

**The 2006 Economic Benefits of  
Hunting, Fishing and Wildlife Watching in**

**OKLAHOMA**

Prepared by:

**Southwick Associates, Inc.**  
P.O. Box 6435  
Fernandina Beach, FL 32035  
Ph (904) 277-9765 • Fax (904) 261-1145  
Email: [Rob@southwickassociates.com](mailto:Rob@southwickassociates.com)

For the:

**Oklahoma Department of Wildlife Conservation**

January 27, 2008

## Table of Contents

Acknowledgments	i	
List of Tables	ii	
Executive Summary	iii	
Introduction	1	
Methods	1	
Demographics	2	
Participation	6	
Economic Impacts	13	
Retail Sales	13	
Total Economic Effect (Output)	13	
Earnings	13	
Employment	13	
Tax Revenues	14	
Per Participant and Per Day Expenditures	16	
Travel-Related Expenditures	18	
Public and Private Land Activity, Expenditures and Impacts	19	
Conclusion	23	
Appendix A	Sound Bites	24
Appendix B	Definitions	27
Appendix C	Methods	27
Appendix D	Detailed Expenditures and Impacts	29

## Acknowledgements

This report examines the contributions of hunting, sportfishing and wildlife viewing to the Oklahoma economy. Thomas Allen and Rob Southwick are the authors. Dr. Peggy McKee provided assistance with report development. This project was commissioned by the Oklahoma Department of Wildlife Conservation. The authors wish to thank all who assisted with this project, especially Andrea Crews, but remain solely responsible for the contents herein.

## List of Tables

Table E-1.	Executive Summary	iii
Table 1.	Demographic Background of Hunters by Species Hunted in Oklahoma, 2006.	3
Table 2.	Demographic Background of Anglers by Freshwater Species Fished in Oklahoma, 2006.	4
Table 3.	Demographic Background of Wildlife Watchers in Oklahoma, 2006.	6
Table 4.	Hunting Participation by Residential Status and Species Hunted in Oklahoma, 2006.	7
Table 5.	Freshwater Fishing Participation by Residential Status and Species Fished in Oklahoma, 2006.	9
Table 6.	Participation in Non-Residential Watchable Wildlife Recreation in Oklahoma, 2006.	10
Table 7.	Participation in Non-Residential Watchable Wildlife Recreation by Site Visited and Wildlife Observed, Fed, or Photographed in Oklahoma, 2006.	11
Table 8.	Participation in Residential Watchable Wildlife Recreation in Oklahoma, 2006.	11
Table 9.	Participation in Residential Watchable Wildlife Recreation by Wildlife Observed in Oklahoma, 2006.	12
Table 10.	Economic Activity Generated by Freshwater Anglers in Oklahoma, 2006.	14
Table 11.	Economic Activity Generated by Hunters in Oklahoma, 2006.	15
Table 12.	Economic Activity Generated by Wildlife Watchers in Oklahoma, 2006.	16
Table 13.	Combined Economic Impacts of Wildlife-Related Recreation in Oklahoma, 2006.	16
Table 14.	Per Day and Per Person Expenditures for Hunting, Fishing and Wildlife Watching in Oklahoma, 2006.	17
Table 15.	Travel-Related Expenditures for Hunting, Fishing and Wildlife Watching in Oklahoma by Residents and Non-Residents Combined, 2006.	18
Table 16.	Percentage of Non-Residential Wildlife Watching Activity and Days Occurring on Public and Private Land in Oklahoma, 2006.	19
Table 17.	Percentage of Hunters and Hunting Days on Public and Private Land in Oklahoma, 2006.	20
Table 18.	Economic Activity Generated by Non-Residential Wildlife Watchers, by Type of Land Used in Oklahoma, 2006.	21
Table 19.	Economic Activity Generated by Hunting in Oklahoma, by Type of Land Used, 2006.	22
Table 20.	Economic Activity Generated by Hunters and Wildlife Watchers Combined, by Type of Land Used in Oklahoma, 2006.	23

## Executive Summary

The purpose of this project was to help resource managers and the public develop a better understanding of the economic contributions of hunting, sportfishing and wildlife watching activities in Oklahoma in 2006. When used effectively, economic data can help increase legislative, public, business and media awareness of the importance of fish and wildlife, and as a result, help boost conservation efforts and public recreational opportunities.

In 2006, 1.2 million residents and non-residents participated in some form of fish and wildlife-related recreation in Oklahoma. These anglers, hunters and wildlife viewers spent \$1.3 billion in retail sales (\$1.2 billion by residents and \$125 million by nonresidents), creating \$696 million in salaries and wages, and supporting 28,142 jobs. The total economic effect (multiplier effect) from fish and wildlife-related recreation was estimated at \$2.3 billion.

**Table E-1: Executive Summary**

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
<b>All Freshwater Fishing:</b>	\$522,137,380	\$906,420,577	\$273,860,566	10,332	\$58,775,832	\$57,359,011
Residents Only:	\$474,409,465	\$821,806,999	\$248,649,651	9,351	\$53,353,119	\$51,936,405
Non-Residents Only:	\$47,727,915	\$84,613,578	\$25,210,915	981	\$5,422,713	\$5,422,606
<b>All Hunting:</b>	\$492,065,447	\$843,349,648	\$251,611,909	9,871	\$53,637,676	\$49,499,187
Residents Only:	\$434,006,908	\$744,717,214	\$225,476,647	9,087	\$47,933,926	\$44,366,268
Non-Residents Only*:	\$58,058,538	\$98,632,434	\$26,135,262	784	\$5,703,750	\$5,132,919
<b>All Wildlife-Watching Activities:</b>	\$328,660,258	\$571,828,683	\$170,287,232	7,939	\$36,411,105	\$34,408,910
Residents Only:	\$309,052,213	\$536,768,141	\$159,567,171	7,499	\$34,079,231	\$32,127,901
Non-Residents Only:	**	**	**	**	**	**
<b>All Fishing and Hunting (combined):</b>	\$1,014,202,827	\$1,749,770,225	\$525,472,475	20,203	\$112,413,508	\$106,858,198
Residents Only:	\$908,416,373	\$1,566,524,213	\$474,126,298	18,438	\$101,287,045	\$96,302,673
Non-Residents Only*:	\$105,786,453	\$183,246,012	\$51,346,177	1,765	\$11,126,463	\$10,555,525
<b>All Fishing, Hunting and Wildlife-Watching Activities (combined):</b>	\$1,342,863,085	\$2,321,598,908	\$695,759,707	28,142	\$148,824,613	\$141,267,108
Residents Only:	\$1,217,468,586	\$2,103,292,354	\$633,693,469	25,937	\$135,366,276	\$128,430,574
Non-Residents Only:	\$125,394,499	\$218,306,554	\$62,066,238	2,205	\$13,458,337	\$12,836,534

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

## **Introduction**

Expenditures made for fish and wildlife-related recreation support significant industries. Unlike traditional industries which are often easily recognized by large factories, the hunting, fishing and wildlife viewing industries are comprised of widely scattered retailers, manufacturers, wholesalers and support services that, when considered together, become quite significant. Given that outdoor recreation dollars are often spent in rural or lightly populated areas, the economic contributions of fish and wildlife resources can be especially important to rural economies.

This project assesses the 2006 economic contributions of fish and wildlife-based recreation in Oklahoma. The purpose was to provide resource managers with the economic information necessary to better conserve and manage wildlife and other natural resources. Only the effects of recreation expenditures that occurred within Oklahoma are considered.

This report contains sections devoted to demographic, participation, and economic impact information that provide the reader with a better understanding of the activities undertaken by outdoor recreationists. Definitions of several terms used in this report are provided in Appendix A. Appendix B provides methodological descriptions. Appendix C presents detailed expenditures for hunting, Appendix D provides detailed expenditures for freshwater fishing, and Appendix E presents detailed expenditures for wildlife watching.

## **Methods**

Data on demographics, participation and expenditures were obtained from the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (Survey), which is conducted approximately every five years by the U.S. Fish and Wildlife Service and the U.S. Bureau of the Census. The Survey provides data required by natural resource management agencies, industry and private organizations at state and national levels to assist in optimally managing natural resources. The Survey is funded through excise taxes on hunting and fishing equipment through the Federal Aid in Sport Fish and Wildlife Restoration Acts. The expenditure data were analyzed using economic models to quantify economic impacts. A more detailed description of the methods used to generate the economic estimates is presented in Appendix B.

## **Demographics**

### *Hunter Demographics*

Participants in hunting (Table 1) are approximately 43 years old, are predominantly male, and are likely to be married. The average household income for Oklahoma hunters is approximately \$58,207, significantly higher than the \$40,001 state average (U.S. Census Bureau). About 51 percent have at least some college experience. Non-resident hunters typically have higher income and more education. Only a small percentage of hunters in Oklahoma report they are non-white.

Table 1 does not necessarily represent the most popular types of game in Oklahoma. The species presented are those most often cited by hunters as targets of their activity, which may be driven by availability rather than preference. In other words, hunters may often pursue species based on the higher likelihood of hunting success rather than the species they actually desire. Please note that non-resident data could not be calculated due to small sample size issues.

### *Angler Demographics*

Freshwater anglers (Table 2) are approximately 45 years old, are predominantly male, and are likely to be married. The average household income for anglers participating in freshwater fishing in Oklahoma is approximately \$51,765. Non-residents report higher incomes than Oklahoma residents. About 49 percent of freshwater anglers in Oklahoma have at least some college experience. Demographic characteristics across species fished were similar, except panfish anglers who reported lower incomes, are more likely female, and are somewhat less likely to be married. Approximately seven percent of all freshwater anglers in Oklahoma report they are non-white.

The tables below do not necessarily represent the most popular species in Oklahoma. The species presented are those most often cited by anglers as targets of their activity, which may be driven by availability rather than preference. In other words, anglers may often fish for the species that is more likely to bite on a given day rather than the species they would actually prefer to catch.

