

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



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Table of Contents

Acknowledgments		ii
List of Tables		iv
Executive Summary		v
Introduction		1
Methods		1
Demographics		2
Participation		9
Economic Impacts		17
Retail Sales		17
Total Economic Effect (Output)		17
Earnings		21
Employment		21
Tax Revenues		22
Per Participant and Per Day Expenditures		22
Travel-Related Expenditures		25
Public and Private Land Activity, Expenditures and Impacts		26
Conclusion		32
Appendix A	Definitions	33
Appendix B	Methods	34
Appendix C	Detailed Hunting Fishing Expenditures and Impacts	38
Appendix D	Detailed Freshwater Fishing Expenditures and Impacts	42
Appendix E	Detailed Great Lakes Fishing Expenditures and Impacts	46
Appendix F	Detailed Wildlife Watching Expenditures and Impacts	50

List of Tables

Table E-1. Executive Summary	v
Table 1. Demographic Background of Hunters by Species Hunted in Wisconsin in 2006	3
Table 2a. Wisconsin Freshwater Angler Demographics by Species Fished, 2006	5
Table 2b. Wisconsin Great Lakes Angler Demographics by Species Fished, 2006	7
Table 3. Wisconsin Wildlife Watching Demographics, 2006	9
Table 4. Hunting Participation by Residential Status and Species Hunted in Wisconsin in 2006	10
Table 5a. Freshwater Fishing Participation by Residential Status and Species Fished in Wisconsin in 2006	12
Table 5b. Great Lakes Fishing Participation by Residential Status and Species Fished in Wisconsin in 2006	13
Table 6. Participation in Non-Residential Watchable Wildlife Recreation in Wisconsin in 2006	14
Table 7. Participation in Non-residential Watchable Wildlife Recreation by Site Visited and Wildlife Observed, Fed, or Photographed in Wisconsin in 2006	15
Table 8. Participation in Residential Watchable Wildlife Recreation in Wisconsin in 2006	15
Table 9. Participation in Residential Watchable Wildlife Recreation by Wildlife Observed in Wisconsin in 2006	16
Table 10a. Economic Activity Generated by Wisconsin Freshwater Anglers, 2006	18
Table 10b. Economic Activity Generated by Wisconsin Great Lakes Anglers, 2006	19
Table 10c. Economic Activity Generated by All Wisconsin Anglers Combined, 2006	19
Table 11. Economic Activity Generated by Wisconsin Hunters, 2006	20
Table 12. Economic Activity Generated by Wisconsin Wildlife Watchers, 2006	21
Table 13. Combined Economic Impacts of Fishing, Hunting and Wildlife-Watching Recreation, 2006	21
Table 14. Per Day and Per Person Expenditures, 2006	23
Table 15. Travel-Related Expenditures, 2006	26
Table 16. Percentage of Non-Residential* Activity and Days Occurring on Public and Private Land	27
Table 17. Percentage of Hunters and Hunting Days on Public and Private Land	28
Table 18. Economic Activity Generated by Wildlife Viewers, by Type of Land Used, 2006	29
Table 19. Economic Activity Generated by Wisconsin Hunters, by Type of Land Used, 2006	30
Table 20. Economic Activity Generated by Hunters and Wildlife Viewers	

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 Wisconsin 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, 2.9 million residents and non-residents participated in some form of fish and wildlife-related recreation in Wisconsin. These anglers, hunters and wildlife viewers spent \$3.8 billion in retail sales (\$2.9 billion by residents and \$854 million by nonresidents), creating \$1.77 billion in salaries and wages, and supporting 72,005 jobs. The total economic effect (multiplier effect) from fish and wildlife-related recreation was estimated at \$6.17 billion.

Table E-1: Executive Summary

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Fishing:	\$1,661,988,083	\$2,747,033,254	\$780,068,275	30,164	\$183,522,360	\$195,979,615
Residents Only:	\$1,078,354,362	\$1,806,836,603	\$519,193,071	19,500	\$119,778,151	\$121,099,418
Non-Residents Only:	\$583,633,721	\$940,196,651	\$260,875,204	10,664	\$63,744,209	\$74,880,197
Freshwater Fishing, Except Great Lakes:	\$1,410,129,615	\$2,328,188,628	\$653,472,489	25,153	\$154,727,506	\$167,548,619
Residents Only:	\$927,088,174	\$1,557,583,542	\$444,313,968	16,561	\$102,816,349	\$103,886,805
Non-Residents Only:	\$483,041,441	\$770,605,086	\$209,158,521	8,592	\$51,911,157	\$63,661,814
All Great Lakes Fishing:	\$251,858,468	\$418,844,626	\$126,595,786	5,011	\$28,794,854	\$28,430,996
Residents Only:*	\$151,266,188	\$249,253,061	\$74,879,103	2,939	\$16,961,802	\$17,212,613
Non-Residents Only:*	\$100,592,280	\$169,591,565	\$51,716,683	2,072	\$11,833,052	\$11,218,383
All Hunting:	\$1,394,050,097	\$2,197,983,789	\$604,107,177	25,298	\$153,773,662	\$197,141,705
Residents Only:	\$1,344,357,875	\$2,113,113,829	\$572,579,338	23,664	\$147,129,624	\$191,873,786
Non-Residents Only:	\$49,692,222	\$84,869,960	\$31,527,839	1,634	\$6,644,038	\$5,267,919
All Wildlife Watching Activities:	\$744,689,360	\$1,229,255,206	\$382,967,967	16,543	\$87,708,407	\$87,363,544
Residents Only:	\$523,936,627	\$856,967,628	\$274,967,671	12,105	\$62,903,079	\$62,002,961
Non-Residents Only:*	\$220,752,733	\$372,287,578	\$108,000,296	4,438	\$24,805,328	\$25,360,583
All Fish and Wildlife Related Recreation (combined):	\$3,800,727,540	\$6,174,272,249	\$1,767,143,419	72,005	\$425,004,429	\$480,484,864
Residents Only:	\$2,946,648,864	\$4,776,918,060	\$1,366,740,080	55,269	\$329,810,854	\$374,976,165
Non-Residents Only:*	\$854,078,676	\$1,397,354,189	\$400,403,339	16,736	\$95,193,575	\$105,508,699

