



NORTH CAROLINA

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 North Carolina 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	1,124	100	23,223	100	15,016	100
All freshwater	862	77	17,444	75	12,590	84
Freshwater, except Great Lakes	849	76	17,416	75	12,561	84
Great Lakes	14	1	27	0	27	0
Saltwater	517	46	5,779	25	2,426	16
ALL HUNTING	315	100	7,937	100	6,780	100
Big game	238	75	5,569	70	3,706	55
Small game	161	51	2,963	37	2,422	36
Migratory birds	75	24	591	7	520	8
Other animals	27	9	198	2	133	2

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

Table 15 North Carolina 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	8,387	100	1,253	15	100	1,124	13	100	315	4	100
RESIDENCE DENSITY											
Urban	6,213	74	851	14	68	772	12	69	197	3	62
Rural	2,175	26	402	18	32	352	16	31	118	5	38
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	7,809	93	1,193	15	95	1,084	14	97	285	4	91
1,000,000 or more	2,697	32	433	16	35	385	14	34	80	3	25
250,000 to 999,999	3,672	44	424	12	34	402	11	36	100	3	32
50,000 to 249,999	1,441	17	336	23	27	297	21	26	105	7	33
Outside MSA	578	7	60	10	5	39	7	3	30	5	9
SEX											
Male	3,739	45	774	21	62	705	19	63	209	6	66
Female	4,648	55	479	10	38	418	9	37	105	2	34
AGE											
16 to 17 years	296	4	81	27	6	75	25	7	3	1	1
18 to 24 years	973	12	65	7	5	63	6	6	17	2	5
25 to 34 years	1,163	14	182	16	15	158	14	14	48	4	15
35 to 44 years	1,407	17	261	19	21	245	17	22	96	7	31
45 to 54 years	1,501	18	184	12	15	150	10	13	58	4	18
55 to 64 years	1,633	19	324	20	26	293	18	26	51	3	16
65 years and older	1,414	17	157	11	12	138	10	12	42	3	13
65 to 74 years	950	11	130	14	10	113	12	10	41	4	13
75 and older	464	6	27	6	2	26	6	2	1	0	0
ETHNICITY											
Hispanic	586	7	22	4	2	21	4	2	—	—	—
Non-Hispanic	7,802	93	1,231	16	98	1,102	14	98	315	4	100
RACE											
White	5,570	66	1,109	20	88	983	18	88	282	5	90
African American	2,145	26	64	3	5	63	3	6	33	2	10
All Others	673	8	80	12	6	78	12	7	—	—	—

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Table 15 North Carolina 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	992	12	81	8	6	76	8	7	32	3	10
\$20,000 to \$29,999	715	9	65	9	5	55	8	5	13	2	4
\$30,000 to \$39,999	638	8	116	18	9	77	12	7	45	7	14
\$40,000 to \$49,999	606	7	128	21	10	119	20	11	51	8	16
\$50,000 to \$74,999	909	11	137	15	11	132	14	12	32	4	10
\$75,000 to \$99,999	911	11	146	16	12	128	14	11	48	5	15
\$100,000 to \$149,999	528	6	78	15	6	76	14	7	25	5	8
\$150,000 or more	935	11	230	25	18	221	24	20	21	2	7
Not reported	2,153	26	272	13	22	239	11	21	48	2	15
EDUCATION											
8 years or less	437	5	4	1	0	4	1	0	—	—	—
9 to 12 years	2,645	32	494	19	39	420	16	37	122	5	39
1 to 3 years of college	2,079	25	244	12	19	224	11	20	72	3	23
4 years or more of college	3,226	38	511	16	41	476	15	42	121	4	38

