent participation of away from home (all and subcategories) and point estimates and standard errors of around the home (all and subcategories) wildlife watching in all wildlife watching (columns denoted by %).

- Standard errors of total wildlife watching (all and sub-categories) days/trips of participation: product-type statistics derived using point estimates and standard errors of total number of wildlife watching (all and subcategories) participants and point estimates and standard errors of days/trips per participant (not displayed).
- Standard errors of percent participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey.
- Standard errors of percent participation in the total population (column denoted by % Pop.): ratio-type statistics, derived using point estimates and standard errors of total population from Table 30 and point estimates and standard errors of wildlife watching participation.

Table 30

Wildlife watching, demographics

- Standard errors of total population (all and subcategories): composite statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey. Note that the standard errors of total population estimates in Tables 15 and 30 differ due to demographic harmonization without state targets estimated from the National Survey of FHWAR (information not available); see Rockville Institute (2020) for more details about the demographic harmonization.
- Standard errors of total number of wildlife watchers: product-type statistics derived using model point estimates and standard errors of percent participation in the population (columns denoted by % Pop.) and survey standard error of total population based on adjusted 50-State Survey of FHWAR final and replicate weights.
- Standard errors of total number of away from home or around the home wildlife watchers: product-type statistics derived using point estimates and standard errors of total number of wildlife watchers and point estimates and standard errors of percent away from home or around the home wildlife watchers in all wildlife watchers (columns denoted by % Pop. in Table 35).

- Standard errors of total population, wildlife watchers, away from home, around the home, by demographics: product-type statistics, derived using point estimates and standard errors of total population, wildlife watchers, away from home, around the home participation and point estimates and standard errors of percent demographic-specific participation in total participation (columns denoted by %).
- Standard errors of percent demographic-specific population, wildlife watchers, away from home, around the home participation in total participation (columns denoted by %): composite statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey.
- Standard errors of percent demographic-specific wildlife watchers in the total demographic-specific population (column denoted by % Pop.): ratio-type statistics, derived using point estimates and standard errors of total demographic-specific wildlife watchers participation and point estimates and standard errors of total demographic-specific population.
- Standard errors of percent total and demographic-specific away from home and around the home participation in the total and demographic-specific population (columns denoted by % Pop.): ratio-type statistics, derived using point estimates and standard errors of total population and away from home and around the home participation, respectively.

Table 33

Wildlife watching, spenders and expenditures — three versions for all wildlife watchers, away from home wildlife watchers, and around the home wildlife watchers

- Standard errors of total wildlife watching expenditure (all and subcategories) amount: product-type statistics derived using point estimates and standard errors of total number of wildlife watching (all and subcategories) participants and point estimates and standard errors of expenditure amount per participant (columns denoted by Average Per Wildlife Watcher).

- Standard errors or expenditure amount per participant (columns denoted by Average Per Wildlife Watcher) and expenditure amount per spender (columns denoted by Average Per Spender): statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey only.
- Standard errors of total wildlife watching (all and subcategories) number of spenders: product-type statistics derived using point estimates and standard errors of total number of wildlife watching (all and subcategories) participants and point estimates and standard errors of the percent spenders in total participation (columns denoted by Percent of Wildlife Watchers).
- Standard errors of percent spenders in total participation (columns denoted by Percent of Wildlife Watchers): statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey only.

Table 35

Wildlife watchers participating in fishing and hunting

- Standard errors of total number of wildlife watchers: product-type statistics derived using model point estimates and standard errors of percent participation in the population (columns denoted by % Pop. in Table 30) and survey point estimates and standard errors of total population based on adjusted 50-State Survey of FHWAR final and replicate weights (displayed in Table 30).
- Standard errors of total number of away from home or around the home wildlife watchers: product-type statistics derived using point estimates and standard errors of total number of wildlife watchers and point estimates and standard errors of percent away from home or around the home wildlife watchers in all wildlife watchers (columns not displayed).
- Standard errors of total number of wildlife watchers, away from home, around the home who did not fish

or hunt, fished or hunted, fished, hunted: product-type statistics, derived using point estimates and standard errors of total number of wildlife watchers and point estimates and standard errors of percent sportsperson-specific category in the corresponding total participation (columns denoted by %).

- Standard errors or percent sportsperson-specific category in the corresponding total participation (columns denoted by %): statistics constructed using full adjusted 50-State Survey of FHWAR final and replicate weights, using data from the wildlife watching survey.