**Table 1. Demographic Background of Hunters by Species Hunted in Oklahoma, 2006. (Participants 16 years old and older.)**

ALL HUNTERS	Upland Game		Migratory		Deer	Turkey	All Hunting
	Big Game	Small Game	Birds	Birds			
<b>Race (non-white)</b>	7.6%	1.7%	0.0% *	8.5% *	6.8%	10.9%	6.4%
<b>Average age</b>	42	48	53 *	38 *	41	44	43
<b>Gender (male)</b>	92.9%	89.6%	94.4% *	100.0% *	93.2%	94.3%	93.4%
<b>Marital Status (married)</b>	79.2%	83.4%	93.3% *	64.8% *	78.6%	84.1%	79.0%
<b>Average household income</b>	\$56,519	\$64,911	\$72,653 *	\$60,680 *	\$55,025	\$61,035	\$58,207
<b>Education</b>							
<b>No High School</b>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%
<b>Some High School</b>	17.2%	19.5%	8.7% *	19.9% *	18.3%	9.7%	16.9%
<b>High School Diploma</b>	31.6%	19.1%	13.3% *	14.8% *	32.4%	26.9%	30.6%
<b>Some College</b>	28.2%	31.8%	32.5% *	42.8% *	28.3%	25.3%	26.4%
<b>College Graduate</b>	23.0%	29.6%	45.4% *	22.6% *	21.0%	38.2%	25.0%
<b>RESIDENT</b>							
<b>Race (non-white)</b>	8.0%	2.3% *	0.0% *	9.4% *	7.1%	11.9%	7.2%
<b>Average age</b>	41	43 *	47 *	35 *	41	43	41
<b>Gender (male)</b>	94.2%	90.8% *	100.0% *	1.0% *	94.6%	93.8%	93.9%
<b>Marital Status (married)</b>	78.2%	77.5% *	88.9% *	61.0% *	77.8%	82.7%	76.4%
<b>Average household income</b>	\$55,238	\$59,375 *	\$66,937 *	\$57,687 *	\$54,117	\$59,942	\$55,085
<b>Education</b>							
<b>No High School</b>	0.0%	0.0% *	0.0% *	0.0% *	0.0%	0.0%	1.3%
<b>Some High School</b>	18.1%	26.4% *	14.5% *	22.0% *	19.0%	10.5%	19.0%
<b>High School Diploma</b>	33.2%	25.8% *	22.1% *	16.4% *	33.6%	29.2%	34.2%
<b>Some College</b>	29.5%	38.8% *	46.3% *	40.9% *	29.3%	27.5%	26.8%
<b>College Graduate</b>	19.2%	9.0% *	17.1% *	20.7% *	18.0%	32.8%	18.8%

\* = Sample size is small and results should be interpreted with caution.

NOTE: A hunter may target multiple species and can be included in more than one species above.

**Table 2. Demographic Background of Anglers by Freshwater Species Fished in Oklahoma, 2006. (Participants 16 years old and older.)**

<b>ALL ANGLERS</b>	<b>Crappie</b>	<b>Panfish</b>	<b>White Bass</b>	<b>Black Bass</b>	<b>Catfish</b>	<b>Anything<sup>1</sup></b>	<b>All Freshwater</b>
<b>Race (non-white)</b>	6.5%	12.2%	9.7%	8.1%	11.8%	1.2%	7.1%
<b>Average age</b>	45	40	44	41	45	44	45
<b>Gender (male)</b>	81.1%	60.4%	77.7%	87.3%	73.0%	70.0%	77.4%
<b>Marital Status (married)</b>	74.3%	50.0%	77.7%	72.9%	69.7%	77.4%	74.3%
<b>Average household income</b>	\$50,717	\$37,935	\$55,429	\$53,454	\$47,261	\$53,088	\$51,765
<b>Education</b>							
<b>No High School</b>	1.0%	0.0%	2.8%	0.9%	4.2%	4.6%	2.2%
<b>Some High School</b>	10.7%	6.1%	17.2%	11.6%	18.3%	14.1%	13.0%
<b>High School Diploma</b>	42.6%	53.0%	27.2%	38.1%	33.7%	22.8%	36.0%
<b>Some College</b>	27.2%	17.6%	30.2%	32.6%	31.2%	32.9%	29.3%
<b>College Graduate</b>	18.5%	23.3%	22.6%	16.8%	12.7%	25.6%	19.5%
<b>RESIDENT</b>							
<b>Race (non-white)</b>	7.3%	12.9%	10.5%	9.2%	11.8%	1.5%	7.8%
<b>Average age</b>	45	40	44	41	44	44	45
<b>Gender (male)</b>	80.9%	62.9%	78.0%	87.4%	74.5%	65.6%	77.0%
<b>Marital Status (married)</b>	73.6%	49.0%	71.2%	72.2%	68.1%	74.6%	74.3%
<b>Average household income</b>	\$48,319	\$36,320	\$53,183	\$50,877	\$45,264	\$45,128	\$48,999
<b>Education</b>							
<b>No High School</b>	1.1%	0.0%	3.0%	1.1%	4.5%	3.0%	2.1%
<b>Some High School</b>	11.0%	4.5%	18.7%	12.5%	19.2%	17.5%	14.5%
<b>High School Diploma</b>	41.9%	55.1%	26.8%	36.5%	33.5%	28.3%	36.4%
<b>Some College</b>	27.7%	15.7%	29.0%	32.3%	30.3%	40.8%	29.5%
<b>College Graduate</b>	18.3%	24.7%	22.5%	17.6%	12.5%	10.5%	17.5%

*(Continued – next page)*

**Table 2. (Continued) Demographic Background of Anglers by Freshwater Species Fished in Oklahoma in 2006. (Participants 16 years old and older.)**

	Crappie		Panfish		White Bass		Black Bass		Catfish		Anything <sup>1</sup>		All Freshwater
<b>NON-RESIDENT</b>													
<b>Race (non-white)</b>	0.0%	*	--	**	--	**	0.0%	*	11.9%	*	--	**	2.8%
<b>Average age</b>	48	*		**		**	44	*	49	*		**	45
<b>Gender (male)</b>	82.0%	*	--	**	--	**	86.0%	*	54.7%	*	--	**	79.3%
<b>Marital Status (married)</b>	79.9%	*	--	**	--	**	78.0%	*	89.0%	*	--	**	74.7%
<b>Average household income</b>	\$75,013	*		**		**	\$75,868	*	\$69,442	*		**	\$69,019
<b>Education</b>													
<b>No High School</b>	0.0%	*	--	**	--	**	0.0%	*	0.0%	*	--	**	3.0%
<b>Some High School</b>	7.8%	*	--	**	--	**	5.3%	*	6.4%	*	--	**	3.8%
<b>High School Diploma</b>	48.9%	*	--	**	--	**	49.1%	*	37.1%	*	--	**	33.3%
<b>Some College</b>	23.3%	*	--	**	--	**	34.4%	*	42.1%	*	--	**	28.4%
<b>College Graduate</b>	20.0%	*	--	**	--	**	11.2%	*	14.5%	*	--	**	31.5%

NOTE: An angler may target multiple species and can be included in more than one species above.

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

<sup>1</sup> The respondent did not fish for any specific species and identified “Anything” from a list of fish species.

### Wildlife Viewer Demographics

Wildlife watching is divided into two major categories: Residential--activities that occur within one mile of the home; and Non-Residential--activities that occur one mile or further from home. Non-residential activity can be divided into two: *residents* and *non-residents*. Residents are people who reside in Oklahoma, and non-residents represent out-of-state visitors. As a result of these definitions, terms will arise such as “resident non-residential participation” meaning state residents who participate in wildlife viewing one mile or more from their home.

Table 3 shows that participants in wildlife watching average 52 years old which is older than hunters and anglers. Fifty-two percent are male. The average household incomes for residents participating in non-residential and residential activities are similar, with an average of \$51,339. Just like hunters and anglers, wildlife watchers tend to have incomes higher than the 2006 state average (\$40,001, U.S. Census Bureau). Residents participating in non-residential wildlife watching are somewhat more educated than those involved in residential activity; sixty-nine percent of residents who participate in wildlife watching activities away from their home have some college experience, while for residential activity fifty-five percent have some college.

**Table 3. Demographic Background of Wildlife Watchers in Oklahoma, 2006. (Participants 16 years old and older.)**

	<u>Nonresidential Activity</u>		<u>Residential Activity</u>	<u>All Participants:</u>
	<u>Resident</u>	<u>Nonresident</u>		
<b>Race (non-white)</b>	11%	**	15%	15%
<b>Average age</b>	47	**	53	52
<b>Gender (male)</b>	52%	**	51%	52%
<b>Marital Status (married)</b>	70%	**	69%	72%
<b>Average HH Income</b>	\$48,552	**	\$50,728	\$51,339
<b>Education</b>				
<b>No High School</b>	0%	**	1%	1%
<b>Some High School</b>	2%	**	7%	6%
<b>High School Diploma</b>	29%	**	37%	37%
<b>Some College</b>	30%	**	23%	25%
<b>College Graduate</b>	39%	**	32%	32%

\*\* = Sample size is too small to report reliably.

## Participation

### Hunter Participation

In 2006, there were 250,590 hunters (residents and nonresidents), hunting a total of 5.5 million days in Oklahoma (Table 4). Of the total hunters in Oklahoma, 223,796 were state residents and 26,794 were nonresidents. Big game hunting was the most popular in terms of both hunters and days, the largest portion of which is made up of deer hunters. The average hunter spent 24 days afield while the average non-resident spent seven days afield in Oklahoma. More days are spent deer hunting (15 days) than for second place small game (eight days). In terms of days hunted, residents outnumbered nonresidents by 27 to 1.

**Table 4. Hunting Participation by Residential Status and Species Hunted in Oklahoma, 2006. (Participants 16 years old and older.)**

	Big Game	Small Game	Upland Game		Migratory Birds	Deer	Turkey	All Hunting
			Birds					
<b><u>Number of Participants</u></b>								
Resident	184,134	58,432 *	30,934 *		58,695 *	174,792	66,015	223,796
Nonresident	-- **	-- **	-- **		-- **	-- **	-- **	26,794 *
<b>Total</b>	<b>193,180</b>	<b>78,970</b>	<b>51,472 *</b>		<b>64,951 *</b>	<b>181,341</b>	<b>71,745</b>	<b>250,590</b>
<b><u>Number of Days</u></b>								
Resident	3,928,562	485,691 *	136,398 *		385,338 *	2,708,440	490,599	5,339,160
Nonresident	-- **	-- **	-- **		-- **	-- **	-- **	194,452 *
<b>Total</b>	<b>3,981,767</b>	<b>594,523</b>	<b>277,638</b>		<b>450,874</b>	<b>2,737,254</b>	<b>514,991</b>	<b>5,533,612</b>
<b><u>Average Days of Participation</u></b>								
Resident	21.3	8.3	4.4		6.6	15.5	7.4	23.9
Nonresident	-- **	-- **	-- **		-- **	-- **	-- **	7.3 *
<b>Total</b>	<b>20.6</b>	<b>7.5</b>	<b>5.4</b>		<b>6.9 *</b>	<b>15.1</b>	<b>7.2</b>	<b>22.1</b>
<b><u>Number of Observations</u></b>								
Resident	78	26	15		25	72	30	96
Nonresident	4	8	8		3	3	2	11
<b>Total</b>	<b>82</b>	<b>34</b>	<b>23</b>		<b>28</b>	<b>75</b>	<b>32</b>	<b>107</b>

NOTE: A hunter may target multiple species and can be included in more than one species above.

NOTE: Each category above is not exclusive of others. For example, deer and turkey are also part of "Big Game." The Definitions appendix explains each category.

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

### *Angler Participation*

In 2006, there were 610,544 freshwater anglers (residents and nonresidents), fishing a total of 10.6 million days in Oklahoma (Table 5). Of the total freshwater anglers in Oklahoma, 524,645 were state residents and 85,899 were nonresidents. The total number of days fished was 10.6 million, averaging 17.3 days per angler. Most fishing effort was directed at black bass, followed by catfish and crappie. In terms of days fished for all freshwater species, residents outnumbered nonresidents by 13 to 1.

### *Wildlife Watching Participation*

Participation information is divided into two subsections. The first subsection explores non-residential activities by state residents and visitors (non-residents). The second subsection examines residential activities (activities occurring within one mile of home).