* = data based on a small sample size

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 Wisconsin. 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 Wisconsin 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, Appendices D and E provide detailed expenditures for freshwater and Great Lakes fishing, and Appendix F 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 (Table 1) are approximately 45 years old, are predominantly male, and are likely to be married. The average household income for Wisconsin hunters is approximately \$65,835, significantly higher than the \$48,874 state average (U.S. Census Bureau). About 47 percent have at least some college experience. Non-resident hunters typically have higher income and more education. Only a small percentage of hunters in Wisconsin report they are non-white.

Table 1 does not necessarily represent the most popular types of game in Wisconsin. 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.

Angler Demographics

Freshwater anglers (Table 2a) 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 Wisconsin is approximately \$66,844. About 66 percent of freshwater anglers in Wisconsin have at least some college experience. Demographic characteristics across species fished were similar except black bass anglers typically have higher incomes. Approximately four percent of freshwater anglers in Wisconsin report they are non-white.

Great Lakes anglers (Table 2b) are approximately 45 years old, are predominantly male, and are likely to be married. The average household income for anglers participating in Great Lakes fishing in Wisconsin is approximately \$64,680. About 59 percent of Great Lakes anglers in Wisconsin have at least some college experience. Approximately ten percent of Great Lakes anglers in Wisconsin report they are non-white.

The tables below do not necessarily represent the most popular species in Wisconsin. 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 Wisconsin in 2006 (Participants 16 years old and older)

ALL HUNTERS	Big Game	Small Game	Upland Game Birds	Migratory Birds	Deer	Turkey	Pheasant	All Hunting
Race (non-white)	2.5%	5.5%	0.0%	0.0% *	2.5%	0.0%	0.0%	2.7%
Average age	45.0	44.4	45.4	42.1 *	44.7	48.3	45.4	44.9
Gender (male)	84.4%	91.0%	90.0%	87.0% *	85.5%	74.0%	88.7%	84.8%
Marital Status (married)	73.5%	78.4%	85.4%	80.4% *	73.1%	86.7%	84.4%	74.4%
Average household income	\$64,126	\$73,439	\$72,999	\$62,907 *	\$64,445	\$62,759	\$74,642	\$65,835
Education								
No High School	0.5%	0.0%	0.0%	0.0% *	0.5%	0.0%	0.0%	0.4%
Some High School	5.1%	0.0%	0.0%	0.0% *	5.3%	1.8%	0.0%	4.6%
High School Diploma	50.7%	39.3%	36.1%	48.5% *	51.5%	51.7%	33.2%	47.7%
College Graduate	26.2%	32.7%	42.5%	42.2% *	26.2%	34.0%	44.2%	28.3%
Post-graduate	17.6%	28.1%	21.4%	9.4% *	16.6%	12.4%	22.6%	18.9%
RESIDENT								
Race (non-white)	2.6%	6.1%	0.0%	0.0% *	2.6%	0.0%	0.0% *	2.9%
Average age	44.8	44.1	45.4	41.6 *	44.5	48.5	44.7 *	44.7
Gender (male)	84.1%	89.9%	88.4%	86.4% *	85.2%	73.4%	86.4% *	84.0%
Marital Status (married)	73.3%	75.7%	83.2%	79.6% *	72.9%	88.6%	81.4% *	73.4%
Average household income	\$62,852	\$71,217	\$69,710	\$62,286 *	\$63,133	\$61,740	\$70,657 *	\$63,669
Education								
No High School	0.5%	0.0%	0.0%	0.0% *	0.5%	0.0%	0.0% *	0.5%
Some High School	5.3%	0.0%	0.0%	0.0% *	5.5%	1.9%	0.0% *	5.0%
High School Diploma	52.2%	44.0%	41.7%	50.5% *	53.2%	52.9%	39.7% *	50.7%
College Graduate	26.0%	26.6%	36.5%	41.3% *	26.0%	34.8%	34.3% *	26.4%
Post-graduate	16.0%	29.4%	21.8%	8.2% *	14.9%	10.5%	25.9% *	17.4%