— No sample data

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 North Carolina Residents for Fishing and Hunting Both In and Out of North Carolina: 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	3,349,768	2,674	2,824	1,186
Food and lodging	671,142	536	672	998
Transportation	313,841	251	335	937
Other trip costs ²	477,936	382	522	916
Equipment (fishing, hunting)	838,194	669	916	915
Auxiliary equipment ³	123,485	99	390	316
Special equipment ⁴	313,011	250	4,897	64
Magazines, books, and DVDs	7,717	6	123	63
Membership dues/contributions	16,988	14	115	148
Other ⁵	587,453	469	785	748
FISHING	1,837,904	1,636	1,680	1,094
Food and lodging	625,673	557	640	977
Transportation	237,970	212	262	909
Other trip costs ²	452,230	403	466	970
Fishing equipment	329,133	293	384	857
Auxiliary equipment ³	49,715	44	349	142
Special equipment ⁴	50,874	45	5,982	9
Magazines, books, and DVDs	4,584	4	119	39
Membership dues/contributions	13,371	12	99	135
Other ⁵	74,354	66	120	617
HUNTING	1,064,725	3,382	3,401	313
Food and lodging	65,353	208	311	210
Transportation	63,575	202	290	219
Other trip costs ²	42,095	134	435	97
Hunting equipment	370,553	1,177	1,489	249
Auxiliary equipment ³	40,131	127	289	139
Special equipment ⁴	107,009	340	8,393	13
Magazines, books, and DVDs	2,473	8	80	31
Membership dues/contributions	2,235	7	90	25
Other ⁵	371,300	1,179	1,254	296
UNSPECIFIED ⁶	137,871	110	1,237	111

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

	PARTICIPANTS			DAYS OF PARTICIPATION		TRIPS	
	#	%	% Pop.	#	%	#	%
WILDLIFE WATCHERS	2,914	100	35	157,919	100	13,100	100
Away from home	1,007	35	12	20,736	13	13,101	100
Observe wildlife	973	33	12	19,370	12	x	x
Photograph wildlife	412	14	5	2,334	1	x	x
Feed wildlife	269	9	3	9,934	6	x	x
Around the home	2,835	97	34	137,181	87	x	x
Observe wildlife	2,103	72	25	113,909	72	x	x
Photograph wildlife	913	31	11	10,039	6	x	x
Feed wildlife	1,726	59	21	x	x	x	x
Visit parks or natural areas ¹	791	27	9	13,233	8	x	x
Maintain plantings or natural areas	488	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 North Carolina 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	8,369	100	2,914	35	100	1,007	12	100	2,835	34	100
RESIDENCE DENSITY											
Urban	6,595	79	2,256	34	77	813	12	81	2,189	33	77
Rural	1,774	21	658	37	23	194	11	19	646	36	23
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	7,202	86	2,308	32	79	947	13	94	2,229	31	79
1,000,000 or more	3,271	39	1,033	32	35	518	16	51	996	30	35
250,000 to 999,999	2,173	26	667	31	23	238	11	24	631	29	22
50,000 to 249,999	1,758	21	608	35	21	191	11	19	602	34	21
Outside MSA	1,167	14	605	52	21	59	5	6	605	52	21
SEX											
Male	4,306	51	1,547	36	53	529	12	53	1,511	35	53
Female	4,063	49	1,367	34	47	478	12	47	1,324	33	47
AGE											
16 to 17 years	143	2	41	29	1	41	29	4	41	29	1
18 to 24 years	771	9	249	32	9	183	24	18	249	32	9
25 to 34 years	2,084	25	690	33	24	128	6	13	672	32	24
35 to 44 years	1,473	18	418	28	14	252	17	25	406	28	14
45 to 54 years	1,047	13	435	42	15	136	13	14	405	39	14
55 to 64 years	932	11	430	46	15	178	19	18	411	44	15
65 years and older	1,919	23	650	34	22	89	5	9	650	34	23
65 to 74 years	972	12	383	39	13	61	6	6	383	39	14
75 and older	947	11	267	28	9	28	3	3	267	28	9
ETHNICITY											
Hispanic	1,336	16	181	14	6	149	11	15	181	14	6
Non-Hispanic	7,033	84	2,733	39	94	858	12	85	2,654	38	94
RACE											
White	5,430	65	2,249	41	77	625	12	62	2,231	41	79
African American	1,493	18	330	22	11	148	10	15	286	19	10
All Others	1,445	17	335	23	11	234	16	23	317	22	11