Table 36

Sportspersons participating in wildlife watching

- Standard errors of total number of sportspersons: ratio-type statistics derived using point estimates and standard errors of total number of anglers and point estimates and standard errors of percent anglers in sportspersons (not displayed).
- Standard errors of total number of anglers or total number of hunters: product-type statistics derived using model point estimates and standard errors of percent participation in the population (columns denoted by % Pop. in Table 15) and survey point estimates and standard errors of total population based on adjusted 50-State Survey of FHWAR weights (displayed in Table 15).
- Standard errors of total number of sportspersons, anglers, or hunters who did not wildlife watch, wildlife watch, wildlife watch away from home, wildlife watch around the home: product-type statistics, derived using point estimates and standard errors of total number of sportspersons, anglers, or hunters and point estimates and standard errors of percent wildlife watcher-specific category in the corresponding total participation (columns denoted by %).
- Standard errors of percent wildlife watcher-specific category in the corresponding total participation (columns denoted by %): composite statistics constructed using 3-way composite factors to adjusted 50-State Survey of FHWAR final and replicate weights, using data from the fishing, hunting, and wildlife watching surveys.

Table 5 SE Standard Errors of Oklahoma Resident Anglers and Hunters, Days of Participation and Trips in the United States,
by Type of Fishing and Hunting: 2016
(Population 16 years and older. Numbers in thousands)

	PARTICIPANTS		DAYS OF PARTICIPATION		TRIPS	
	#	%	#	%	#	%
ALL FISHING	89.94	0.00	4,382.87	0.00	3,384.26	0.00
All freshwater	89.94	0.00	4,377.36	0.40	3,382.15	0.20
Freshwater, except Great Lakes	89.94	0.00	4,377.36	0.40	3,382.15	0.20
Great Lakes	—	—	—	—	—	—
Saltwater	5.69	1.08	64.58	0.40	18.40	0.20
ALL HUNTING	45.49	0.00	1,140.58	0.00	1,106.71	0.00
Big game	38.92	7.81	541.46	13.96	381.78	11.35
Small game	24.69	8.52	365.94	6.01	355.14	6.80
Migratory birds	23.04	8.77	557.14	9.94	523.50	9.84
Other animals	15.88	6.78	217.91	6.13	204.75	6.54

— No sample data

Table 15 SE Standard Errors of Oklahoma Resident Anglers and Hunters, by Selected Characteristics: 2016
(State population 16 years and older. Numbers in thousands)

	POPULATION		SPORTSPERSONS			ANGLERS			HUNTERS		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
TOTAL	131.43	0.00	127.17	5.02	0.00	89.94	3.30	0.00	45.49	1.70	0.00
RESIDENCE DENSITY											
Urban	136.07	3.77	85.10	5.05	6.49	64.87	3.89	7.09	30.92	1.81	8.38
Rural	105.06	3.77	65.92	8.79	6.49	50.58	6.77	7.09	25.47	3.31	8.38
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	128.63	2.63	98.50	4.96	4.42	71.40	3.63	4.93	35.20	1.75	7.02
1,000,000 or more	123.56	4.28	60.75	6.77	6.49	46.58	5.19	6.98	20.42	2.19	7.85
250,000 to 999,999	110.59	4.11	49.52	6.99	5.75	41.00	5.83	6.29	22.31	3.08	8.21
50,000 to 249,999	100.17	3.75	30.29	13.43	4.27	25.85	11.21	4.70	7.42	3.18	3.26
Outside MSA	71.89	2.63	42.57	8.80	4.42	33.85	7.02	4.93	19.09	3.80	7.02
SEX											
Male	102.39	3.31	87.45	7.31	4.90	65.45	5.55	5.38	36.46	3.01	6.25
Female	113.96	3.31	54.45	4.32	4.90	40.70	3.24	5.38	16.65	1.29	6.25
AGE											
16 to 17 years	50.05	1.91	19.36	20.44	3.01	17.46	18.45	3.37	2.45	2.42	1.21
18 to 24 years	92.70	3.51	25.34	12.41	3.63	16.56	7.95	3.04	15.51	7.03	7.16
25 to 34 years	103.68	3.85	51.97	14.48	6.52	42.62	11.74	7.16	16.52	4.34	6.83
35 to 44 years	93.51	3.58	37.38	8.71	4.74	31.19	7.27	5.21	18.07	4.04	7.52
45 to 54 years	67.22	2.33	31.61	8.28	3.73	26.48	6.95	4.20	10.38	2.61	4.18
55 to 64 years	49.41	1.83	25.37	7.36	2.94	21.41	6.23	3.34	11.65	3.29	4.54
65 years and older	54.18	1.86	21.35	4.70	2.36	16.53	3.65	2.48	7.86	1.68	3.08
65 to 74 years	41.73	1.51	13.45	4.86	1.51	10.24	3.71	1.58	6.02	2.10	2.31
75 and older	37.12	1.37	12.40	7.55	1.76	10.75	6.51	1.95	3.28	1.87	1.58
ETHNICITY											
Hispanic	134.67	4.88	21.87	6.57	3.40	19.57	5.84	3.78	15.73	4.70	7.62
Non-Hispanic	133.65	4.88	123.10	5.72	3.40	87.57	4.11	3.78	43.53	2.00	7.62
RACE											
White	144.55	4.39	103.03	5.70	5.24	73.71	4.13	5.78	37.39	2.04	7.61
African American	106.98	3.98	27.12	9.51	3.97	24.04	8.48	4.43	8.03	2.64	3.79
All Others	76.60	2.90	27.95	9.66	3.44	23.02	8.01	3.74	14.12	4.61	5.78