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

** = sample size is too small to report reliably

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

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

NON-RESIDENT	Big Game	Small Game	Upland Game	Migratory Bird	Deer	Turkey	Pheasant	All Hunting
Race (non-white)	0.0 *	-- **	-- **	-- **	0.0 *	-- **	-- **	100.0 *
Average age	49.1 *	-- **	-- **	-- **	49.1 *	-- **	-- **	47.5 *
Gender (male)	91.0% *	-- **	-- **	-- **	91.0% *	-- **	-- **	95.2% *
Marital Status (married)	77.7% *	-- **	-- **	-- **	77.7% *	-- **	-- **	88.0% *
Average household income	\$90,565 *	-- **	-- **	-- **	\$90,565 *	-- **	-- **	\$91,643 *
Education								
No High School	0.0% *	-- **	-- **	-- **	0.0% *	-- **	-- **	0.0% *
Some High School	0.0% *	-- **	-- **	-- **	0.0% *	-- **	-- **	0.0% *
High School Diploma	13.7% *	-- **	-- **	-- **	13.7% *	-- **	-- **	7.4% *
College Graduate	29.9% *	-- **	-- **	-- **	29.9% *	-- **	-- **	53.6% *
Post-graduate	56.4% *	-- **	-- **	-- **	56.4% *	-- **	-- **	39.0% *

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

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

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

ALL ANGLERS	Crappie	Panfish	White Bass	Black Bass	Walleye	Pike	Any Freshwater	All Freshwater
Race (non-white)	1.0%	3.9%	7.9%	0.8%	3.1%	3.6%	3.9%	4.1%
Average age	47.4	45.7	47.3	44.9	45.8	43.4	46.0	45.6
Gender (male)	82.1%	72.9%	82.8%	77.8%	80.0%	79.7%	55.7%	74.0%
Marital Status (married)	83.2%	76.2%	77.4%	81.2%	75.0%	71.5%	66.43	74.9%
Average household income	\$66,264	\$64,999	\$66,129	\$75,382	\$66,371	\$66,204	\$69,297	\$66,844
Education								
No High School	1.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
Some High School	2.1%	2.6%	0.0%	5.1%	3.2%	8.1%	8.6%	3.9%
High School Diploma	35.8%	29.2%	40.9%	28.4%	28.4%	26.1%	29.7%	29.6%
College Graduate	33.9%	31.9%	35.7%	18.4%	31.2%	28.1%	27.2%	29.2%
Post-graduate	27.3%	35.9%	23.5%	48.1%	37.2%	37.7%	34.5%	36.9%
RESIDENT								
Race (non-white)	1.4%	3.9%	10.7%	1.1%	3.4%	1.1%	0.0%	3.7%
Average age	45.8	44.9	46.6	44.0	44.5	42.5	45.4	44.9
Gender (male)	84.3%	72.2%	76.7%	77.6%	81.7%	79.3%	49.4%	71.6%
Marital Status (married)	81.1%	73.8%	76.6%	78.5%	74.7%	69.0%	63.1%	73.5%
Average household income	\$64,254	\$62,358	\$61,280 *	\$71,923	\$62,276	\$61,522	\$71,708 *	\$63,817
Education								
No High School	1.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Some High School	2.9%	2.5%	0.0%	6.1%	3.2%	8.3%	8.3%	3.8%
High School Diploma	44.3%	32.9%	52.2%	35.5%	35.8%	31.7%	29.0%	36.0%
College Graduate	31.0%	32.8%	32.3%	18.2%	31.8%	28.4%	32.0%	30.1%
Post-graduate	20.6%	31.4%	15.5%	40.2%	29.2%	31.7%	30.8%	29.9%

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

** = sample size is too small to report reliably

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

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

NON-RESIDENT	Crappie	Panfish	White Bass	Black Bass	Walleye	Pike	Any Freshwater	All Freshwater
Race (non-white)	0.0%	3.6%	0.0% *	0.0%	2.0%	9.8%	15.8% *	5.4%
Average age	51.6	49.2	49.4 *	47.4	49.9	45.6	47.7 *	47.5
Gender (male)	76.3%	75.9%	100.0% *	78.0%	74.9%	80.9%	74.8% *	80.5%
Marital Status (married)	88.7%	86.7%	79.7% *	88.7%	75.8%	77.8%	76.7% *	78.8%
Average household income	\$70,657 *	\$78,736	- **	\$85,275	\$78,276	\$77,208	\$63,046 *	\$75,416
Education								
No High School	0.0%	0.0%	0.0% *	0.0%	0.0%	0.0%	0.0% *	0.6%
Some High School	0.0%	2.9%	0.0% *	2.3%	3.2%	7.6%	9.5% *	4.4%
High School Diploma	13.6%	12.8%	9.1% *	8.2%	6.7%	12.2%	31.7% *	12.3%
College Graduate	41.4%	27.8%	45.1% *	19.0%	29.3%	27.5%	12.7% *	26.7%
Post-graduate	45.0%	56.5%	45.7% *	70.5%	60.8%	52.7%	46.0% *	56.0%