#### Non-Residential Participation (activity occurring one or more miles from home):

In 2006, there were 371,546 watchable wildlife recreationists (residents and non-residents) participating in non-residential activities in Oklahoma (Table 6). Of the total recreationists in Oklahoma participating in activities more than one mile from home, most were state residents. Altogether, these recreationists spent 7.1 million days in non-residential activities in Oklahoma.

The primary watchable wildlife activity, measured in terms of number of participants and number of activity days, was observing wildlife. Feeding wildlife was the second preferred activity in terms of number of participants; in number of days, photographing wildlife was second. Please note one participant may engage in two or more activities per trip as these activities are not exclusive of one another.

Participation by resident and non-resident recreationists in terms of sites visited and wildlife observed, fed, or photographed is presented in Table 7. Over two-thirds of participants observe, feed or photograph birds. Recreationists are fairly evenly divided between public and private land. Note that the results presented in Table 7 do not necessarily imply that recreationists prefer a certain site type or prefer to observe a certain wildlife type; the results in Table 7 reflect participants' preferences *and* the availability of sites and wildlife.

#### Residential Participation (activity occurring within one mile of home):

In 2006, there were 975,660 residential watchable wildlife participants in Oklahoma (Table 8). This number represents Oklahoma residents participating in watchable wildlife recreation within one mile of their home. Compared to non-residential activity, there are nearly 2.6 times the residents who participate within one mile of their homes than those who travel away from home.

**Table 5. Freshwater Fishing Participation by Residential Status and Species Fished in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>Crappie</b>	<b>Panfish</b>	<b>White Bass</b>	<b>Black Bass</b>	<b>Catfish</b>	<b>Any Freshwater</b>	<b>All Freshwater</b>
<b><u>Number of Participants</u></b>							
<b>Resident</b>	208,849	63,650 *	170,449	262,356	243,795	95,389	524,645
<b>Nonresident</b>	26,261 *	-- **	-- **	38,188 *	19,860 *	-- **	85,899
<b>Total</b>	<b>235,109</b>	<b>67,425</b>	<b>184,920</b>	<b>300,544</b>	<b>263,655</b>	<b>118,342</b>	<b>610,544</b>
<b><u>Number of Days</u></b>							
<b>Resident</b>	3,340,511	1,059,739 *	2,454,624	4,867,835	4,248,323	1,103,245	9,843,049
<b>Nonresident</b>	244,580 *	-- **	-- **	345,233 *	248,038 *	-- **	736,628
<b>Total</b>	<b>3,585,091</b>	<b>1,173,029</b>	<b>2,508,856</b>	<b>5,213,068</b>	<b>4,496,362</b>	<b>1,200,721</b>	<b>10,579,677</b>
<b><u>Avg. Days of Participation</u></b>							
<b>Resident</b>	16.0	16.6 *	14.4	18.6	17.4	11.6	18.8
<b>Nonresident</b>	9.3	-- **	-- **	9.0 *	12.5 *	-- **	8.6
<b>Total</b>	<b>15.2</b>	<b>17.4</b>	<b>13.6</b>	<b>17.3</b>	<b>17.1</b>	<b>10.1</b>	<b>17.3</b>
<b><u>Number of Observations</u></b>							
<b>Resident</b>	91	28	74	112	102	37	222
<b>Nonresident</b>	10	3	7	22	14	2	35
<b>Total</b>	<b>101</b>	<b>31</b>	<b>81</b>	<b>134</b>	<b>116</b>	<b>39</b>	<b>257</b>

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

**Table 6. Participation in Non-Residential Watchable Wildlife Recreation in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>Resident</b>	<b>Nonresident</b>	<b>Total</b>
<b>Number of Participants</b>	313,096	**	371,546
Observing wildlife	247,050	**	300,156
Photographing wildlife	154,083	**	173,639
Feeding wildlife	162,416	**	180,362
<b>Number of Days</b>	6,823,979	**	7,097,969
Observing wildlife	5,230,763	**	5,475,642
Photographing wildlife	2,105,725	**	2,213,044
Feeding wildlife	1,583,455	**	1,647,149
<b>Number of Trips</b>	5,031,278	**	5,099,039
<b>Average Days Participation</b>	21.8	**	19.1
<b>Number of Observations</b>	38	9	47

\*\* = Sample size is too small to report reliably.

**Table 7. Participation in Non-Residential Watchable Wildlife Recreation by Site Visited and Wildlife Observed, Fed, or Photographed in Oklahoma, 2006. (Participants 16 years old and older; Ranked by number of participants per activity.)**

	Resident	Nonresident	Total
<b>Number of Participants</b>	313,096	**	371,546
<b>Number of Recreationists Visiting</b>			
Public land	181,137	**	218,364
Private land	172,424	**	208,660
<b>Number of Recreationists Observing, Feeding, Photographing</b>			
Birds	274,601	**	321,167
Waterfowl	212,066	**	248,559
Songbirds	175,629	**	208,616
Birds of prey	190,758	**	208,544
Other birds	132,439	**	150,225
Water birds	125,666	**	133,754
Mammals	242,497	**	265,786
Small land mammals	199,621	**	217,566
Large land mammals	205,516	**	228,805
Other wildlife	136,676	**	150,080
Fish	84,463	**	84,463

\*\* = Sample size is too small to report reliably.

**Table 8. Participation in Residential Watchable Wildlife Recreation in Oklahoma, 2006. (Participants 16 years old and older.)**

<b>Number of participants</b>	975,660
Feeding birds & wildlife	908,867
Birds	876,286
Other wildlife	398,400
Observing wildlife	632,478
Photographing wildlife	274,436
Visiting parks near home	137,120
Maintaining natural areas around home	203,334
Maintaining plantings around home	67,051
<b>Number of days</b>	
Observing wildlife	82,038,652
Photographing wildlife	11,846,135
<b>Number of observations</b>	127

The primary residential watchable wildlife activity, measured in terms of number of participants, was feeding wildlife. Observing wildlife was the second most popular residential watchable wildlife activity. This is in contrast to the ranking of the non-residential activities, in which observing wildlife was the most popular activity. Of those who participate in feeding birds and wildlife, most feed wild birds.

Given the manner in which the survey questions were asked, we cannot determine the number of days spent feeding wildlife. However, we can determine the number of days spent observing and photographing wildlife around the home. In terms of days spent in watchable wildlife activities, observing wildlife again was the most popular activity. Residents spent approximately 82 million days observing wildlife around their home on an average of 96 days per resident annually.

The number one type of wildlife observed by residential recreationists in Oklahoma was birds (Table 9). The second most prominent category to be observed by residents was small mammals. The results in Table 9 do not necessarily imply that recreationists prefer to observe a certain wildlife type because the results reflect participants' preferences and the availability of wildlife types.

**Table 9. Participation in Residential Watchable Wildlife Recreation by Wildlife Observed in Oklahoma, 2006. (Participants 16 years old and older.)**

---

<b>Number of Recreationists</b>	
Birds	601,400
Mammals	567,890
Large mammals	287,909
Small mammals	561,532
Insects or spiders	249,698
Amphibians or reptiles	174,546
Fish & other insects	107,595

---

NOTE: A participant may enjoy more than one type of wildlife listed above.

## **Economic Impacts**

### *Retail Sales*

Tables 10, 11 and 12 present retail sales and resulting economic impacts in Oklahoma associated with freshwater fishing, hunting and wildlife watching. Table 13 presents combined expenditures and impacts for all fish and wildlife-related recreation in total. Altogether, these activities generated \$1.3 billion in consumer expenditures for equipment and services consumed as part of their outdoor activities. Most of these were made by residents (\$1.2 billion), while nonresidents contributed \$125 million. Tables detailing the expenditures and economic impacts of each activity and by species are provided in Appendices C-E. Please note that in Table 12, wildlife viewing impacts are divided in to resident and non-resident impacts versus near-home and away-from home (residential versus non-residential, respectively). Expenditure data for wildlife viewing were provided based on the individual's place of residence and not where the activities took place.

### *Total Economic Effect (Output)*

Original expenditures made by hunters, anglers and wildlife watchers generate rounds of additional spending throughout the economy. For example, a retailer buys more inventory and pays bills, wholesalers buy more from manufacturers, and all these pay employees who then spend their paychecks. The sum of these impacts is the total economic impact resulting from the original expenditures (Appendix B includes methods and sources). The total economic effect from 2006 fish and wildlife-related recreation in Oklahoma was estimated to be \$2.3 billion. In other words, if hunters, anglers and wildlife watchers were to stop spending money in Oklahoma and not spend these dollars on other in-state items, the state economy would shrink by \$2.3 billion. Sportfishing accounted for \$906 million, with \$843 million and \$571 million from hunting and wildlife-watching, respectively.

### *Earnings*

The business activity stimulated throughout the Oklahoma economy by outdoorsmen and women generates salaries and wages. In addition, many of the businesses supporting these individuals pay dividends. Altogether, these represent earnings created for Oklahoma as a result of hunting, fishing and wildlife watching activities. Total earnings in 2006 in Oklahoma from fish and wildlife related activities were estimated at \$696 million, with \$634 million from residents and \$62 million from non-residents.

### *Employment*

Expenditures made for hunting, fishing and wildlife watching activities support jobs throughout the state. Many of these are in companies that directly serve recreationists such as retailers, restaurants, and more. Others are in companies that support the first companies and employees such as wholesalers, utilities, manufacturers, grocers and more. Total jobs, full and part time, supported in Oklahoma in 2006 from fish and wildlife related activities were estimated at 28,142, with 9,871, 10,332 and 7,939 from hunting, fishing and wildlife watching respectively.

## Tax Revenues

State and local tax revenues generated from 2006 fish and wildlife-related recreation in Oklahoma were estimated to be \$141 million (\$128.4 million by residents and \$12.8 million by non-residents). Freshwater anglers accounted for \$57.4 million, hunters and wildlife watchers generated \$49.5 million, and \$34.4 million of the total, respectively. All fish and wildlife-related recreation generated \$148.8 million in tax revenues to the federal government.