(continued on next page)

Table 15 SE Standard Errors of Oklahoma Resident Anglers and Hunters, by Selected Characteristics: 2016 (continued)
(State population 16 years and older. Numbers in thousands)

(continued from previous page)

	POPULATION		SPORTSPERSONS			ANGLERS			HUNTERS		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
ANNUAL HOUSEHOLD INCOME											
Less than \$20,000	82.79	3.06	41.08	13.63	6.07	36.31	11.99	6.78	3.63	1.16	1.73
\$20,000 to \$29,999	68.54	2.62	27.52	13.67	3.84	20.24	10.00	3.63	11.22	5.16	5.16
\$30,000 to \$39,999	70.95	2.67	33.95	15.23	4.86	29.42	13.25	5.34	10.05	4.20	4.73
\$40,000 to \$49,999	82.76	3.17	26.90	13.29	3.92	23.40	11.57	4.31	6.39	3.04	2.93
\$50,000 to \$74,999	70.78	2.80	38.20	10.11	4.81	28.66	7.57	4.78	15.52	3.91	6.72
\$75,000 to \$99,999	57.15	2.23	17.15	8.64	2.40	12.61	6.34	2.26	8.40	3.93	3.93
\$100,000 to \$149,999	96.54	3.62	30.57	11.15	4.31	25.18	8.96	4.60	18.20	6.44	8.03
\$150,000 or more	50.96	1.98	29.41	19.67	3.99	25.23	16.94	4.40	17.32	10.94	7.58
Not reported	92.05	3.19	13.98	4.85	1.96	12.34	4.27	2.22	9.05	2.99	4.08
EDUCATION											
8 years or less	55.04	2.08	9.21	7.82	1.44	8.15	6.81	1.58	6.37	5.24	3.13
9 to 12 years	131.11	4.57	49.30	5.83	5.32	40.32	4.79	5.98	14.91	1.68	5.98
1 to 3 years of college	86.35	3.37	57.92	8.92	5.50	44.74	6.97	5.88	20.38	2.99	7.77
4 years or more of college	110.99	3.84	52.68	7.39	5.25	39.74	5.61	5.61	27.07	3.72	8.38

NOTE: Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population living in urban areas who fished, etc.). Columns labeled "% Pop." under Sportspeople, Anglers, and Hunters show the percentage of each column's participants who are described by the row heading (the percentage of anglers who lived in urban areas, etc.).