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Table 30 North Carolina 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	707	8	380	54	13	177	25	18	380	54	13
\$20,000 to \$29,999	639	8	124	19	4	2	0	0	124	19	4
\$30,000 to \$39,999	566	7	239	42	8	141	25	14	226	40	8
\$40,000 to \$49,999	439	5	130	30	4	68	16	7	130	30	5
\$50,000 to \$74,999	838	10	356	42	12	145	17	14	356	42	13
\$75,000 to \$99,999	951	11	157	17	5	67	7	7	134	14	5
\$100,000 to \$149,999	937	11	318	34	11	227	24	23	275	29	10
\$150,000 or more	381	5	206	54	7	115	30	11	206	54	7
Not reported	2,910	35	1,004	34	34	66	2	7	1,004	34	35
EDUCATION											
8 years or less	326	4	57	18	2	—	—	—	57	18	2
9 to 12 years	2,589	31	990	38	34	144	6	14	990	38	35
1 to 3 years of college	2,154	26	782	36	27	389	18	39	762	35	27
4 years or more of college	3,299	39	1,084	33	37	474	14	47	1,025	31	36

— 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 North Carolina Residents for All Wildlife Watching Both In and Out of North Carolina: 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	2,181,238	749	1,100	1,983	68
TRIP-RELATED EXPENDITURES	637,858	219	726	878	30
Food and lodging	353,931	121	428	827	28
Food	207,518	71	251	827	28
Lodging	146,413	50	540	271	9
Transportation	134,734	46	186	725	25
Other trip costs ²	149,193	51	289	517	18
EQUIPMENT AND OTHER EXPENDITURES	1,543,377	530	877	1,759	60
Wildlife-watching equipment	557,003	191	333	1,674	57
Binoculars, spotting scopes	27,189	9	150	181	6
Film and photo processing	3,931	1	28	140	5
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	133,936	46	408	328	11
Day packs, carrying cases, and special clothing	49,462	17	190	260	9
Bird food	173,870	60	141	1,237	42
Food for other wildlife	69,407	24	126	550	19
Nest boxes, bird houses, bird feeders, and bird baths	97,843	34	138	708	24
Other equipment (including field guides)	1,367	0	17	79	3
Auxiliary equipment ³	139,306	48	813	171	6
Special equipment ⁴	695,703	239	14,160	49	2
Magazines, books, and DVDs	6,463	2	39	167	6
Membership dues and contributions	50,560	17	129	393	13
Land leasing and ownership	36,982	13	3,284	11	0
Plantings	57,364	20	210	273	9

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 North Carolina Residents for Away-from-home Wildlife Watching Both In and Out of North Carolina: 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	585,397	581	911	642	64
TRIP-RELATED EXPENDITURES	520,017	517	824	631	63
Food and lodging	257,270	256	408	631	63
Food	108,537	108	172	631	63
Lodging	148,733	148	610	244	24
Transportation	123,917	123	222	559	56
Other trip costs ²	138,830	138	371	374	37
EQUIPMENT AND OTHER EXPENDITURES	65,380	65	615	106	11
Wildlife-watching equipment	63,418	63	597	106	11
Binoculars, spotting scopes	93	0	10	9	1
Film and photo processing	—	—	—	—	—
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	17,142	17	250	69	7
Day packs, carrying cases, and special clothing	17,424	17	215	81	8
Bird food	14,871	15	176	85	8
Food for other wildlife	13,715	14	200	69	7
Nest boxes, bird houses, bird feeders, and bird baths	97	0	20	5	0
Other equipment (including field guides)	78	0	16	5	0
Auxiliary equipment ³	725	1	150	5	0
Special equipment ⁴	—	—	—	—	—
Magazines, books, and DVDs	—	—	—	—	—
Membership dues and contributions	1,236	1	100	12	1
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 North Carolina Residents for Around-the-home Wildlife Watching Both In and Out of North Carolina: 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	1,522,924	537	1,048	1,453	51
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	1,522,924	537	1,048	1,453	51
Wildlife-watching equipment	339,516	120	247	1,376	49
Binoculars, spotting scopes	24,215	9	138	176	6
Film and photo processing	4,465	2	25	178	6
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	14,318	5	144	99	3
Day packs, carrying cases, and special clothing	18,369	6	150	122	4
Bird food	133,138	47	114	1,171	41
Food for other wildlife	51,454	18	111	462	16
Nest boxes, bird houses, bird feeders, and bird baths	92,850	33	150	621	22
Other equipment (including field guides)	706	0	31	23	1
Auxiliary equipment ³	26,287	9	292	90	3
Special equipment ⁴	1,003,053	354	15,123	66	2
Magazines, books, and DVDs	4,598	2	29	161	6
Membership dues and contributions	30,134	11	107	282	10
Land leasing and ownership	52,412	18	4,632	11	0
Plantings	66,924	24	257	260	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 North Carolina 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	2,914	100	1,007	100	2,835	100
Did not fish or hunt	2,271	78	729	72	2,223	78
Fished or hunted	642	22	278	28	612	22
Fished	535	18	242	24	535	19
Hunted	227	8	111	11	197	7