**Table 10. Economic Activity Generated by Freshwater Anglers in Oklahoma, 2006.**  
(Participants 16 years old and older.)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
<b>All Freshwater</b>						
<b>Fishing:</b>	\$522,137,380	\$906,420,577	\$273,860,566	10,332	\$58,775,832	\$57,359,011
Residents Only:	\$474,409,465	\$821,806,999	\$248,649,651	9,351	\$53,353,119	\$51,936,405
Non-Residents Only:	\$47,727,915	\$84,613,578	\$25,210,915	981	\$5,422,713	\$5,422,606
<b>Black Bass Fishing:</b>	\$200,027,147	\$348,744,907	\$105,944,683	3,794	\$22,681,349	\$25,185,754
Residents Only:	\$185,648,819	\$323,084,461	\$98,173,526	3,501	\$21,014,902	\$20,506,228
Non-Residents Only:*	\$14,378,328	\$25,660,446	\$7,771,157	293	\$1,666,447	\$4,679,526
<b>White Bass Fishing:</b>	\$65,443,168	\$114,858,537	\$34,690,493	1,289	\$7,392,486	\$7,256,036
Residents Only:	\$61,307,067	\$107,613,171	\$32,460,457	1,195	\$6,912,554	\$6,788,985
Non-Residents Only:**	--	--	--	--	--	--
<b>Crappie Fishing:</b>	\$67,434,320	\$109,096,641	\$34,924,996	1,376	\$7,651,355	\$7,796,099
Residents Only:	\$58,945,974	\$100,639,995	\$30,423,533	1,197	\$6,686,350	\$6,815,517
Non-Residents Only:*	\$8,488,346	\$8,456,646	\$4,501,463	179	\$965,005	\$980,582
<b>Panfish Fishing:</b>	\$10,651,561	\$18,812,541	\$5,680,014	220	\$1,203,103	\$1,196,034
Residents Only:*	\$9,230,095	\$16,244,826	\$4,958,772	192	\$1,051,201	\$1,031,632
Non-Residents Only:**	--	--	--	--	--	--
<b>Catfish Fishing:</b>	\$147,636,082	\$253,346,213	\$75,917,448	3,017	\$16,281,358	\$15,374,756
Residents Only:	\$136,880,776	\$234,615,546	\$70,534,503	2,813	\$15,125,083	\$14,246,111
Non-Residents Only:*	\$10,755,306	\$18,730,667	\$5,382,945	204	\$1,156,275	\$1,128,645
<b>Any Fish:</b>	\$44,447,673	\$73,501,803	\$19,861,393	878	\$4,860,723	\$5,696,159
Residents Only:	\$14,741,475	\$25,697,478	\$7,663,979	312	\$1,694,408	\$1,752,252
Non-Residents Only:**	--	--	--	--	--	--

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

**Table 11. Economic Activity Generated by Hunters in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>RETAIL SALES</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>JOBS</b>	<b>FEDERAL TAX REVENUE</b>	<b>STATE &amp; LOCAL TAX REVENUE</b>
<b>All Hunting:</b>	\$492,065,447	\$843,349,648	\$251,611,909	9,871	\$53,637,676	\$49,499,187
Residents Only:	\$434,006,908	\$744,717,214	\$225,476,647	9,087	\$47,933,926	\$44,366,268
Non-Residents Only:*	\$58,058,538	\$98,632,434	\$26,135,262	784	\$5,703,750	\$5,132,919
<b>Big Game Hunting:</b>	\$379,404,353	\$649,217,989	\$192,838,234	7,325	\$40,875,381	\$36,810,704
Residents Only:	\$338,587,419	\$579,655,594	\$175,682,608	6,887	\$37,238,243	\$33,791,548
Non-Residents Only:**	--	--	--	--	--	--
<b>Small Game Hunting:</b>	\$53,900,208	\$92,171,545	\$29,741,634	1,226	\$6,542,469	\$6,551,128
Residents Only:*	\$38,358,054	\$66,240,062	\$21,802,025	913	\$4,688,954	\$4,636,809
Non-Residents Only:**	--	--	--	--	--	--
<b>Upland Game Hunting:</b>	\$24,979,556	\$42,109,101	\$12,990,446	529	\$2,976,907	\$3,055,357
Residents Only:*	\$8,640,951	\$14,703,004	\$4,591,205	199	\$1,026,902	\$1,053,079
Non-Residents Only:**	--	--	--	--	--	--
<b>Migratory Bird Hunting:</b>	\$34,389,493	\$59,476,919	\$19,770,099	818	\$4,242,285	\$4,145,504
Residents Only:*	\$31,995,070	\$55,178,070	\$18,303,616	771	\$3,938,306	\$3,874,605
Non-Residents Only:**	--	--	--	--	--	--
<b>Deer Hunting:</b>	\$291,773,660	\$499,510,340	\$148,353,930	5,662	\$31,418,237	\$28,323,368
Residents Only:	\$288,444,256	\$493,813,461	\$146,674,627	5,597	\$31,036,866	\$27,912,660
Non-Residents Only:**	--	--	--	--	--	--
<b>Turkey Hunting:</b>	\$40,314,218	\$69,135,050	\$22,949,461	1,079	\$4,901,579	\$4,732,277
Residents Only:	\$38,512,478	\$65,859,129	\$21,968,383	1044	\$4,694,218	\$4,518,183
Non-Residents Only:**	--	--	--	--	--	--

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

**Table 12. Economic Activity Generated by Wildlife Watchers in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>RETAIL SALES</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>JOBS</b>	<b>FEDERAL TAX REVENUE</b>	<b>STATE &amp; LOCAL TAX REVENUE</b>
<b>All Wildlife Watching Activities:</b>	\$328,660,258	\$571,828,683	\$170,287,232	7,939	\$36,411,105	\$34,408,910
Residents Only:	\$309,052,213	\$536,768,141	\$159,567,171	7,499	\$34,079,231	\$32,127,901
Non-Residents Only**:	--	--	--	--	--	--

\*\* = Sample size is too small to report reliably.

**Table 13. Combined Economic Impacts of Wildlife-Related Recreation in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>RETAIL SALES</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>JOBS</b>	<b>FEDERAL TAX REVENUE</b>	<b>STATE &amp; LOCAL TAX REVENUE</b>
<b>Fishing and Hunting:</b>	\$1,014,202,827	\$1,749,770,225	\$525,472,475	20,203	\$112,413,508	\$106,858,198
Residents Only:	\$908,416,373	\$1,566,524,213	\$474,126,298	18,438	\$101,287,045	\$96,302,673
Non-Residents Only*:	\$105,786,453	\$183,246,012	\$51,346,177	1,765	\$11,126,463	\$10,555,525
<b>Fishing, Hunting and Wildlife-Watching:</b>	\$1,342,863,085	\$2,321,598,908	\$695,759,707	28,142	\$148,824,613	\$141,267,108
Residents Only	\$1,217,468,586	\$2,103,292,354	\$633,693,469	25,937	\$135,366,276	\$128,430,574
Non-Residents Only*	\$125,394,499	\$218,306,554	\$62,066,238	2,205	\$13,458,337	\$12,836,534

\* = Sample size is small and results should be interpreted with caution.

#### *Per Participant and Per Day Expenditures*

Table 14 presents estimates of the amount spent by recreationists per person and per day. These estimates can be used to approximate changes in economic activity when it is known how specific management or other actions may affect participation in fish and wildlife recreation.

**Table 14. Per Day and Per Person Expenditures for Hunting, Fishing and Wildlife Watching in Oklahoma, 2006. (Participants 16 years old and older.)**

<b>HUNTING</b>	<b>Big Game</b>	<b>Small Game</b>	<b>Upland Game Birds</b>	<b>Migratory Bird</b>	<b>Deer</b>	<b>Turkey</b>	<b>All Species<sup>1</sup></b>
<b>All Hunters:</b>							
Average daily expenditures	\$95.29	\$90.66	\$89.97*	\$76.27*	\$106.59	\$78.28	\$88.92
Average annual expenditures	\$1,963.99	\$682.54	\$485.30*	\$529.47*	\$1,608.98	\$561.91	\$1,963.63
<b>Resident Hunters:</b>							
Average daily expenditures	\$86.19	\$78.98*	\$63.35*	\$83.03*	\$106.50	\$78.50	\$81.29
Average annual expenditures	\$1,838.81	\$656.45*	\$279.33*	\$545.11*	\$1,650.21	\$583.39	\$1,939.30
<b>Non-Resident Hunters:</b>							
Average daily expenditures	**	**	**	**	**	**	\$298.58
Average annual expenditures	**	**	**	**	**	**	\$2,166.84
<hr/>							
<b>FRESHWATER FISHING</b>	<b>Crappie</b>	<b>Panfish</b>	<b>White Bass</b>	<b>Black Bass</b>	<b>Catfish</b>	<b>Any species</b>	<b>All Species<sup>1</sup></b>
<b>All Anglers:</b>							
Average daily expenditures	\$18.81	\$9.08	\$26.08	\$38.37	\$32.83	\$37.02	\$49.35
Average annual expenditures	\$286.82	\$157.98	\$353.90	\$665.55	\$559.96	\$375.59	\$855.20
<b>Resident Anglers:</b>							
Average daily expenditures	\$17.65	\$8.71*	\$24.98	\$38.14	\$32.22	\$13.36	\$48.20
Average annual expenditures	\$282.24	\$145.01*	\$359.68	\$707.62	\$561.46	\$154.54	\$904.25
<b>Non-Resident Anglers:</b>							
Average daily expenditures	\$34.71*	**	**	\$41.65*	\$43.36*	**	\$64.79
Average annual expenditures	\$323.23*	**	**	\$376.51*	\$541.56*	**	\$555.63

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

<sup>1</sup> These figures present the average expenditures for all hunters or anglers, regardless of species targeted. These figures include big-ticket items such as vehicles, boats, and other items that sportsmen and women could not assign to any specific species. Some of these big-ticket items may be left out of species specific expenditure estimates, thus the "All Species" expenditure averages are generally higher than reported for any other species in the above table.

**Table 14. (Continued) Per Day and Per Person Expenditures for Hunting, Fishing and Wildlife Watching in Oklahoma, 2006. (Participants 16 years old and older.)**

<b>WILDLIFE WATCHING</b>	<b>Residents</b>	<b>Non-Residents</b>	<b>All Participants</b>
<b>Average per participant, annually</b>			
On residential activities, annually	\$261.37*		
On non-residential activities, annually	\$3,604.80*	**	\$3,056.96
<b>Average per day, per participant</b>			
For non-residential activities, including equipment items	\$230.87*	**	\$222.69
For non-residential activities, travel expenses only (food, hotel, etc):	\$22.99*	**	\$29.25

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

*Travel-Related Expenditures:*

Table 15 presents travel-related expenditures made by Oklahoma anglers, hunters and wildlife viewers. Through travel, participants help distribute wealth to rural areas where economic opportunities may be limited compared to urban and suburban regions. These expenditures include food, transportation costs (mostly fuel), lodging, guide fees, equipment rental, etc. While not all of these dollars may be spent in rural areas, many are. In addition to travel expenses, many participants will spend money on equipment and services in rural areas. Such equipment and service expenditures are not included in the table below.

**Table 15. Travel-Related Expenditures for Hunting, Fishing and Wildlife Watching in Oklahoma by Residents and Non-Residents Combined, 2006. (Participants 16 years old and older.)**

<b>HUNTING</b>	
Big Game	\$95,039,315
Small Game	\$19,365,844
Upland Game	\$13,261,730
Migratory Bird	\$12,173,262
Deer	\$75,109,723
Turkey	\$18,494,418
<b>All Hunting, All Species</b>	<b>\$135,335,312</b>
<b>FISHING</b>	
Catfish	\$80,448,520
Black Bass	\$108,719,831
Crappie	\$37,245,754
Panfish	\$7,453,116
White Bass	\$44,215,321
Any other	\$22,692,276
<b>All Fishing, All Species</b>	<b>\$301,408,210</b>
<b>WILDLIFE WATCHING</b>	
Non-residential only <sup>1</sup>	\$134,867,644

<sup>1</sup> Per-day expenditure estimates are not possible for residential wildlife viewing activities.