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

Table 2b. Demographic Background of Anglers by Great Lakes Species Fished in Wisconsin in 2006
(Participants 16 years old and older)

ALL ANGLERS	Salmon	Trout	All Great Lakes
Race (non-white)	10.5%	13.3% *	10.4%
Average age	46.5	47.0 *	45.3
Gender (male)	82.4%	78.7% *	82.5%
Marital Status (married)	89.6%	89.9% *	76.6%
Average household income	\$ 67,489	\$ 71,093 *	\$ 64,680
Education			
No High School	0.0%	0 *	0.0%
Some High School	2.0%	3.2% *	6.5%
High School Diploma	40.2%	49.6% *	34.4%
College Graduate	41.0%	31.8% *	32.9%
Post-graduate	16.8%	15.4% *	26.2%
RESIDENT			
Race (non-white)	14.8% *	15.1% *	13.9%
Average age	45.6 *	47.6 *	45.3
Gender (male)	79.4% *	100.0% *	80.7%
Marital Status (married)	88.3% *	95.0% *	74.9%
Average household income	\$ 64,903 *	\$ 59,749 *	\$ 61,808
Education			
No High School	0.0% *	0.0% *	0.0%
Some High School	2.9% *	0.0% *	8.7%
High School Diploma	42.5% *	51.0% *	37.6%
College Graduate	40.1% *	49.0% *	33.4%
Post-graduate	14.5% *	0.0% *	20.4%

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

Table 2b. (Continued) Demographic Background of Anglers by Great Lakes Species Fished in Wisconsin in 2006
(Participants 16 years old and older)

NON-RESIDENT	Salmon		Trout		All Great Lakes	
Race (non-white)	0.0%	*	-	**	0.0%	*
Average age	48.5	*	-	**	45.5	*
Gender (male)	89.4%	*	-	**	87.9%	*
Marital Status (married)	92.8%	*	-	**	81.6%	*
Average household income	\$ 73,480	*	-	**	\$ 74,310	*
Education						
No High School	0.0%	*	-	**	0.0%	*
Some High School	0.0%	*	-	**	0.0%	*
High School Diploma	34.9%	*	-	**	25.0%	*
College Graduate	43.0%	*	-	**	31.5%	*
Post-graduate	22.1%	*	-	**	43.5%	*

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

** = sample size is too small to report reliably

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

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 Wisconsin, 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.

Participants (Table 3) tend to be older than hunters and anglers, are split fairly evenly between male and female, and are likely to be married. Only a small percentage of wildlife viewers in Wisconsin report they are non-white.

Table 3. Wisconsin Wildlife Watching Demographics, 2006 (Participants 16 years+)

	<u>Nonresidential Activity</u>		<u>Residential</u>	<u>All</u>
	<u>Resident</u>	<u>Nonresident</u>	<u>Activity</u>	<u>Participant:</u>
Race (non-white)	7%	14%	4%	5.3%
Average age	49	48	51.86	51.3%
Gender (male)	68%	59%	47%	48.9%
Marital Status (married)	93%	77%	75%	75.2%
Average HH Income	\$69,230	\$74,525	\$59,515	\$62,110
Education				
No high school	-	-	-	0.0%
Some high school	2%	-	7%	6.4%
High school diploma	29%	10%	34%	30.4%
College graduate	8%	27%	22%	22.4%
Post-graduate	61%	63%	37%	40.8%

The average household incomes for residents participating in non-residential and residential activities are approximately the same. Non-residents (out-of-state visitors) have, on average, a household income higher than resident participants. Just like hunters and anglers, wildlife watchers tend to have incomes higher than the 2006 state average (\$48,874 U.S. Census Bureau). As with income levels, the education levels of residents who participate in residential and non-residential activities are similar.

Participation

Hunter Participation

In 2006, there were 697,215 hunters (residents and nonresidents), hunting a total of 10 million days in Wisconsin (Table 4). Of the total hunters in Wisconsin, 649,009 were state residents and 48,207 were nonresidents. Big game hunting was the most popular in terms of hunters and days, the largest portion of which is made up of deer hunters.