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

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

	SPORTSPERSONS		ANGLERS		HUNTERS	
	#	%	#	%	#	%
ALL SPORTSPERSONS	1,253	100	1,124	100	315	100
Did not watch wildlife	366	29	363	32	43	14
Watched wildlife	884	71	759	68	272	86
Away from home	471	38	396	35	178	57
Around the home	829	66	737	66	230	73

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 North Carolina 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	209.81	0.00	6,331.95	0.00	4,319.71	0.00
All freshwater	179.46	7.18	4,902.27	6.65	3,865.11	4.82
Freshwater, except Great Lakes	177.53	7.25	4,891.54	6.64	3,853.83	4.84
Great Lakes	14.32	1.28	28.63	0.13	28.63	0.20
Saltwater	132.45	8.21	2,100.47	6.65	841.80	4.82
ALL HUNTING	83.14	0.00	2,474.98	0.00	2,216.75	0.00
Big game	70.01	10.22	1,838.69	14.96	1,450.00	16.10
Small game	54.79	11.37	1,428.35	14.36	1,335.01	16.82
Migratory birds	32.69	8.55	375.19	4.00	307.21	3.81
Other animals	16.06	4.73	134.62	1.45	90.27	1.26

Table 15 SE Standard Errors of North Carolina 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	372.52	0.00	238.21	2.92	0.00	209.81	2.43	0.00	83.14	0.98	0.00
RESIDENCE DENSITY											
Urban	432.44	3.91	178.06	3.02	6.04	160.01	2.72	6.30	59.25	0.98	9.41
Rural	336.79	3.91	106.60	5.68	6.04	95.64	5.06	6.30	42.32	2.12	9.41
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	396.83	1.66	227.99	3.02	1.87	202.82	2.69	1.07	77.46	1.01	6.04
1,000,000 or more	379.89	4.36	119.09	4.96	6.99	109.51	4.53	7.49	31.02	1.22	7.48
250,000 to 999,999	506.10	5.24	109.30	3.37	6.01	103.76	3.20	6.49	35.48	1.04	7.78
50,000 to 249,999	224.19	2.86	92.32	7.37	5.42	84.19	6.67	5.73	39.01	2.94	9.05
Outside MSA	136.32	1.66	25.65	5.07	1.87	13.94	2.90	1.07	19.96	3.66	6.04
SEX											
Male	286.18	3.17	164.47	4.68	5.97	148.66	4.23	6.25	61.46	1.70	8.84
Female	362.97	3.17	117.00	2.64	5.97	104.22	2.35	6.25	38.69	0.85	8.84
AGE											
16 to 17 years	133.44	1.59	71.61	27.16	5.69	70.08	26.33	6.22	3.65	1.34	1.17
18 to 24 years	302.16	3.46	27.07	3.46	1.96	26.20	3.36	2.12	11.46	1.30	3.47
25 to 34 years	339.26	4.07	69.22	7.51	4.87	64.67	6.84	5.21	23.90	2.38	6.66
35 to 44 years	259.05	2.95	78.97	6.57	5.00	75.43	6.25	5.43	36.45	2.88	8.59
45 to 54 years	187.86	2.41	51.51	3.76	3.08	43.42	3.15	3.00	26.84	1.85	7.27
55 to 64 years	270.92	2.94	85.96	6.21	4.88	78.21	5.64	5.06	25.70	1.66	7.24
65 years and older	147.36	1.86	44.30	3.34	2.67	40.68	3.05	2.85	21.19	1.53	5.96
65 to 74 years	114.78	1.46	38.52	4.37	2.41	35.08	3.96	2.54	21.08	2.28	5.96
75 and older	109.93	1.31	11.38	2.81	0.83	11.01	2.71	0.90	0.81	0.18	0.26
ETHNICITY											
Hispanic	178.08	2.10	18.63	3.38	1.48	18.17	3.29	1.61	—	—	—
Non-Hispanic	385.80	2.10	234.77	3.11	1.48	206.60	2.74	1.61	83.14	1.08	0.00
RACE											
White	448.90	5.90	216.06	4.20	3.85	189.37	3.69	4.21	76.89	1.44	6.20
African American	565.17	6.22	28.95	1.56	2.13	28.23	1.53	2.33	20.68	1.04	6.20
All Others	186.36	2.24	44.37	7.36	3.39	43.31	7.18	3.70	—	—	—