## Public and Private Land Activity, Expenditures and Impacts

### *Use of Public Lands*

Hunters and non-residential wildlife viewers depend on a combination of public and private lands. With urban and suburban populations increasing, it is likely that public lands will play an increasing role in supplying residents and visitors alike with opportunities to experience Oklahoma’s wildlife resources. Table 16 presents the percentage of Oklahoma resident wildlife viewers using public and private lands for non-residential activities (those occurring more one or more miles from home). Data were not available for non-residents. Table 17 presents the percentage of Oklahoma hunters using public and private lands. The 2006 National Survey does not ask anglers about activities on public and/or private waters. Therefore, estimates regarding fishing on public waters are not possible.

Please note that in Table 17, while information may exist for a specific type of hunting, such as ‘big game hunting,’ there may not be any information to report the next step higher, such as ‘all hunting.’ This happens for a reason. It is more difficult to identify people in the Survey who have hunted exclusively on either private or public lands for all types of hunting. For example, someone may hunt on public land exclusively for deer, but then hunt private land for small game. In this case, this individual could be included in the “Public land only – big game” calculations, but would not be eligible for inclusion in the “Public land only – all hunting” calculations.

Although the sample sizes are quite small, wildlife viewers appear to be much more dependent on public lands for non-residential activities. One reason among several for this difference might be related to a higher percentage of participants living in non-rural regions and therefore less likely to have access to private lands.

**Table 16. Percentage of Non-Residential<sup>1</sup> Wildlife Watching Activity and Days Occurring on Public and Private Land in Oklahoma, 2006. (Participants 16 years old and older.)**

	Percent of Residents	Total
<b>Public Land Exclusively</b>		
Participants*	35.0%	35.4%
Days of Participation*	15.8%	16.1%
<b>Private Land Exclusively</b>		
Participants*	32.2%	32.8%
Days of Participation*	32.5%	32.9%
<b>Use Both Public and Private Lands</b>		
Participants	**	**
Days of Participation	**	**

<sup>1</sup>“Non-Residential” describes people who watch, photograph and/or feed wildlife *one mile or more* from their place of residence. Data were not available for residential (around the home) activity.

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably.

**Table 17. Percentage of Hunters and Hunting Days on Public and Private Land in Oklahoma, 2006. (Participants 16 years old and older.)**

	<u>All Hunting</u>		<u>Big Game</u>		<u>Small Game</u>		<u>Upland Game Birds</u>		<u>Migratory Birds</u>	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<b>NUMBER OF HUNTERS WHO USE:</b>										
<b>All Types of Land:</b>	250,590	100%	193,180	100%	78,970	100%	51,472	100%	64,951	100%
Residents:	223,796		184,134		58,432*		30,934		58,695	
Non-residents:	26,794*		**		**		**		**	
<b>Public Lands Exclusively:</b>	**		**		**		**		**	
Residents:	**		**		**		**		**	
Non-residents:	**		**		**		**		**	
<b>Private Lands Exclusively:</b>	**		155,501	80.5%	67,384	85.3%	42,661	82.9%	46,594	71.7%
Residents:	**		146,455	79.5%	49,408*	84.6%	24,685	79.8%	44,096	67.9%
Non-residents:	**		**		**		**		**	
<b>Both Public and Private Lands:</b>	38,930	15.5%	**		**		**		**	
Residents:	37,101		**		**		**		**	
Non-residents:	**		**		**		**		**	
<b>DAYS OF HUNTING:</b>										
<b>All Hunters, All Types of Land</b>	14,049,720	100%	3,981,767	100%	5,533,612	100%	277,638	100%	450,874	100%
Residents:	13,400,165		3,928,562		5,339,160		136,398		385,338	
Non-residents:	649,555*		**		**		**		**	
<b>Public Lands Exclusively:</b>	**		**		**		**		**	
Residents:	**		**		**		**		**	
Non-residents:	**		**		**		**		**	
<b>Private Lands Exclusively:</b>	**		2,262,324	56.8%	2,512,245	45.4%	209,932	75.6%	258,452	57.3%
Residents:	**		2,209,119	56.2%	2,512,245*	47.1%	76,380	56.0%	253,457	65.8%
Non-residents:	**		**		**		**		**	
<b>Both Public and Private Lands:</b>	2,224,427	15.8%	**		**		**		**	
Residents:	2,202,484		**		**		**		**	
Non-residents:	**		**		**		**		**	

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably. The results do not mean that non-residents did not use these types of lands. The results do imply that such use by non-residents is infrequent.

## Expenditures (Retail Sales) and Economic Impacts Associated with Activities on Public and Private Lands

Significant public funds go into managing fish and wildlife on all lands, public and private. Additional funds are used to acquire and manage habitat on public lands. To help gain an understanding of the return from public lands, Table 18 *estimates* the expenditures and economic impacts created by wildlife viewers associated with their activity occurring on public and private lands. Only the impacts from non-residential activities (more than one mile from home) are included in these estimates. Table 19 presents the same information for hunters, and Table 20 presents the combined impacts by type of land used. These estimates are based on the number of days each spends on public and private lands respectively. The 2006 National Survey does not ask anglers about activities on public and/or private waters. Therefore, such estimates are not possible for anglers.

Please note that in Table 19, while information may exist for a specific type of hunting, such as ‘big game hunting,’ there may not be any information reported for the next step higher, such as ‘all hunting.’ This happens for a reason. It is more difficult to identify people in the Survey who have hunted exclusively on either private or public lands for all types of hunting. For example, someone may hunt on public land exclusively for deer, but then hunt private land for small game. In this case, this individual could be included in the “Public land only – big game” calculations, but would not be eligible for inclusion in the “Public land only – all hunting” calculations.

**Table 18. Economic Activity Generated by Non-Residential Wildlife Watchers, by Type of Land Used in Oklahoma, 2006. (Participants 16 years old and older.)**

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
<b>Public Land</b>						
<b>Exclusively</b>	\$61,338,817	\$108,052,547	\$34,159,947	1,296	\$7,189,751	\$6,710,300
Residents*	\$54,071,196	\$94,937,834	\$30,166,289	1,145	\$6,336,377	\$5,856,326
Non-Residents**	--	--	--	--	--	--
<b>Private Land</b>						
<b>Exclusively*</b>	\$55,170,426	\$96,201,523	\$26,868,957	1,221	\$5,838,539	\$5,916,447
Residents*	\$54,513,705	\$95,039,881	\$26,510,376	1,204	\$5,761,408	\$5,843,744
Non-Residents**	--	--	--	--	--	--
<b>Both Public and Private Lands</b>	----- Not enough data to report reliably -----					

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably. The results do not mean that non-residents did not use these types of lands. The results do imply that such use by non-residents is infrequent.

**Table 19. Economic Activity Generated by Hunting in Oklahoma, by Type of Land Used, 2006. (Participants 16 years old and older.)**

	<b>RETAIL SALES</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>JOBS</b>	<b>FEDERAL TAX REVENUE</b>	<b>STATE &amp; LOCAL TAX REVENUE</b>
<b>PUBLIC LANDS EXCLUSIVELY:</b>						
----- Not enough data to report reliably -----						
<b>PRIVATE LANDS EXCLUSIVELY:</b>						
<b>Big Game Hunting:*</b>	\$259,635,726	\$441,551,391	\$130,349,036	5,034	\$27,713,299	\$24,650,590
Residents Only:*	\$254,504,581	\$432,593,082	\$127,685,176	4,933	\$27,123,488	\$24,028,670
Non-Residents Only:	**	**	**	**	**	**
<b>Migratory Bird Hunting:*</b>	\$15,836,838	\$27,433,132	\$8,941,078	389	\$1,925,226	\$1,896,555
Residents Only:*	\$15,349,835	\$26,553,565	\$8,672,946	380	\$1,868,838	\$1,840,419
Non-Residents Only:	**	**	**	**	**	**
<b>Small Game Hunting:*</b>	\$32,237,751	\$55,370,095	\$17,516,269	630	\$3,878,135	\$4,026,664
Residents Only:*	\$20,644,444	\$36,224,815	\$11,818,220	412	\$2,523,880	\$2,544,297
Non-Residents Only:	**	**	**	**	**	**
<b>USE BOTH PUBLIC AND PRIVATE LANDS</b>						
----- Not enough data to report reliably -----						

\* = Sample size is small and results should be interpreted with caution.

\*\* = Sample size is too small to report reliably. The results do not mean that residents and non-residents did not use these types of lands. The results do imply that such use is infrequent.

**Table 20. Economic Activity Generated by Hunters and Wildlife Watchers Combined, by Type of Land Used in Oklahoma, 2006. (Participants 16 years old and older.)**

	<b>RETAIL SALES</b>	<b>OUTPUT</b>	<b>EARNINGS</b>	<b>JOBS</b>	<b>FEDERAL TAX REVENUE</b>	<b>STATE &amp; LOCAL TAX REVENUE</b>
<b>Public Land</b>						
<b>Exclusively</b>	\$61,338,817	\$108,052,547	\$34,159,947	1,296	\$7,189,751	\$6,710,300
Residents	\$54,071,196	\$94,937,834	\$30,166,289	1,145	\$6,336,377	\$5,856,326
Non-Residents	**	**	**	**	**	**
<b>Private Land</b>						
<b>Exclusively</b>	\$55,170,426	\$96,201,523	\$26,868,957	1,221	\$5,838,539	\$5,916,447
Residents	\$54,513,705	\$95,039,881	\$26,510,376	1,204	\$5,761,408	\$5,843,744
Non-Residents	**	**	**	**	**	**
<b>Both Public and Private Lands</b>	----- Not enough data to report reliably -----					

\*\* = Sample size is too small to report reliably. The results do not mean that non-residents did not use these types of lands. The results do imply that such use by non-residents is infrequent.

## Conclusion

Fish and wildlife provide numerous recreation opportunities for Oklahoma residents. The recreation expenditures benefit Oklahoma with significant jobs, income and other economic activity. These benefits are particularly important in rural or remote areas where other sources of income are limited. Anglers, hunters and wildlife viewers spend dollars that, in turn, benefit many other industries throughout the state. The resulting economic benefits reach every corner of the state and its economy. Every resident and tourist of Oklahoma benefits from fish and wildlife recreation spending. It is clear that fish and wildlife generates significant economic impacts that must be considered in policy-making.