Table 22 SE Standard Errors of Expenditures by Oklahoma Residents for Fishing and Hunting Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER SPORTSPERSON (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)
FISHING AND HUNTING	1,053,877.42	1,480.85	1,583.81	134.37
Food and lodging	208,553.10	305.81	379.70	120.28
Transportation	123,325.20	178.18	228.83	116.78
Other trip costs ²	299,380.75	462.65	685.17	103.13
Equipment (fishing, hunting)	218,042.82	303.15	366.25	122.03
Auxiliary equipment ³	64,655.31	95.62	348.62	47.82
Special equipment ⁴	316,068.17	479.38	4,197.50	25.20
Magazines, books, and DVDs	622.81	0.84	10.81	35.75
Membership dues/contributions	11,658.41	17.62	81.79	42.99
Other ⁵	101,687.05	149.00	245.71	96.48
FISHING	870,522.34	1,617.28	1,687.75	87.03
Food and lodging	185,094.32	348.15	411.14	80.17
Transportation	106,861.01	200.40	239.85	80.16
Other trip costs ²	271,905.02	524.12	660.38	77.38
Fishing equipment	168,296.58	316.06	362.52	81.00
Auxiliary equipment ³	50,621.59	97.17	597.72	31.52
Special equipment ⁴	235,715.30	449.27	3,890.49	27.67
Magazines, books, and DVDs	331.89	0.62	2.92	14.83
Membership dues/contributions	4,009.18	7.72	59.89	28.74
Other ⁵	69,833.75	136.20	279.26	61.36
HUNTING	121,698.73	433.72	433.72	45.49
Food and lodging	17,997.44	73.99	89.76	38.60
Transportation	13,936.61	54.60	61.15	37.59
Other trip costs ²	14,821.27	72.47	187.79	26.99
Hunting equipment	58,123.81	241.84	278.96	40.50
Auxiliary equipment ³	16,601.90	76.26	144.54	30.19
Special equipment ⁴	4,761.23	22.57	403.78	8.59
Magazines, books, and DVDs	200.40	0.96	39.20	2.41
Membership dues/contributions	4,466.26	21.96	125.43	18.73
Other ⁵	45,055.63	203.98	205.56	45.18
UNSPECIFIED⁶	79,520.10	121.20	901.76	32.65

1 Average expenditures are annual estimates.

2 Includes boating costs, equipment rental, guide fees, access fees, heating and cooking fuel, and ice and bait (for fishing only).

3 Includes sleeping bags, packs, duffel bags, tents, binoculars and field glasses, special fishing and hunting clothing, foul weather gear, boots and waders, maintenance and repair of equipment, processing and taxidermy costs, and electronic equipment such as a GPS device.

4 Includes big-ticket items bought primarily for hunting and fishing, including 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.

5 Includes land leasing and ownership, licenses, stamps, tags, permits, and plantings (for hunting only).

6 Respondent could not specify whether expenditure was primarily for either fishing or hunting.

Table 28 SE Standard Errors of Oklahoma Resident Wildlife Watchers Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	PARTICIPANTS			DAYS OF PARTICIPATION		TRIPS	
	#	%	% Pop.	#	%	#	%
WILDLIFE WATCHERS	104.68	0.00	2.97	23,435.50	0.00	1,713.80	0.00
Away from home	79.53	7.00	2.97	3,708.85	3.20	1,825.27	0.00
Observe wildlife	77.81	6.92	2.90	2,383.14	1.99	x	x
Photograph wildlife	56.36	5.38	2.06	863.22	0.80	x	x
Feed wildlife	59.41	5.69	2.17	3,173.79	3.10	x	x
Around the home	102.42	2.64	4.23	21,641.76	3.20	x	x
Observe wildlife	98.52	7.75	3.77	16,392.66	5.16	x	x
Photograph wildlife	79.99	7.08	2.99	3,298.29	2.56	x	x
Feed wildlife	98.50	6.49	3.87	x	x	x	x
Visit parks or natural areas ¹	69.69	6.67	2.55	3,651.09	2.48	x	x
Maintain plantings or natural areas	46.09	4.40	1.69	x	x	x	x

x Not applicable

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

NOTE: Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population who observed wildlife away from home, etc.). Columns labeled "%" show the percentage of each column's participants who are described by the row heading (the percentage of wildlife watchers who observed wildlife away from home, etc.).

Table 30 SE Standard Errors of Oklahoma Resident Wildlife Watchers, by Selected Characteristics: 2016
(State population 16 years and older. Numbers in thousands)