(continued on next page)

Table 15 SE Standard Errors of North Carolina 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	278.95	3.23	31.00	3.87	2.19	29.92	3.71	2.38	20.27	2.24	6.06
\$20,000 to \$29,999	382.08	4.54	40.54	7.46	3.14	38.64	6.80	3.37	8.57	1.55	2.58
\$30,000 to \$39,999	149.56	1.86	43.16	7.99	3.02	30.35	5.53	2.42	26.30	4.43	7.74
\$40,000 to \$49,999	182.45	2.19	46.77	10.01	3.25	44.61	9.44	3.50	24.75	4.81	6.84
\$50,000 to \$74,999	170.52	2.18	49.17	6.11	3.39	47.55	5.90	3.69	16.45	1.93	4.64
\$75,000 to \$99,999	177.72	2.17	60.90	7.38	4.41	57.70	6.90	4.76	22.63	2.69	6.18
\$100,000 to \$149,999	103.64	1.33	34.17	7.09	2.50	33.42	6.93	2.74	16.06	3.17	4.84
\$150,000 or more	247.70	3.01	94.29	12.01	6.79	90.63	11.54	7.31	16.57	1.87	5.13
Not reported	473.46	5.09	90.91	5.05	6.08	84.84	4.64	6.53	26.09	1.31	7.52
EDUCATION											
8 years or less	107.68	1.33	3.34	0.80	0.26	3.26	0.78	0.29	—	—	—
9 to 12 years	467.79	5.18	120.49	5.63	6.14	108.12	4.96	6.74	42.48	1.80	9.13
1 to 3 years of college	305.69	3.52	65.86	3.61	3.80	61.01	3.33	4.03	27.93	1.44	6.74
4 years or more of college	358.62	4.15	118.24	4.07	5.48	110.13	3.79	5.90	42.89	1.39	9.43

— 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 fished, etc.). Columns labeled "%" 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 North Carolina Residents for Fishing and Hunting Both In and Out of North Carolina: 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	944,276.72	566.80	565.18	254.56
Food and lodging	203,086.78	128.46	141.48	224.15
Transportation	84,894.43	49.09	60.44	211.77
Other trip costs ²	133,017.07	78.98	88.92	210.97
Equipment (fishing, hunting)	379,121.61	279.72	382.80	203.09
Auxiliary equipment ³	44,725.63	30.95	112.91	91.00
Special equipment ⁴	176,256.26	134.91	3,036.35	26.37
Magazines, books, and DVDs	4,494.94	3.45	50.51	27.45
Membership dues/contributions	6,596.25	4.68	23.57	52.78
Other ⁵	421,162.72	330.22	556.02	179.22
FISHING	452,076.60	266.57	273.54	205.32
Food and lodging	183,803.53	128.55	148.11	188.48
Transportation	61,791.82	38.90	49.89	177.84
Other trip costs ²	121,879.74	79.62	88.11	191.52
Fishing equipment	93,025.27	63.26	78.12	170.04
Auxiliary equipment ³	31,842.24	27.60	209.70	55.18
Special equipment ⁴	39,444.27	34.68	3,245.82	7.13
Magazines, books, and DVDs	3,058.85	2.66	49.02	21.40
Membership dues/contributions	5,932.99	4.88	21.24	55.80
Other ⁵	57,592.09	50.64	93.20	150.18
HUNTING	477,953.22	1,272.79	1,281.43	82.69
Food and lodging	24,890.41	59.07	76.29	64.47
Transportation	23,057.01	52.05	65.19	66.60
Other trip costs ²	19,283.18	51.89	183.75	40.25
Hunting equipment	249,575.38	756.05	953.46	72.07
Auxiliary equipment ³	19,661.21	54.54	118.56	50.77
Special equipment ⁴	109,854.09	349.57	12,588.21	9.70
Magazines, books, and DVDs	2,429.09	7.70	68.85	22.48
Membership dues/contributions	1,614.33	4.95	99.47	18.11
Other ⁵	293,205.64	909.94	971.02	78.88
UNSPECIFIED ⁶	79,307.48	60.87	684.99	41.92