## Appendix A: Sound Bites

### Comparing Hunting, Fishing And Wildlife-Viewing To Well-Known Activities

1. **The number of people who view wildlife in Oklahoma could fill the University of Oklahoma football stadium (Owen Field) AND the Oklahoma State University football stadium (Boone Pickens) eight and a half times.** (Owen Field capacity = 82,112; Boone Pickens = 50,614; OK wildlife viewers = 1.11 million per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
2. **The number of people who fish in Oklahoma could fill the University of Oklahoma football stadium (Owen Field) AND the Oklahoma State University football stadium (Boone Pickens) four and a half times.** (Owen Field capacity = 82,112; Boone Pickens = 50,614; OK anglers = 610,544 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
3. **The number of people who hunt in Oklahoma could fill the University of Oklahoma football stadium (Owen Field) AND the Oklahoma State University football stadium (Boone Pickens) almost two times.** (Owen Field capacity = 82,112; Boone Pickens = 50,614; OK hunters = 250,590 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
4. **The number of residents and non-residents in Oklahoma who travel away from home to view wildlife is nearly equal to the population of Tulsa.** (Population of Tulsa = 387,807 in 2003 per U.S. Census Bureau; residents + non-residents traveling away from home in OK to view wildlife = 371,546 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
5. **The number of residents who fish each year in Oklahoma is equal to the population of Oklahoma City.** (Population of Oklahoma City = 523,303 in 2003 per U.S. Census Bureau; number of Oklahomans who fish = 525,000 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
6. **The number of residents who hunt each year in Oklahoma is nearly two and a half times greater than the population of Lawton.** (Population of Lawton = 91,730 in 2003 per U.S. Census Bureau; number of Oklahomans who hunt = 224,000 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
7. **If not for the jobs supported by fishing, hunting and wildlife viewing, Oklahoma's ranks of unemployed would be 40% higher.** (Oklahoma's November 2006 unemployed = 70,200 per U.S. Bureau of Labor Statistics; jobs supported by fishing, hunting and wildlife viewing = 28,142 per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
8. **The 28,142 jobs supported by hunting, fishing and wildlife-viewing in Oklahoma are greater than the state's third largest employer, Tinker Air Force Base, with 23,000 employees.** (State government and Wal-Mart/Sam's Club are the first and second largest employers with 30,000 and 37,000 employees, respectively; jobs supported by fishing,

hunting and wildlife viewing = 28,142 per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)

9. **Nearly as many people fished in Oklahoma in 2006 than voted for the winning gubernatorial candidate that year.** (616,037 voted for the winner per <http://www.cnn.com/ELECTION/2006/pages/results/states/OK/G/00/index.html>; OK anglers = 610,544 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
10. **The total state and local tax revenues generated by wildlife viewing in Oklahoma equates to \$9.60 per resident.** (3.579 million OK residents per U.S. Census Bureau; tax revenue from wildlife viewing calculated by Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
11. **The total state and local tax revenues generated by fishing in Oklahoma equates to \$16.02 per resident.** (3.579 million OK residents per U.S. Census Bureau; tax revenue from fishing calculated by Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
12. **The total state and local tax revenues generated by hunting in Oklahoma equates to \$13.83 per resident.** (3.579 million OK residents per U.S. Census Bureau; tax revenue from hunting calculated by Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
13. **The total days, resident and non-resident, spent fishing, hunting and wildlife-viewing in Oklahoma equates to 63,592 years worth of outdoor activity.** (23.2 million days of fishing, hunting and wildlife viewing in 2006 per the U.S. Fish and Wildlife Service's *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
14. **The income (salaries, wages and business profits) generated in 2006 by hunting, fishing and wildlife watching in Oklahoma is 75 percent greater than the value of the state's wheat harvest.** (Wheat crop value = \$396 million in 2006 per the USDA National Agricultural Statistics Service; hunting, fishing and wildlife viewing-generated income = \$696 million per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
15. **The income (salaries, wages and business profits) generated in 2006 by fishing in Oklahoma equals half the value of the state's annual production of poultry and eggs.** (Poultry & egg value = \$508.3 million in 2006 per the USDA National Agricultural Statistics Service; fishing-generated income = \$273.9 million per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
16. **The income (salaries, wages and business profits) generated in 2006 by hunting in Oklahoma is 50 percent greater than the value of the state's annual milk and dairy production.** (Milk and dairy receipts = \$163 million in 2006 per the USDA National Agricultural Statistics Service; hunting-generated income = \$252 million per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
17. **The total spent in Oklahoma for fishing in 2006 was 23 percent greater than the total national box office earnings of "Pirates of the Caribbean: Dead Man's Chest," the nation's top grossing movie that year.** (Total box office earnings = \$423 million per

boxofficemojo.com; fishing related retail sales = \$522 million per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)

18. **The total spent in Oklahoma for fishing, hunting and wildlife viewing in 2006 was more than three times greater than the total national box office earnings of “*Pirates of the Caribbean: Dead Man’s Chest*,” the nation’s top grossing movie that year.** (Total box office earnings = \$423 million per boxofficemojo.com; total hunting, fishing and wildlife viewing-related retail sales = \$1.342 billion per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
19. **The average Oklahoma angler has an annual household income 22 percent greater than the statewide average.** (Oklahoma average household income per U.S. Census Bureau = \$40,001; average household income per resident angler = \$48,999 per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)
20. **The average Oklahoma hunter has an annual household income 38 percent greater than the statewide average.** (Oklahoma average household income per U.S. Census Bureau = \$40,001; average household income per resident hunter = \$55,085 per Southwick Associates, Inc., using data from the *2006 National Survey of Fishing, Hunting and Wildlife-Related Recreation*.)

## **Appendix B: Definitions**

**Economic benefits** can be estimated by two types of economic measures: economic impacts and economic values. An **economic impact** addresses the business and financial activity resulting from the use of a resource. **Economic value**, on the other hand, measures the difference between what an individual would be willing to pay and what they actually pay for a commodity or activity. This concept is also known as “consumer surplus”. Only economic impacts are addressed in this report.

There are three types of economic impacts: direct, indirect and induced. A **direct impact** is defined as the economic impact of the initial purchase made by the consumer. For example, when a person buys a rod and reel for \$50 there is a direct impact to the retailer of \$50. **Indirect impacts** are the secondary effects generated from a direct impact. Indirect impacts indicate that sales in one industry affect not only that industry, but also the industries that supply the first industry. For example, the retail store must purchase additional rods and reels; the rod and reel manufacturers must purchase additional materials for production; materials manufacturers must buy inputs, and so on. Therefore, the original expenditure of \$50 for the rod and reel benefits a host of other industries. An **induced impact** results from the salaries and wages paid by the directly and indirectly impacted industries. The employees of these industries spend their income on various goods and services. These expenditures are induced impacts which, in turn, create a continual cycle of indirect and induced effects.

The sum of the direct, indirect and induced impact effects equals the **total economic impact**. As the original retail purchase (direct impact) goes through round after round of indirect and induced effects, the economic impact of the original purchase is multiplied, benefiting many industries and individuals. Likewise, the reverse is true. If a particular item or industry is removed from the economy, the economic loss is greater than the original retail sale. Once the original retail purchase is made, each successive round of spending is smaller than the previous round. When the economic benefits are no longer measurable, the economic examination ends.

### **Species Included in this Study:**

- “Big Game” – deer, turkey, bear and elk
- “Small Game” – rabbit/hare, quail, grouse, squirrel and pheasant
- “Upland Game Birds” – quail, pheasant, and grouse
- “Migratory Birds” – geese, ducks and dove.

## **Appendix C: Methods**

The methods used to generate the economic impact estimates for Oklahoma are separated into four stages:

- 1) tabulate the expenditures made by recreationists (16 years old and older) from the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (Survey);
- 2) allocate the detailed expenditures to the appropriate sectors of the economy that are directly impacted the spending;
- 3) estimate the indirect and induced effects of the consumer spending through the use of an input-output model of the Oklahoma economy and the IMPLAN economic modeling software;
- 4) estimate federal and state/local tax revenues with the IMPLAN economic modeling software.

### **1. Tabulating Expenditures**

Hunters, anglers and wildlife watchers’ expenditures were obtained from the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (Survey). This Survey is conducted approximately every five years by the U.S. Fish and Wildlife Service and U.S. Bureau of the Census. The Survey provides data required by natural resource management agencies, industry and private organizations at the local, state, and national levels to assist in

optimally managing natural resources. The Survey is funded through excise taxes on hunting and fishing equipment through the Federal Aid in Sport Fish and Wildlife Restoration Acts.

To generate the statewide economic results, expenditures were categorized into resident and nonresident files. Both included information on trip-related and equipment expenditures. Together, the resident and nonresident files represent all expenditures made in Oklahoma during 2006 for hunting, fishing and wildlife viewing.

The Survey contains data on trip-related expenditures (such as food, lodging, fuel) made by participants where the primary purpose of each purchase was for fishing, hunting and/or wildlife viewing. The Survey also contains data on equipment expenditures (such as rods and firearms), and contains data on equipment expenditures (such as boats, camping equipment) made by sportsmen that can be used for both hunting and fishing. Anglers were able to specify their angler-related equipment expenditures to either Great Lakes fishing, freshwater (non-Great Lakes) fishing, saltwater fishing, or unspecified fishing. Anglers were able to specify their hunting and fishing related expenditures to one of five fishing categories: Great Lakes fishing, freshwater fishing, saltwater fishing, unspecified fishing, and unspecified hunting and fishing. (Please note: the Survey is a national survey. Therefore the Great Lakes and saltwater categories were included though they had no bearing on this state's study).

For individuals who indicated their equipment expenditures were for non-Great Lakes freshwater fishing, we allocated the relevant expenditures to Oklahoma fishing. For individuals who indicated their equipment expenditures were for unspecified fishing, we allocated expenditures based on the number of days of reported fishing, by type. For individuals who indicated their equipment expenditures were for unspecified fishing and hunting purposes, we allocated these expenditures evenly across hunting and fishing. The U.S. Fish and Wildlife Service does not attempt to allocate unspecified angler expenditures. Therefore, the equipment expenditures reported here are slightly higher than those reported by the U.S. Fish and Wildlife Service.

#### *Data Adjustments and Assumptions*

The Survey does not have separate expenditure categories for activity related to specific species, such as deer hunting or black bass fishing. Therefore, these had to be estimated. To do this, we used two different methods - one for the trip-related expenditure data and another for the equipment expenditure data. Freshwater fishing will be used as the example here to explain methods:

To allocate the freshwater trip-related expenditures to three categories of interest, we first calculated the following ratio for each observation:

$$\text{Ratio 1} = \text{DFS/DFFW}$$

where DFS = days spent fishing for the species of interest, and DFFW = total days spent freshwater fishing. We then multiplied each trip-related expenditure reported by survey respondents by its corresponding 'Ratio 1'. We could not apply this method to the equipment expenditures because some individuals purchased angling equipment in 2006, but did not take any freshwater fishing trips that year. Applying the above method would underestimate the equipment expenditures to each subcategory. To allocate angling equipment expenditures to pan fish, black bass, trout, etc., we multiplied the total expenditures spent on each equipment category by the corresponding average 'Ratio 1'.

Statistical analyses such as those reported here are based upon samples of the population contacted through the U.S. Fish and Wildlife Service's Survey. Because the primary purpose of the Survey was not to specifically contact anglers fishing for specific species but rather hunters, anglers and other wildlife recreationists in general, some species categories have small samples of respondents. Small samples can lead to results that are influenced by a single, unusual observation or results that are not representative of the population at large. Results dependent on small samples are footnoted in the tables and should be interpreted with extra caution.

## **2. Disaggregating Expenditures**

Retail sales (angler expenditures) were separated into manufacturing, wholesale and retail subcategories because economic impact analysis treats each segment as separate industries. The amount of each retail sale attributed to each segment is known as a trade margin. A trade margin is the percentage (mark-up) of a sale attributable to either

the retail, wholesale or manufacturing sector. A gross margin is the revenue remaining after the cost of the goods sold is subtracted. Data used to calculate gross margins are from the U.S. Department of Commerce (census of wholesale and retail trade). These sources contain national sales figures for most retail and wholesale industry sectors. To derive margins, each wholesale and retail industry's gross margin was divided by its total sales. This produces the typical price mark-up for that industry. Next, two formulas are applied to estimate the value added (price mark-up) for each sector:

$R/(1+R)$  = retail margin, where R = retail mark-up

$W/\{(1+W)(1+R)\}$  = wholesale margin, where W = wholesale mark-up.