Table 4. Hunting Participation by Residential Status and Species Hunted in Wisconsin in 2006 (Participants 16+ years)

<u>Number of participants</u>	Big Game	Small Game	Upland Game Birds	Migratory Birds	Deer	Turkey	Pheasant	All Hunting
Resident	612,664	197,634	143,695	72,102 *	593,923	155,057	97,999 *	649,009
Nonresident	25,938 *	24,132 *	22,269 *	- **	25,938 *	- **	- **	48,207
Total	638,602	221,766	165,964	75,048 *	619,860	158,516	117,187	697,215

<u>Number of days</u>	Big Game	Small Game	Upland Game Birds	Migratory Birds	Deer	Turkey	Pheasant	All Hunting
Resident	7,739,645	1,888,552	1,959,082	698,907	6,483,256	1,176,209	996,573	9,679,211
Nonresident	209,862	170,100	132,848	57,349	199,486	10,376	117,443	379,614
Total	7,949,507	2,058,651	2,091,930	756,256	6,682,742	1,186,586	1,114,016	10,058,826

<u>Average Days of Participation</u>	Big Game	Small Game	Upland Game Birds	Migratory Birds	Deer	Turkey	Pheasant	All Hunting
Resident	12.6	9.6	13.6	9.7 *	10.9	7.6	10.2	14.9
Nonresident	8.1 *	7.0 *	6.0 *	- **	7.7 *	- **	6.1	7.9
Total	12.4	9.3	12.6	10.1 *	10.8	7.5	9.5	14.4

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 1.25 million freshwater anglers (excepting Great Lakes; residents and nonresidents), fishing a total of 16.2 million days in Wisconsin (Table 5a). Of the total freshwater anglers in Wisconsin, 917,841 were state residents and 335,518 were nonresidents. Most fishing effort was directed at panfish. There were 235,374 Great Lakes anglers (residents and nonresidents), fishing a total of 3.7 million days in Wisconsin (Table 5b). Of the total Great Lakes anglers in Wisconsin, 175,647 were state residents and 59,727 were nonresidents. Most fishing effort was directed at salmon. Altogether, there were 1.394 million anglers in Wisconsin.

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 685,210 watchable wildlife recreationists (residents and non-residents) participating in non-residential activities in Wisconsin (Table 6). Of the total recreationists in Wisconsin participating in activities more than one mile from home, slightly more were state residents than non-residents. Altogether, these recreationists spent 5.5 million days in non-residential activities in Wisconsin.

The primary watchable wildlife activity, measured in terms of number of participants and number of activity days, was observing wildlife, with photographing wildlife the second preferred activity. 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. 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. This is because 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 1.7 million residential watchable wildlife participants in Wisconsin (Table 8). This number represents Wisconsin residents participating in watchable wildlife recreation within one mile of their home. Compared to non-residential activity, there are nearly 5 times the residents who participate within one mile of their homes than those who travel away from home.

Table 5a. Freshwater Fishing Participation, Excepting Great Lakes, by Residential Status and Species Fished in Wisconsin in 2006

(Participants 16+ years)

<u>Number of participants</u>	Crappie	Panfish	White Bass	Black Bass	Walleye	Pike	Any Freshwater	All Freshwater
Resident	220,287	622,225	115,564	297,558	369,637	301,415	120,723	917,841
Nonresident	83,477	138,178	41,081 *	105,878	124,645	120,609	39,321 *	335,518
Total	303,764	760,403	156,645	403,436	494,282	422,024	160,044	1,253,359
<u>Number of days</u>	2,917,964	7,765,944	1,423,808	3,270,695	4,973,870	3,264,861	728,171	13,424,092
Resident	498,749	869,123	135,237		894,744	1,000,427	253,458	
Nonresident		8,635,067	1,559,045	971,916 *	5,868,614	4,265,287	981,629	2,792,219 *
Total	3,416,713							
<u>Avg Days of Participation</u>	13	12	12	11	13	11	6	15
Resident	6	6	3	9	7	8	6 *	8
Nonresident								
Total	11	11	10	11	12	10	6	13
<u>Number of observations</u>	62	154	32	75	93	71	30	225
Resident	31	52	12	46	45	52	18 *	128
Nonresident								
Total	93	206	44	121	138	123	48	353

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

**Table 5b. Great Lakes Fishing Participation by Residential Status and Species Fished in Wisconsin in 2006
(Participants 16+ years)**

<u>Number of participants</u>	<u>Salmon</u>		<u>Trout</u>		<u>All Great Lakes</u>
Resident	102,545 *		85,944 *		175,647
Nonresident	42,811 *		4,745 *		59,727 *
Total	145,356		90,688 *		235,374
<u>Number of days</u>					
Resident	1,268,444 *		1,117,906 *		3,347,506
Nonresident	233,745 *		30,398 *		357,439 *
Total	1,502,189		1,148,304 *		3,704,945
<u>Avg Days of Participation</u>					
Resident	12 *		13 *		19
Nonresident	5 *		6 *		6 *
Total	10		13 *		16
<u>Number of observations</u>					
Resident	24 *		18 *		38
Nonresident	11 *		3 *		17 *
Total	35		21 *		55

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

**Table 6. Participation in Non-Residential Watchable Wildlife Recreation in Wisconsin in 2006
(Participants 16+ years)**

	Resident	Nonresident	Total
Number of participants	356,377	328,833	685,210
observing wildlife	270,935	278,836	549,771
photographing wildlife	121,064	168,095	289,159
feeding wildlife	77,642	64,165	141,808
Number of days	3,760,343	1,786,235	5,546,578
observing wildlife	3,105,783	1,596,784	4,702,567
photographing wildlife	985,734	672,132	1,657,866
feeding wildlife	408,364	308,823	717,187
Number of trips	2,151,258	1,276,023	3,427,281
Average Days Participation	10.6	5.4	8.1