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

	PARTICIPANTS			DAYS OF PARTICIPATION		TRIPS	
	#	%	% Pop.	#	%	#	%
WILDLIFE WATCHERS	314.86	0.00	2.82	39,121.87	0.00	6,655.47	0.00
Away from home	283.19	9.03	3.49	9,396.87	4.30	6,597.19	0.00
Observe wildlife	278.10	8.89	3.43	9,159.03	4.33	x	x
Photograph wildlife	140.54	4.60	1.72	1,023.04	0.50	x	x
Feed wildlife	110.63	3.68	1.34	7,433.55	3.99	x	x
Around the home	309.05	1.42	4.42	33,649.10	4.30	x	x
Observe wildlife	293.19	6.39	3.94	35,314.37	4.81	x	x
Photograph wildlife	238.45	7.50	2.95	3,366.41	1.65	x	x
Feed wildlife	384.24	11.60	4.82	x	x	x	x
Visit parks or natural areas ¹	225.58	7.21	2.78	4,993.08	3.16	x	x
Maintain plantings or natural areas	140.81	4.51	1.73	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 North Carolina 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	599.87	0.00	314.86	2.82	0.00	283.19	3.49	0.00	309.05	4.42	0.00
RESIDENCE DENSITY											
Urban	714.48	4.19	284.82	5.69	5.09	236.94	3.83	6.43	281.13	5.58	5.27
Rural	305.85	4.19	163.59	11.23	5.09	82.70	5.03	6.43	164.42	11.20	5.27
RESIDENCE SIZE											
Metropolitan Statistical Area (MSA)	639.68	9.15	471.48	7.14	13.81	269.20	3.92	3.95	467.33	7.05	14.16
1,000,000 or more	691.36	7.98	293.63	11.19	9.38	180.08	6.44	10.94	291.19	10.99	9.59
250,000 to 999,999	335.56	4.65	178.40	9.48	5.63	94.73	4.68	6.94	173.71	9.17	5.66
50,000 to 249,999	392.95	5.19	177.74	12.73	5.70	88.23	5.58	7.24	179.65	12.76	5.94
Outside MSA	785.18	9.15	405.41	49.27	13.81	41.63	4.95	3.95	404.57	49.22	14.16
SEX											
Male	602.90	5.74	264.05	7.93	7.06	171.39	4.34	8.81	263.67	7.85	7.31
Female	510.98	5.74	252.17	7.51	7.06	159.12	4.19	8.81	251.46	7.42	7.31
AGE											
16 to 17 years	94.56	1.15	32.77	29.81	1.12	33.33	30.10	3.24	32.83	29.83	1.15
18 to 24 years	329.82	4.17	149.79	23.86	5.09	126.82	19.35	12.00	150.55	23.94	5.26
25 to 34 years	760.68	8.14	372.18	21.56	12.59	65.15	3.84	5.63	373.12	21.43	12.98
35 to 44 years	393.04	5.01	154.50	12.94	5.10	125.88	9.68	10.78	154.13	12.79	5.24
45 to 54 years	245.52	2.91	136.81	16.30	4.43	64.09	6.84	5.32	129.17	15.31	4.31
55 to 64 years	164.32	2.14	112.75	14.57	3.55	70.96	8.32	5.20	112.18	14.33	3.65
65 years and older	353.83	3.98	171.65	10.91	5.41	40.29	2.27	3.27	172.24	10.94	5.57
65 to 74 years	188.13	2.32	108.42	13.51	3.46	31.01	3.41	2.68	109.04	13.57	3.58
75 and older	316.40	3.63	144.56	17.95	4.89	18.15	2.16	1.69	144.65	17.95	5.03
ETHNICITY											
Hispanic	534.79	6.32	134.65	11.44	4.60	125.96	10.43	12.30	135.04	11.47	4.74
Non-Hispanic	698.12	6.32	323.98	6.01	4.60	269.02	4.01	12.30	318.70	5.88	4.74
RACE											
White	789.62	8.20	324.84	8.49	7.44	210.58	4.22	12.01	319.15	8.38	7.33
African American	528.10	6.23	146.04	12.52	4.89	95.92	7.32	8.94	133.84	11.24	4.62
All Others	542.80	6.55	158.29	13.98	5.32	130.96	10.91	11.72	156.16	13.59	5.40