These formulas estimate the percentage of a product's final selling price that accrue to each sector. The manufacturing margin is derived by summing the retail and wholesale margins and subtracting the total from 100 percent. Since there are no wholesale or manufacturing activities in the service sector, services are not subjected to the above process.

### 3. Applying the Economic Model

To estimate the economic impacts, the data were analyzed with the IMPLAN input-output model. The IMPLAN model was developed by MIG, Inc. of Stillwater, Minnesota originally for use by the U.S. Forest Service. Input-output models describe how sales in one industry impact other industries. For example, once a sportsman makes a purchase, the retailer buys more merchandise from wholesalers, who buy more from manufacturers, who, in turn, purchase new inputs and supplies. In addition, the salaries and wages paid by these businesses stimulate more benefits. Simply, the first purchase creates numerous rounds of purchasing. Input-output analysis tracks how the various rounds of purchasing benefits other industries and generates economic benefits.

The relationships between industries are explained through multipliers. For example, an income multiplier of .09 for industry X would indicate that for every dollar received by the industry under study, nine cents would be paid to the employees of industry X for its products or services. The IMPLAN model provides multipliers for all major industries in the U.S. and for each state. The IMPLAN model includes output, earnings and employment multipliers. The **output** multiplier measures the total economic effect created by the original retail sale. The **earnings** multiplier measures the total salaries and wages generated by the original retail sale. The **employment** multiplier estimates the number of jobs supported by the original retail sale. IMPLAN also estimates federal, state and local tax revenues.

To apply the IMPLAN model, angler expenditures are each matched to the appropriate output, earnings and employment multipliers. For example, dollars attributed to gasoline refining are multiplied separately by the earnings, output and employment multipliers specific to gasoline refinement. The resulting estimates describe the salaries and wages, total economic effects, and jobs supported by the refining industry as a result of fuel purchases made by anglers. This same process is repeated for all reported expenditures. After all expenditures and multipliers have been applied together, the retail, wholesale and manufacturing results for each category are summed together.

## Appendix D: Detailed Expenditures And Impacts

This appendix reports the expenditures made by resident and non-resident hunters for specific items. The data source, the 2006 National Survey of Fishing, Hunting and Wildlife-Associated Recreation, asked hunters, anglers and wildlife viewers about their expenditures for a uniform list of items. Many of these items may or may not be common in Oklahoma, such as bass boat expenditures for hunting, ice fishing gear. In such cases, these items will be listed with zero dollars. This does not mean that nothing was spent for this specific item. Instead, it means that no one in the sample reported such expenditures. In such cases, a zero value should only be interpreted to mean the item is not a common purchase in Oklahoma.

**Detailed Expenditures By All Hunters In Oklahoma, 2006.**

	Residents	Nonresidents*	Total
<b>Sample Size:</b>	<b>96</b>	<b>11</b>	<b>107</b>
Food	\$42,658,990	\$4,680,068	\$47,339,058
Lodging	\$3,653,374	\$1,997,241	\$5,650,615
Airplane fare	\$0	\$640,635	\$640,635
Public transport	\$592,477	\$0	\$592,477
Automobile	\$62,479,954	\$5,601,327	\$68,081,281
Guide fees	\$170,874	\$1,025,015	\$1,195,889
Public land fees	\$233,818	\$0	\$233,818
Private land fees	\$7,529,758	\$0	\$7,529,758
Heat/cook fuel	\$2,010,141	\$137,374	\$2,147,515
Equip rentals	\$1,030,605	\$0	\$1,030,605
Boat fuel	\$287,153	\$18,286	\$305,439
Boat launch fee	\$0	\$0	\$0
Boat mooring	\$588,224	\$0	\$588,224
Rifles	\$16,804,177	\$0	\$16,804,177
Shotguns	\$10,326,775	\$0	\$10,326,775
Muzzle loader	\$1,440,952	\$0	\$1,440,952
Handgun	\$10,497,546	\$0	\$10,497,546
Bows	\$13,845,094	\$0	\$13,845,094
Scopes - guns	\$5,194,962	\$0	\$5,194,962
Decoys	\$3,727,442	\$0	\$3,727,442
Ammo	\$15,000,940	\$102,502	\$15,103,442
Handloading	\$721,454	\$0	\$721,454
Dogs	\$17,957,989	\$164,829	\$18,122,818
Other hunt equip	\$15,716,767	\$0	\$15,716,767
Camping gear	\$1,820,184	\$0	\$1,820,184
Binoculars	\$2,183,468	\$0	\$2,183,468
Foul weather gear	\$7,041,798	\$0	\$7,041,798
Taxidermy	\$11,545,594	\$396,939	\$11,942,534
Other items	\$2,332,750	\$381,735	\$2,714,484
Bass boat	\$0	\$0	\$0
Boat	\$0	\$0	\$0
Canoe	\$0	\$0	\$0
Boat motor	\$2,447,206	\$0	\$2,447,206
Van	\$110,850,873	\$35,107,279	\$145,958,152
Cabin	\$274,680	\$0	\$274,680
Off-road vehicle	\$35,746,186	\$0	\$35,746,186
Other special equip	\$890,998	\$0	\$890,998
Books	\$2,288,395	\$0	\$2,288,395
Dues	\$1,942,581	\$0	\$1,942,581
License	\$3,736,135	\$1,750,366	\$5,486,501
Land purchase	\$1,071,404	\$6,054,944	\$7,126,348
Land lease	\$17,365,191	\$0	\$17,365,191
<b>TOTAL</b>	<b>\$434,006,908</b>	<b>\$58,058,538</b>	<b>\$492,065,447</b>

\* = Sample size is small and results should be interpreted with caution.

**Detailed Expenditures By All Freshwater Anglers In Oklahoma, 2006.**

	<b>Residents</b>	<b>Nonresidents</b>	<b>Total</b>
<b>Sample Size:</b>	<b>222</b>	<b>35</b>	<b>257</b>
Food	\$77,784,869	\$12,492,192	\$90,277,061
Lodging	\$10,466,838	\$7,760,611	\$18,227,449
Airfare	\$1,112,869	\$1,787	\$1,114,656
Public transportation	\$52,486	\$0	\$52,486
Private transportation	\$91,582,751	\$13,937,561	\$105,520,312
Boat fuel	\$29,189,507	\$2,315,872	\$31,505,378
Guides	\$1,145,452	\$2,730,130	\$3,875,582
Public land use fees	\$1,205,336	\$169,370	\$1,374,706
Private land use fees	\$1,701,081	\$0	\$1,701,081
Boat launching	\$4,295,380	\$47,420	\$4,342,799
Boat mooring	\$13,592,377	\$0	\$13,592,377
Equipment rental	\$2,545,495	\$0	\$2,545,495
Bait (live, cut, prepared)	\$14,546,517	\$1,567,084	\$16,113,601
Ice	\$8,170,823	\$940,677	\$9,111,500
Heating & cooking fuel	\$1,462,452	\$591,274	\$2,053,726
Rods, reels & components	\$32,452,902	\$634,344	\$33,087,246
Lines & leaders	\$6,112,935	\$291,725	\$6,404,660
Lures, flies & artificial bait	\$23,237,750	\$585,999	\$23,823,749
Hooks, sinkers, other terminal tackle	\$6,534,650	\$166,468	\$6,701,118
Tackle boxes	\$2,912,823	\$122,662	\$3,035,485
Creels, strings, landing nets, etc.	\$1,777,745	\$10,581	\$1,788,325
Bait buckets, minnow traps, etc.	\$748,667	\$0	\$748,667
Depth finder, fish finders, other electronics	\$6,055,008	\$118,186	\$6,173,194
Ice fishing equipment	\$0	\$0	\$0
Other fishing equipment	\$5,689,643	\$33,019	\$5,722,662
Camping gear	\$1,652,891	\$0	\$1,652,891
Binoculars	\$742,193	\$0	\$742,193
Special fishing clothing, foul weather gear	\$3,515,614	\$533,616	\$4,049,230
Bass boats	\$10,599,423	\$0	\$10,599,423
Other motorized boats	\$46,700,947	\$0	\$46,700,947
Canoes, non-motorized boats	\$2,308,696	\$0	\$2,308,696
Boat motors, trailers, hitches, etc.	\$2,675,732	\$2,637,267	\$5,312,999
Pick-ups, campers, motor homes, etc.	\$30,234,675	\$0	\$30,234,675
Cabins	\$0	\$0	\$0
4x4 and off-road vehicles	\$152,317	\$0	\$152,317
Other special equipment	\$3,500,321	\$0	\$3,500,321
Taxidermy & processing	\$1,337,759	\$0	\$1,337,759
Books & magazines	\$1,497,558	\$40,072	\$1,537,631
Dues and contributions	\$4,928,574	\$0	\$4,928,574
Other misc. fishing expenditures	\$118,651	\$0	\$118,651
Land purchased for fishing	\$14,486,688	\$0	\$14,486,688
Land leased for fishing	\$5,581,070	\$0	\$5,581,070
<b>TOTAL</b>	<b>\$474,409,465</b>	<b>\$47,727,915</b>	<b>\$522,137,380</b>

**Detailed Expenditures By All Wildlife Watching In Oklahoma, 2006.** *Does not include wildlife watching activities around the home ( residential).*

<b>Sample Size:</b>	<b>Residents</b>	<b>Nonresidents**</b>	<b>Total</b>
	<b>38</b>	<b>9</b>	<b>47</b>
Food	\$32,141,442	**	\$38,781,621
Lodging	\$29,693,352	**	\$36,735,271
Airfare	\$7,400,222	**	\$7,400,222
Public transportation	\$8,524	**	\$8,524
Private transportation	\$41,588,634	**	\$47,415,389
Guide fees	\$81,252	**	\$81,252
Public land access fees	\$475,974	**	\$546,089
Private land access fees	\$8,524	**	\$8,524
Equipment rental	\$894,644	**	\$894,644
Boat fuel	\$2,687,155	**	\$2,687,155
Other boat costs	\$8,524	**	\$8,524
Heating & cooking fuel	\$300,430	**	\$300,430
Cameras	\$4,358,687	**	\$4,358,687
Film & developing	\$42,218,010	**	\$42,218,010
Binoculars & spotting scopes	\$24,105,561	**	\$24,105,561
Commercial bird food	\$43,974,223	**	\$43,974,223
Other bird food	\$9,197,799	**	\$9,197,799
Food for other wildlife	\$22,871,868	**	\$22,871,868
Nest boxes, feeders	\$7,006,365	**	\$7,035,441
Other special equipment	\$1,861,799	**	\$1,861,799
Tents, tarps	\$742,553	**	\$742,553
Backpacking equipment	\$283,203	**	\$283,203
Other camping equipment	\$1,581,304	**	\$1,581,304
Day packs	\$2,424,701	**	\$2,424,701
Magazines & books	\$6,612,507	**	\$6,612,507
Membership dues, contributions	\$4,030,279	**	\$4,030,279
Other equipment	\$445,377	**	\$445,377
Off-road vehicles	\$5,931,634	**	\$5,931,634
Pickup, camper, motor home	\$0	**	\$0
Boat	\$0	**	\$0
Trailer, boat accessories	\$0	**	\$0
Cabin	\$10,535,773	**	\$10,535,773
Other equipment	\$0	**	\$0
Land purchases	\$0	**	\$0
Land leases	\$2,871,354	**	\$2,871,354
Plantings	\$2,710,541	**	\$2,710,541
<b>TOTAL</b>	<b>\$309,052,213</b>		<b>\$328,660,258</b>

\*\* = Sample size too small to report reliably.