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

	<u>Resident</u>	<u>Nonresident</u>	<u>Total</u>
Number of participants	356,377	328,833	685,210
Number of recreationists visiting:			
Public land	233,826	303,894	537,720
Private land	160,209	205,518	365,727
Number of recreationists observing, feeding, photographing:			
Birds	311,902	310,341	622,242
waterfowl	253,699	293,801	547,500
songbirds	264,092	257,867	521,958
birds of prey	233,620	278,540	512,160
other birds	248,429	140,031	388,460
shorebirds	211,182	232,012	443,194
mammals	305,879	243,585	549,464
small land mammals	262,915	146,434	409,349
large land mammals	290,280	212,668	502,948
other wildlife	177,915	120,784	298,700
Fish	100,805	66,601	167,406

Table 8. Participation in Residential Watchable Wildlife Recreation in Wisconsin in 2006
(Participants 16+ years)

Number of participants	1,703,215
feeding birds & wildlife	1,534,438
birds	1,480,302
other wildlife	432,443
observing wildlife	1,058,776
photographing wildlife	445,141
visiting parks near home	367,457
maintaining natural areas around home	271,084
maintaining plantings around home	260,395
Number of days	
observing wildlife	141,654,803
photographing wildlife	7,506,853

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, where 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 141.7 million days observing wildlife around their home.

The number one type of wildlife observed by residential recreationists in Wisconsin 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 Wisconsin in 2006 (Participants 16+ years)

Number of recreationists	
birds	1,042,252
mammals	952,694
large mammals	686,929
small mammals	952,694
insects or spiders	368,263
amphibians or reptiles	264,621
fish & other insects	282,740

Note = a participant may enjoy more than one type of wildlife listed above

Economic Impacts

Retail Sales

Tables 10a, 10b, 11 and 12 present retail sales and resulting economic impacts in Wisconsin associated with freshwater fishing, Great Lakes 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 \$3.8 billion in consumer expenditures for equipment and services consumed as part of their outdoor activities. Most of these were made by residents (\$2.95 billion), while nonresidents contributed \$854 million. Inland and Great Lakes fishing together accounted for \$1.662 billion in retail sales while hunting added \$1.394 billion and wildlife viewing contributed \$744.7 million in retail sales. Tables detailing the expenditures and economic impacts of each activity and by species are provided in Appendices C-F.

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 Wisconsin was estimated to be \$6.17 billion. In other words, if hunters, anglers and wildlife watchers were to stop spending money in Wisconsin and not spend these dollars on other in-state items, the state economy would shrink by \$6.17 billion. Sportfishing accounted for \$2.7 billion (\$2.33 billion from freshwater and \$418.8 million from Great Lakes), with \$2.2 billion and \$1.3 billion from hunting and wildlife-watching, respectively.

Table 10a. Economic Activity Generated by Wisconsin Freshwater Anglers, Excepting Great Lakes, 2006
(Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Freshwater Fishing:	\$1,410,129,615	\$2,328,188,628	\$653,472,489	25,153	\$154,727,506	\$167,548,619
Residents Only:	\$927,088,174	\$1,557,583,542	\$444,313,968	16,561	\$102,816,349	\$103,886,805
Non-Residents Only:	\$483,041,441	\$770,605,086	\$209,158,521	8,592	\$51,911,157	\$63,661,814
Black Bass Fishing:	\$245,617,890	\$391,389,463	\$105,686,891	4,281	\$26,388,648	\$32,645,209
Residents Only:	\$103,553,199	\$172,774,696	\$51,351,333	2,059	\$11,813,017	\$11,884,223
Non-Residents Only:	\$142,064,692	\$218,614,767	\$54,335,558	2,222	\$14,575,631	\$20,760,986
White Bass Fishing:	\$33,616,002	\$58,427,143	\$15,723,990	587	\$3,570,454	\$3,662,126
Residents Only:	\$27,895,332	\$48,834,000	\$12,872,600	474	\$2,920,680	\$3,014,040
Non-Residents Only:*	\$5,720,671	\$9,593,143	\$2,851,390	113	\$649,774	\$648,086
Walleye Fishing:	\$318,135,742	\$543,437,586	\$150,185,992	5,220	\$34,490,792	\$34,044,235
Residents Only:	\$261,065,554	\$450,887,303	\$124,432,762	4,130	\$28,337,020	\$26,922,926
Non-Residents Only:	\$57,070,188	\$92,550,283	\$25,753,230	1,090	\$6,153,772	\$7,121,309
Crappie Fishing:	\$115,641,542	\$187,034,112	\$52,207,000	2,220	\$3,834,169	\$14,575,541
Residents Only:	\$63,967,643	\$105,111,188	\$30,465,875	1,294	\$2,232,988	\$7,606,355
Non-Residents Only:	\$51,673,900	\$81,922,924	\$21,741,125	926	\$1,601,181	\$6,969,186
Panfish Fishing:	\$319,573,905	\$533,349,733	\$156,823,692	6,173	\$36,200,864	\$36,309,395
Residents Only:	\$250,644,739	\$422,002,740	\$125,304,366	4,839	\$28,591,926	\$27,468,047
Non-Residents Only:	\$68,929,166	\$111,346,993	\$31,519,326	1,334	\$7,608,938	\$8,841,348
Pike Fishing:	\$245,629,038	\$403,341,700	\$114,376,039	4,368	\$27,102,159	\$29,313,225
Residents Only:	\$135,829,838	\$222,740,274	\$61,949,050	2,327	\$14,796,018	\$16,549,787
Non-Residents Only:	\$109,799,200	\$180,601,426	\$52,426,989	2,041	\$12,306,141	\$12,763,438
Any Fish:	\$44,447,673	\$70,335,218	\$18,572,533	795	\$4,749,025	\$6,215,131
Residents Only:	\$14,741,475	\$24,218,663	\$6,972,873	296	\$1,632,038	\$1,799,204
Non-Residents Only:*	\$29,706,198	\$46,116,555	\$11,599,660	499	\$3,116,987	\$4,415,927