(continued on next page)

Table 30 SE Standard Errors of North Carolina 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	277.73	3.50	168.98	31.86	5.66	132.46	21.15	12.70	170.56	32.03	5.87
\$20,000 to \$29,999	272.34	3.40	49.35	11.30	1.64	1.89	0.32	0.19	49.55	11.32	1.69
\$30,000 to \$39,999	180.00	2.30	94.51	21.43	3.14	78.50	15.96	7.01	93.15	20.77	3.19
\$40,000 to \$49,999	153.78	1.97	53.28	15.96	1.77	41.89	10.97	3.86	53.46	15.99	1.83
\$50,000 to \$74,999	211.15	2.78	128.15	18.68	4.22	80.71	10.58	7.21	129.08	18.77	4.37
\$75,000 to \$99,999	364.41	4.55	63.11	9.17	2.10	38.27	4.84	3.45	56.86	8.06	1.95
\$100,000 to \$149,999	389.21	4.67	116.47	18.77	3.84	111.22	15.55	9.43	110.77	16.98	3.78
\$150,000 or more	172.30	2.12	99.97	35.94	3.36	85.12	26.18	8.15	100.12	35.97	3.46
Not reported	972.84	9.84	400.58	17.96	13.31	35.10	1.42	3.08	397.84	17.89	13.57
EDUCATION											
8 years or less	181.68	2.18	45.21	17.00	1.55	—	—	—	45.30	17.02	1.59
9 to 12 years	810.58	8.71	384.49	19.07	12.75	93.56	4.01	8.73	383.14	19.03	13.05
1 to 3 years of college	397.58	5.40	231.08	12.65	7.42	158.95	8.09	11.94	231.04	12.55	7.65
4 years or more of college	635.20	7.73	270.47	10.36	8.41	171.69	5.89	11.19	265.63	10.03	8.55

— 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 North Carolina Residents for All Wildlife Watching Both In and Out of North Carolina: 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	822,159.75	271.91	355.52	431.98	12.95
TRIP-RELATED EXPENDITURES	221,775.50	72.77	162.37	264.79	8.53
Food and lodging	117,425.18	38.33	88.63	257.46	8.34
Food	77,906.81	25.76	55.32	257.46	8.34
Lodging	57,074.80	18.93	188.14	111.56	3.72
Transportation	44,244.02	14.42	34.67	237.15	7.73
Other trip costs ²	73,792.63	24.86	119.23	202.28	6.71
EQUIPMENT AND OTHER EXPENDITURES	732,891.45	246.37	379.82	388.70	11.70
Wildlife-watching equipment	165,115.77	53.08	62.14	380.95	11.57
Binoculars, spotting scopes	12,274.56	4.11	30.38	70.49	2.34
Film and photo processing	2,216.53	0.75	14.78	84.88	2.88
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	62,300.72	20.92	150.21	155.56	5.23
Day packs, carrying cases, and special clothing	20,424.05	6.80	35.01	92.52	3.04
Bird food	52,753.71	17.02	29.79	284.43	8.67
Food for other wildlife	35,542.94	11.99	52.87	185.92	6.08
Nest boxes, bird houses, bird feeders, and bird baths	44,880.76	15.06	49.14	187.79	5.92
Other equipment (including field guides)	702.23	0.24	4.47	38.61	1.30
Auxiliary equipment ³	105,761.79	36.14	537.42	79.53	2.67
Special equipment ⁴	653,914.00	224.24	14,702.79	26.58	0.90
Magazines, books, and DVDs	3,149.24	1.06	15.77	90.12	3.05
Membership dues and contributions	21,089.00	7.03	32.91	139.70	4.59
Land leasing and ownership	34,447.44	11.81	3,006.37	7.26	0.25
Plantings	35,563.08	12.09	127.08	105.14	3.48