	POPULATION		TOTAL			AWAY FROM HOME			AROUND THE HOME		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
TOTAL	183.05	0.00	104.68	2.97	0.00	79.53	2.97	0.00	102.42	4.23	0.00
RESIDENCE DENSITY											
Urban	238.42	6.14	96.10	6.23	6.75	63.04	3.40	12.33	95.08	6.19	6.68
Rural	167.96	6.14	73.75	12.09	6.75	59.85	8.65	12.33	67.98	10.72	6.68
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	198.69	3.99	93.53	5.08	3.46	65.94	3.06	8.21	92.20	4.95	3.61
1,000,000 or more	195.66	5.80	87.52	8.63	7.71	48.04	3.96	11.59	86.07	8.38	8.02
250,000 to 999,999	133.23	4.53	69.43	13.66	6.52	51.22	8.96	11.39	65.52	12.87	6.46
50,000 to 249,999	97.74	3.51	42.05	13.43	4.14	28.03	8.13	6.76	42.30	13.48	4.38
Outside MSA	112.12	3.99	37.71	10.29	3.46	37.81	8.78	8.21	36.90	9.76	3.61
SEX											
Male	153.65	4.93	80.63	7.01	6.51	57.73	4.51	10.74	76.60	6.54	6.66
Female	177.01	4.93	83.21	7.25	6.51	56.17	4.24	10.74	82.93	7.23	6.66
AGE											
16 to 17 years	—	—	—	—	—	—	—	—	—	—	—
18 to 24 years	155.86	5.44	32.80	9.76	3.36	33.13	9.84	8.42	32.86	9.78	3.55
25 to 34 years	187.77	6.48	77.65	22.28	7.82	15.28	3.58	3.95	77.58	22.26	8.24
35 to 44 years	110.95	4.16	52.20	14.11	5.12	44.83	12.21	9.31	49.48	12.44	5.22
45 to 54 years	101.38	3.46	48.58	16.47	4.66	32.91	9.80	7.54	48.49	16.45	4.88
55 to 64 years	95.71	3.22	50.60	12.07	4.56	22.70	4.58	5.21	51.05	12.14	4.82
65 years and older	92.32	3.08	49.48	10.41	4.50	23.35	4.37	5.14	49.24	10.21	4.75
65 to 74 years	83.96	2.89	42.62	14.04	4.04	13.81	3.95	3.24	43.27	14.08	4.33
75 and older	50.04	1.75	18.81	12.85	1.82	15.26	9.03	3.63	16.56	11.22	1.69
ETHNICITY											
Hispanic	79.71	2.85	20.86	19.21	2.10	15.43	12.71	3.84	20.91	19.24	2.22
Non-Hispanic	195.17	2.85	102.14	4.64	2.10	75.86	3.03	3.84	99.78	4.49	2.22
RACE											
White	196.68	6.21	110.05	6.20	7.67	75.15	3.88	6.76	109.01	6.12	7.85
African American	148.40	5.07	73.65	33.07	7.49	—	—	—	73.59	33.06	7.89
All Others	127.03	4.56	37.34	11.72	3.70	27.14	7.41	6.76	26.76	8.15	2.82

(continued on next page)

Table 30 SE Standard Errors of Oklahoma Resident Wildlife Watchers, by Selected Characteristics: 2016 (continued)
(State population 16 years and older. Numbers in thousands)

(continued from previous page)

	POPULATION		TOTAL			AWAY FROM HOME			AROUND THE HOME		
	Total	%	Total	% Pop.	%	Total	% Pop.	%	Total	% Pop.	%
ANNUAL HOUSEHOLD INCOME											
Less than \$20,000	161.38	5.41	72.20	19.17	7.18	17.78	4.34	4.27	72.29	18.70	7.61
\$20,000 to \$29,999	48.24	1.74	26.25	27.37	2.61	12.88	12.39	3.07	26.37	27.44	2.76
\$30,000 to \$39,999	92.92	3.35	35.02	19.88	3.51	29.79	15.36	7.34	24.38	14.13	2.57
\$40,000 to \$49,999	62.04	2.29	23.91	22.55	2.42	22.49	18.40	5.78	23.97	22.58	2.56
\$50,000 to \$74,999	155.47	5.33	66.77	13.49	6.43	40.93	6.90	10.15	67.20	13.49	6.82
\$75,000 to \$99,999	83.69	3.02	41.52	24.67	4.14	36.59	18.45	9.17	36.21	22.12	3.78
\$100,000 to \$149,999	119.45	4.30	50.96	23.87	5.14	43.31	18.36	10.86	50.88	23.85	5.41
\$150,000 or more	185.75	6.52	32.84	11.65	3.35	4.16	1.30	1.08	32.70	11.62	3.52
Not reported	97.09	3.24	46.09	19.50	4.55	32.23	11.85	7.90	45.09	18.71	4.71
EDUCATION											
8 years or less	51.50	1.82	23.36	38.19	2.40	23.45	36.52	6.06	23.38	38.22	2.53
9 to 12 years	178.76	6.35	73.68	11.97	6.81	51.65	7.03	11.85	72.33	11.51	7.09
1 to 3 years of college	223.16	7.61	71.60	8.95	6.78	54.71	6.10	12.23	71.64	8.92	7.13
4 years or more of college	175.43	5.69	85.03	12.97	7.73	37.43	4.85	8.25	84.10	12.45	8.16