* = data based on a small sample size

** = sample size too small to report results reliably

Table 10b. Economic Activity Generated by Wisconsin Great Lakes Anglers, 2006
(Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Great Lakes						
Fishing:	\$251,858,468	\$418,844,626	\$126,595,786	5,011	\$28,794,854	\$28,430,996
Residents Only:*	\$151,266,188	\$249,253,061	\$74,879,103	2,939	\$16,961,802	\$17,212,613
Non-Residents Only:*	\$100,592,280	\$169,591,565	\$51,716,683	2,072	\$11,833,052	\$11,218,383
Salmon	\$76,588,503	\$126,921,883	\$38,085,486	1,583	\$8,700,623	\$6,891,672
Residents Only:*	\$34,240,120	\$55,875,335	\$16,712,837	658	\$3,784,243	\$3,886,961
Non-Residents Only:*	\$42,348,383	\$71,046,548	\$21,372,649	925	\$4,916,380	\$3,004,711
Lake Trout*	\$23,213,060	\$37,986,502	\$11,193,263	437	\$2,526,315	\$2,597,373
Residents Only:*	\$23,213,060	\$37,986,502	\$11,193,263	437	\$2,526,315	\$2,597,373
Non-Residents Only:	**	**	**	**	**	**

* = data based on a small sample size

** = sample size too small to report results reliably

Table 10c. Economic Activity Generated by All Wisconsin Anglers Combined, 2006
(Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Great Lakes						
Fishing:	\$1,661,988,083	\$2,747,033,254	\$780,068,275	30,164	\$183,522,360	\$195,979,615
Residents Only:*	\$1,078,354,362	\$1,806,836,603	\$519,193,071	19,500	\$119,778,151	\$121,099,418
Non-Residents Only:*	\$583,633,721	\$940,196,651	\$260,875,204	10,664	\$63,744,209	\$74,880,197

Table 11. Economic Activity Generated by Wisconsin Hunters, 2006 (Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Hunting:	\$1,394,050,097	\$2,197,983,789	\$604,107,177	25,298	\$153,773,662	\$197,141,705
Residents Only:	\$1,344,357,875	\$2,113,113,829	\$572,579,338	23,664	\$147,129,624	\$191,873,786
Non-Residents Only:*	\$49,692,222	\$84,869,960	\$31,527,839	1,634	\$6,644,038	\$5,267,919
Big Game Hunting:	\$1,053,003,101	\$1,630,127,571	\$437,166,478	18,467	\$114,956,948	\$156,269,346
Residents Only:	\$1,032,069,662	\$1,594,747,476	\$423,973,849	18,014	\$112,049,358	\$153,855,705
Non-Residents Only:*	\$20,933,439	\$35,380,095	\$13,192,629	453	\$2,907,590	\$2,413,641
Small Game Hunting:	\$183,350,657	\$288,353,869	\$86,169,374	4,123	\$21,030,781	\$25,289,467
Residents Only:	\$167,550,474	\$261,572,065	\$73,865,204	3,114	\$18,630,511	\$23,677,797
Non-Residents Only:	**	**	**	**	**	**
Upland Game Hunting:	\$157,725,993	\$246,586,158	\$71,331,586	3,555	\$17,469,625	\$21,292,711
Residents Only:	\$145,031,327	\$224,771,219	\$60,495,749	2,597	\$15,395,342	\$20,012,229
Non-Residents Only:	**	**	**	**	**	**
Migratory Bird Hunting:	\$131,731,053	\$215,682,715	\$58,351,631	2,101	\$14,394,929	\$17,256,094
Residents Only:	\$126,129,429	\$206,690,965	\$55,583,997	2,001	\$13,772,673	\$16,644,393
Non-Residents Only:	**	**	**	**	**	**
Deer Hunting:	\$898,569,209	\$1,398,868,378	\$376,405,098	15,830	\$98,726,963	\$133,358,103
Residents Only:	\$886,044,101	\$1,377,594,918	\$368,017,884	15,528	\$96,902,041	\$132,001,820
Non-Residents Only:*	\$12,525,108	\$21,273,460	\$8,387,214	302	\$1,824,922	\$1,356,283
Turkey Hunting:	\$145,438,702	\$224,387,450	\$59,306,731	2,566	\$15,842,518	\$22,293,215
Residents Only:	\$144,919,880	\$223,521,220	\$58,969,326	2,554	\$15,769,361	\$22,237,887
Non-Residents Only:	**	**	**	**	**	**
Pheasant Hunting:	\$109,697,002	\$170,726,192	\$47,994,529	2,115	\$12,262,308	\$15,554,215
Residents Only:*	\$98,043,524	\$151,502,708	\$39,039,344	1,788	\$10,359,812	\$14,437,412
Non-Residents Only:	**	**	**	**	**	**