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 North Carolina Residents for Away-from-home Wildlife Watching
Both In and Out of North Carolina: 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	325,862.59	291.07	341.89	313.22	26.48
TRIP-RELATED EXPENDITURES	273,639.52	239.38	272.39	309.67	26.26
Food and lodging	135,366.82	118.42	154.03	309.67	26.26
Food	58,593.96	51.77	57.17	309.67	26.26
Lodging	90,341.97	82.88	214.11	140.21	12.66
Transportation	63,057.98	54.39	60.03	284.04	24.49
Other trip costs ²	94,780.25	89.39	239.27	223.91	20.46
EQUIPMENT AND OTHER EXPENDITURES	66,001.46	65.61	436.22	85.34	8.27
Wildlife-watching equipment	65,642.25	65.39	470.00	85.34	8.27
Binoculars, spotting scopes	100.80	0.10	0.00	10.08	1.01
Film and photo processing	—	—	—	—	—
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	19,083.74	19.11	0.00	76.33	7.64
Day packs, carrying cases, and special clothing	16,182.45	15.96	85.88	78.84	7.81
Bird food	15,465.27	15.41	104.87	79.88	7.89
Food for other wildlife	15,267.03	15.29	0.00	76.33	7.64
Nest boxes, bird houses, bird feeders, and bird baths	106.04	0.11	0.00	5.31	0.53
Other equipment (including field guides)	84.87	0.08	0.00	5.31	0.53
Auxiliary equipment ³	795.56	0.80	0.00	5.31	0.53
Special equipment ⁴	—	—	—	—	—
Magazines, books, and DVDs	—	—	—	—	—
Membership dues and contributions	1,349.76	1.35	0.00	13.50	1.35
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 North Carolina Residents for Around-the-home Wildlife Watching
Both In and Out of North Carolina: 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	1,045,015.62	366.14	670.44	479.97	16.08
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	1,045,015.62	366.14	670.44	479.97	16.08
Wildlife-watching equipment	126,654.13	42.98	43.26	461.63	15.49
Binoculars, spotting scopes	15,619.65	5.46	47.80	96.21	3.35
Film and photo processing	3,165.78	1.11	15.91	130.00	4.56
Cameras, special lenses, video cameras, and other photographic equipment, including memory cards	10,861.86	3.81	103.89	63.65	2.23
Day packs, carrying cases, and special clothing	12,964.86	4.55	78.76	68.90	2.40
Bird food	49,254.38	16.70	21.05	394.80	13.26
Food for other wildlife	29,263.96	10.19	25.10	242.56	8.42
Nest boxes, bird houses, bird feeders, and bird baths	63,159.05	22.12	83.53	242.07	8.25
Other equipment (including field guides)	646.51	0.23	28.39	17.70	0.62
Auxiliary equipment ³	22,088.42	7.77	113.19	63.66	2.23
Special equipment ⁴	983,801.30	346.96	16,528.98	40.88	1.43
Magazines, books, and DVDs	2,892.65	1.01	18.12	119.03	4.18
Membership dues and contributions	24,010.44	8.44	63.88	150.35	5.22
Land leasing and ownership	51,596.10	18.20	3,777.39	9.32	0.33
Plantings	53,472.65	18.80	225.52	145.88	5.08

— 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 North Carolina 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	314.86	0.00	283.19	0.00	309.05	0.00
Did not fish or hunt	297.26	5.79	222.10	8.84	292.50	5.81
Fished or hunted	181.51	5.79	115.81	8.84	176.89	5.81
Fished	157.90	5.07	104.53	8.20	159.60	5.27
Hunted	93.06	3.10	60.37	5.35	86.22	2.96

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

	SPORTSPERSONS		ANGLERS		HUNTERS	
	#	%	#	%	#	%
ALL SPORTSPERSONS	238.21	0.00	209.81	0.00	83.14	0.00
Did not watch wildlife	92.83	4.99	90.30	5.41	19.16	5.09
Watched wildlife	178.96	4.99	153.71	5.41	73.48	5.09
Away from home	108.00	4.91	94.10	5.26	53.61	8.51
Around the home	169.46	5.04	150.40	5.48	64.45	7.14