— No sample data

NOTE: Percent population (% Pop.) columns show the percentage of each row's population who participated in the activity named by the column (the percentage of the population living in urban areas who participated, etc.). Columns labeled "% under TOTAL, Away From Home, and Around the Home show the percentage of each column's participants who are described by the row heading (the percentage of those who lived in urban areas, etc.).

Table 33A SE Standard Errors of Expenditures by Oklahoma Residents for All Wildlife Watching Both In and Out of Oklahoma: 2016
(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	292,023.25	283.88	363.67	110.23	8.21
TRIP-RELATED EXPENDITURES	196,745.38	197.40	495.12	79.11	7.17
Food and lodging	101,129.66	101.18	274.91	74.87	6.86
Food	31,579.40	31.16	80.12	74.34	6.82
Lodging	79,628.07	80.62	339.99	54.41	5.44
Transportation	70,321.68	70.83	195.66	73.92	6.83
Other trip costs ²	33,950.26	34.51	247.15	46.75	4.69
EQUIPMENT AND OTHER EXPENDITURES	158,245.72	154.43	251.58	103.12	8.52
Wildlife-watching equipment	53,152.39	49.68	72.12	102.44	8.48
Binoculars, spotting scopes	18,140.81	18.20	80.19	52.13	5.01
Film and photo processing	1,288.81	1.31	21.73	14.88	1.50
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	15,919.19	15.94	115.57	36.12	3.45
Day packs, carrying cases, and special clothing	9,380.52	9.27	67.56	42.63	4.22
Bird food	16,230.09	15.14	29.01	88.52	7.70
Food for other wildlife	10,643.97	10.83	60.89	55.62	5.42
Nest boxes, bird houses, bird feeders, and bird baths	10,206.08	10.22	25.27	71.67	6.55
Other equipment (including field guides)	414.82	0.42	8.58	16.15	1.64
Auxiliary equipment ³	18,704.80	19.03	270.49	30.35	3.03
Special equipment ⁴	138,041.09	140.71	3,125.03	19.34	1.93
Magazines, books, and DVDs	1,702.78	1.70	7.49	48.64	4.86
Membership dues and contributions	3,463.18	3.48	28.14	27.27	2.66
Land leasing and ownership	1,533.14	1.56	92.61	4.61	0.47
Plantings	8,846.54	8.90	45.08	34.62	3.41

¹ Average expenditures are annual estimates.

² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.

³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.

⁴ 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.

Table 33B SE Standard Errors of Expenditures by Oklahoma Residents for Away-from-home Wildlife Watching
Both In and Out of Oklahoma: 2016

(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	215,194.90	439.45	443.04	76.88	5.42
TRIP-RELATED EXPENDITURES	196,872.21	400.80	401.94	76.88	5.42
Food and lodging	102,117.80	209.86	210.65	76.03	7.68
Food	39,386.15	86.84	103.70	75.04	7.70
Lodging	86,572.59	198.98	220.06	75.17	12.61
Transportation	101,427.58	232.38	241.02	76.88	5.42
Other trip costs ²	35,322.92	88.48	407.95	64.09	15.72
EQUIPMENT AND OTHER EXPENDITURES	27,934.17	67.65	151.38	83.25	19.41
Wildlife-watching equipment	20,856.73	50.78	90.86	83.25	19.41
Binoculars, spotting scopes	8,352.21	21.61	0.00	16.70	4.32
Film and photo processing	—	—	—	—	—
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	8,352.21	21.61	0.00	16.70	4.32
Day packs, carrying cases, and special clothing	4,972.05	12.86	0.00	24.86	6.43
Bird food	3,369.65	8.28	20.05	84.51	20.73
Food for other wildlife	2,007.82	5.11	11.40	85.41	21.17
Nest boxes, bird houses, bird feeders, and bird baths	10,442.32	26.99	0.00	83.54	21.59
Other equipment (including field guides)	332.46	0.85	1.87	27.56	7.02
Auxiliary equipment ³	14,916.11	38.58	0.00	24.86	6.43
Special equipment ⁴	—	—	—	—	—
Magazines, books, and DVDs	—	—	—	—	—
Membership dues and contributions	919.15	2.38	0.00	12.25	3.17
Land leasing and ownership	—	—	—	—	—
Plantings	—	—	—	—	—

— No sample data

¹ Average expenditures are annual estimates.

² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.

³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.

⁴ 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.

Table 33C SE Standard Errors of Expenditures by Oklahoma Residents for Around-the-home Wildlife Watching
Both In and Out of Oklahoma: 2016

(State population 16 years and older. Numbers in thousands)

	AMOUNT (thousands of \$)	AVERAGE PER WILDLIFE WATCHER (\$) ¹	AVERAGE PER SPENDER (\$) ¹	NUMBER OF SPENDERS (thousands)	PERCENT OF WILDLIFE WATCHERS
ALL EXPENDITURES	164,548.69	175.79	303.73	113.46	10.74
TRIP-RELATED EXPENDITURES	x	x	x	x	x
Food and lodging	x	x	x	x	x
Food	x	x	x	x	x
Lodging	x	x	x	x	x
Transportation	x	x	x	x	x
Other trip costs ²	x	x	x	x	x
EQUIPMENT AND OTHER EXPENDITURES	164,548.69	175.79	303.73	113.46	10.74
Wildlife-watching equipment	39,774.26	40.89	56.69	112.13	10.64
Binoculars, spotting scopes	22,631.30	24.36	122.97	68.04	7.20
Film and photo processing	215.93	0.23	0.00	10.79	1.16
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	2,927.73	3.12	51.58	18.37	1.96
Day packs, carrying cases, and special clothing	6,431.75	6.93	58.00	53.38	5.76
Bird food	19,804.82	20.39	35.76	103.87	9.98
Food for other wildlife	1,324.94	1.42	17.08	26.21	2.76
Nest boxes, bird houses, bird feeders, and bird baths	2,940.53	2.98	8.26	68.60	6.98
Other equipment (including field guides)	—	—	—	—	—
Auxiliary equipment ³	2,899.69	3.12	36.40	20.23	2.17
Special equipment ⁴	155,230.97	168.39	13,799.22	15.61	1.68
Magazines, books, and DVDs	1,322.67	1.41	8.35	46.02	4.91
Membership dues and contributions	4,253.02	4.61	78.61	28.95	3.10
Land leasing and ownership	—	—	—	—	—
Plantings	12,999.44	13.98	69.56	47.16	5.04

— No sample data x Not applicable

¹ Average expenditures are annual estimates.

² Includes equipment rental and fees for guides, pack trips, public land use and private land use, boat fuel, other boating costs, and heating and cooking fuel.

³ Includes tents, tarps, frame packs and other backpacking equipment, other camping equipment, and other auxiliary equipment.

⁴ 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.

Table 35 SE Standard Errors of Oklahoma Resident Wildlife Watchers Participating in Fishing or Hunting: 2016
(State population 16 years and older. Numbers in thousands)

	TOTAL		AWAY FROM HOME		AROUND THE HOME	
	#	%	#	%	#	%
ALL WILDLIFE WATCHERS	104.68	0.00	79.53	0.00	102.42	0.00
Did not fish or hunt	95.99	6.48	61.07	10.56	95.20	6.56
Fished or hunted	70.46	6.48	52.17	10.56	66.58	6.56
Fished	59.40	5.54	48.92	10.26	56.21	5.64
Hunted	53.41	5.28	29.12	7.02	52.51	5.48

Table 36 SE Standard Errors of Oklahoma Resident Sportspersons Participating in Wildlife Watching: 2016
(State population 16 years and older. Numbers in thousands)

	SPORTSPERSONS		ANGLERS		HUNTERS	
	#	%	#	%	#	%
ALL SPORTSPERSONS	127.17	0.00	89.94	0.00	45.49	0.00
Did not watch wildlife	55.52	7.14	27.78	4.21	30.05	13.30
Watched wildlife	103.60	7.14	75.03	4.21	40.50	13.30
Away from home	70.82	6.62	54.83	6.22	27.26	10.30
Around the home	94.44	6.92	70.27	5.65	37.63	12.46