**Oklahoma Economic Sectors Stimulated By Resident Hunter Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	19,887,926	666.8	2,552,577
Mining	18,283,904	47.7	3,264,874
Utilities	9,666,713	18.4	1,885,698
Construction	4,651,953	60.1	1,906,341
Manufacturing	257,716,080	792	47,032,596
Wholesale Trade	21,333,240	196.9	9,088,555
Transportation & Warehousing	59,463,424	240.9	19,545,428
Retail trade	118,711,272	3,063.8	60,400,100
Information	13,610,277	57.4	3,081,036
Finance & insurance	17,178,464	132.7	4,984,450
Real estate & rental	36,611,964	367.3	6,291,397
Professional- scientific & tech svcs	25,733,352	275.3	12,120,237
Management of companies	6,448,687	47.5	2,728,011
Administrative & waste services	10,579,263	243	5,074,831
Educational svcs	1,693,900	39.3	838,487
Health & social services	22,358,628	343	11,697,950
Arts- entertainment & recreation	15,433,922	343.8	4,227,446
Accommodation & food services	35,959,640	845.7	11,186,317
Other services	22,916,946	1196.8	13,068,059
Government & non NAICs	25,980,638	108.9	4,502,259
<b>TOTAL</b>	<b>744,220,193</b>	<b>9,087</b>	<b>225,476,649</b>

**Oklahoma Economic Sectors Stimulated By Nonresident Hunter Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	722,324	15.3	169,219
Mining	1,771,881	4.6	317,174
Utilities	1,218,356	2.3	238,225
Construction	570,169	7.3	230,636
Manufacturing	41,298,584	67.5	6,328,172
Wholesale Trade	2,863,384	26.4	1,219,882
Transportation & Warehousing	6,756,339	29.1	2,206,305
Retail trade	9,697,925	165.2	4,743,141
Information	1,349,699	5.6	298,214
Finance & insurance	2,123,170	16.5	618,961
Real estate & rental	8,220,295	84.9	1,320,023
Professional- scientific & tech svcs	2,814,119	28.3	1,180,580
Management of companies	757,743	5.6	320,551
Administrative & waste services	1,381,210	31.3	650,875
Educational svcs	205,981	4.8	101,944
Health & social services	2,585,477	39.7	1,352,725
Arts- entertainment & recreation	1,691,897	35	548,874
Accommodation & food services	5,664,833	126.4	1,763,684
Other services	2,626,322	48.7	930,920
Government & non NAICs	4,302,515	39.2	1,595,158
<b>TOTAL</b>	<b>98,622,223</b>	<b>784</b>	<b>26,135,263</b>

\* = Sample size is small and results should be interpreted with caution

**Oklahoma Economic Sectors Stimulated By Resident + Nonresident Hunter Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	20,610,250	682	2,721,796
Mining	20,055,785	52	3,582,048
Utilities	10,885,069	21	2,123,923
Construction	5,222,122	67	2,136,977
Manufacturing	299,014,664	860	53,360,768
Wholesale Trade	24,196,624	223	10,308,437
Transportation & Warehousing	66,219,763	270	21,751,733
Retail trade	128,409,197	3,229	65,143,241
Information	14,959,976	63	3,379,250
Finance & insurance	19,301,634	149	5,603,411
Real estate & rental	44,832,259	452	7,611,420
Professional- scientific & tech svcs	28,547,471	304	13,300,817
Management of companies	7,206,430	53	3,048,562
Administrative & waste services	11,960,473	274	5,725,706
Educational svcs	1,899,881	44	940,431
Health & social services	24,944,105	383	13,050,675
Arts- entertainment & recreation	17,125,819	379	4,776,320
Accommodation & food services	41,624,473	972	12,950,001
Other services	25,543,268	1,246	13,998,979
Government & non NAICs	30,283,153	148	6,097,417
<b>TOTAL</b>	<b>842,842,416</b>	<b>9,871</b>	<b>251,611,912</b>

**Oklahoma Economic Sectors Stimulated By Resident Angler Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	20,739,738	618	3,241,157
Mining	30,582,672	79.6	5,450,840
Utilities	11,858,523	22.6	2,307,456
Construction	6,604,867	87.2	2,769,302
Manufacturing	234,610,336	770.8	45,728,320
Wholesale Trade	23,528,396	217.1	10,023,752
Transportation & Warehousing	83,313,968	279.2	26,880,480
Retail trade	127,900,464	3,135.70	63,301,632
Information	15,250,420	64.4	3,444,991
Finance & insurance	19,564,906	151.3	5,690,153
Real estate & rental	42,885,920	426.6	7,676,336
Professional- scientific & tech svcs	27,131,032	279.2	11,717,819
Management of companies	7,086,398	52.2	2,997,784
Administrative & waste services	12,452,167	290.9	6,045,679
Educational svcs	1,857,453	43	917,179
Health & social services	24,710,594	379.1	12,928,205
Arts- entertainment & recreation	19,755,230	394.5	6,716,421
Accommodation & food services	61,672,968	1430.6	19,164,468
Other services	21,001,478	567	8,999,779
Government & non NAICs	26,775,778	61.7	2,647,900
<b>TOTAL</b>	<b>819,283,308</b>	<b>9,351</b>	<b>248,649,653</b>

**Oklahoma Economic Sectors Stimulated By Nonresident Angler Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	2,526,241	71.5	422,367
Mining	3948835	10.3	703612
Utilities	1,452,193	2.8	283,394
Construction	776,138	10.3	325,712
Manufacturing	17,321,290	35	2,966,164
Wholesale Trade	2,484,357	22.9	1,058,405
Transportation & Warehousing	9,281,818	29.7	2,981,795
Retail trade	10,814,712	228.9	5,052,062
Information	1,518,008	6.4	340,136
Finance & insurance	2,034,813	15.7	592,294
Real estate & rental	2,440,764	22.1	412,857
Professional- scientific & tech svcs	2,784,888	28.9	1,213,071
Management of companies	765,197	5.6	323,704
Administrative & waste services	1,332,467	31.1	649,730
Educational svcs	186,098	4.3	92,037
Health & social services	2,507,925	38.5	1,312,156
Arts- entertainment & recreation	2,580,294	50.5	892,359
Accommodation & food services	15,279,046	329.6	4,750,314
Other services	1,460,994	29.8	537,029
Government & non NAICs	2,751,362	7.1	301,717
<b>TOTAL</b>	<b>84,247,440</b>	<b>981</b>	<b>25,210,915</b>

**Oklahoma Economic Sectors Stimulated By Resident + Nonresident Angler Spending, 2006.**

	<b>Total Output (Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	23,265,979	690	3,663,524
Mining	34,531,507	90	6,154,452
Utilities	13,310,716	25	2,590,850
Construction	7,381,005	98	3,095,014
Manufacturing	251,931,626	806	48,694,484
Wholesale Trade	26,012,753	240	11,082,157
Transportation & Warehousing	92,595,786	309	29,862,275
Retail trade	138,715,176	3,365	68,353,694
Information	16,768,428	71	3,785,127
Finance & insurance	21,599,719	167	6,282,447
Real estate & rental	45,326,684	449	8,089,193
Professional- scientific & tech svcs	29,915,920	308	12,930,890
Management of companies	7,851,595	58	3,321,488
Administrative & waste services	13,784,634	322	6,695,409
Educational svcs	2,043,551	47	1,009,216
Health & social services	27,218,519	418	14,240,361
Arts- entertainment & recreation	22,335,524	445	7,608,780
Accommodation & food services	76,952,014	1,760	23,914,782
Other services	22,462,472	597	9,536,808
Government & non NAICs	29,527,140	69	2,949,617
<b>TOTAL</b>	<b>903,530,748</b>	<b>10,332</b>	<b>273,860,568</b>

**Oklahoma Economic Sectors Stimulated By Resident Wildlife Watching Spending, 2006.** (Sample size too small to reliably report economic sectors stimulated by nonresident wildlife watching spending.)

	<b>Total Output</b>		
	<b>(Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	67,532,232	2542.9	7,096,663
Mining	13,977,565	36.4	2,493,294
Utilities	8,406,466	16.3	1,660,343
Construction	9,315,277	90.4	2,858,032
Manufacturing	105,743,248	259.3	24,349,306
Wholesale Trade	14,417,272	133.1	6,142,160
Transportation & Warehousing	53,208,944	246	18,454,592
Retail trade	79,527,160	1,626.00	38,671,804
Information	14,854,864	65.1	3,551,828
Finance & insurance	12,796,744	98	3,696,136
Real estate & rental	24,340,594	239.1	4,235,604
Professional- scientific & tech svcs	17,036,552	183.8	7,866,649
Management of companies	4,458,917	32.9	1,886,271
Administrative & waste services	8,364,896	185.8	3,931,247
Educational svcs	1,190,736	27.6	587,487
Health & social services	15,893,279	243.8	8,314,937
Arts- entertainment & recreation	1,453,603	43.9	553,935
Accommodation & food services	53,832,440	1149.5	16,758,664
Other services	12,881,834	245.2	4,976,717
Government & non NAICs	17,077,314	34.1	1,482,504
<b>TOTAL</b>	<b>536,309,937</b>	<b>7,499</b>	<b>159,568,173</b>

**Oklahoma Economic Sectors Stimulated By Resident + Nonresident Wildlife Watching Spending, 2006.**

	<b>Total Output</b>		
	<b>(Sales)</b>	<b>Employment</b>	<b>Income</b>
Ag, Forestry, Fish & Hunting	68,094,986	2,552	7,243,127
Mining	15,371,614	40	2,741,758
Utilities	9,107,773	18	1,797,764
Construction	9,706,650	96	3,017,721
Manufacturing	111,110,247	270	25,286,003
Wholesale Trade	15,456,090	143	6,584,725
Transportation & Warehousing	56,461,313	257	19,506,504
Retail trade	83,153,871	1,702	40,351,605
Information	15,510,268	68	3,697,930
Finance & insurance	13,651,271	105	3,944,745
Real estate & rental	25,477,031	250	4,426,328
Professional- scientific & tech svcs	18,179,107	196	8,369,972
Management of companies	4,768,751	35	2,017,341
Administrative & waste services	8,960,376	199	4,214,343
Educational svcs	1,269,779	29	626,563
Health & social services	16,957,139	260	8,871,562
Arts- entertainment & recreation	1,555,695	47	593,389
Accommodation & food services	64,751,038	1,378	20,154,964
Other services	13,527,286	259	5,220,503
Government & non NAICs	18,292,332	37	1,621,387
<b>TOTAL</b>	<b>571,362,617</b>	<b>7,940</b>	<b>170,288,234</b>