* = data based on a small sample size

** = sample size too small to report results reliably

Table 12. Economic Activity Generated by Wisconsin Wildlife Watchers, 2006 (Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Wildlife Watching Activities:	\$744,689,360	\$1,229,255,206	\$382,967,967	16,543	\$87,708,407	\$87,363,544
Residents Only:	\$523,936,627	\$856,967,628	\$274,967,671	12,105	\$62,903,079	\$62,002,961
Non-Residents Only:	\$220,752,733	\$372,287,578	\$108,000,296	4,438	\$24,805,328	\$25,360,583

Table 13: Combined Economic Impacts of Fishing, Hunting and Wildlife-Watching Recreation in Wisconsin, 2006 (Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Fish and Wildlife Related Recreation:	\$3,800,727,540	\$6,174,272,249	\$1,767,143,419	72,005	\$425,004,429	\$480,484,864
Residents Only:	\$2,946,648,864	\$4,776,918,060	\$1,366,740,080	55,269	\$329,810,854	\$374,976,165
Non-Residents Only:	\$854,078,676	\$1,397,354,189	\$400,403,339	16,736	\$95,193,575	\$105,508,699

Earnings

The business activity stimulated throughout the Wisconsin economy by outdoorsmen and women generate salaries and wages. In addition, many of the businesses supporting these individuals pay dividends. Altogether, these represent earnings created for Wisconsin as a result of hunting, fishing and wildlife watching activities. Total earnings in 2006 in Wisconsin from fish and wildlife related activities were estimated at \$1.77 billion, with \$1.37 billion from residents and \$400 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 Wisconsin in 2006 from fish and wildlife related activities were estimated at 72,005, with 25,298, 30,164 and 16,543 from hunting, fishing and wildlife watching respectively.

Tax Revenues

State and local tax revenues generated from 2006 fish and wildlife-related recreation in Wisconsin were estimated to be \$480 million (\$374.9 million by residents and \$105.5 million by non-residents). Freshwater anglers accounted for \$167.5 million and Great Lakes anglers contributed \$28.4 million. All fishing together accounted for \$196.0 million. Hunters and wildlife watchers generated \$197.1 million, and \$87.4 million of the total, respectively. All fish and wildlife-related recreation generated \$425 million in tax revenues to the federal government.

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, 2006 (Participants 16+ years)

		HUNTING							
		Big Game	Small Game	Upland Game	Migratory Bird	Deer	Turkey	Pheasant	All Hunting
All Hunters:									
	Average daily expenditures	\$132.46	\$89.06	\$75.40	\$174.19	\$134.46	\$122.57	\$98.47	\$138.59
	Average annual expenditures	\$1,648.92	\$826.78	\$950.36	\$1,755.30	\$1,449.63	\$917.50	\$936.08	\$1,999.45
Resident Hunters:									
	Average daily expenditures	\$133.35	\$88.72	\$74.03	\$180.47	\$136.67	\$123.21	\$98.38	\$138.89
	Average annual expenditures	\$1,684.56	\$847.78	\$1,009.30	\$1,749.31	\$1,491.85	\$934.62	\$1,000.45	\$2,071.40
Non-Resident Hunters*:									
	Average daily expenditures	\$99.75	\$92.89	\$95.56	\$97.68	\$62.79	\$50.00	\$99.23	\$130.90
	Average annual expenditures	\$807.07	\$654.75	\$570.06	\$1,901.81	\$482.89	\$150.00	\$607.33	\$1,030.82
		FRESHWATER FISHING, Except Great Lakes							All Freshwater Species¹
		Crappie	Panfish	White Bass	Black Bass	Walleye	Pike	Any species	
All Anglers:									
	Average daily expenditures	\$33.85	\$37.01	\$21.56	\$57.90	\$54.21	\$57.59	\$45.28	\$86.96
	Average annual expenditures	\$380.70	\$420.27	\$214.60	\$608.81	\$643.63	\$582.03	\$277.72	\$1,125.08
Resident Anglers:									
	Average daily expenditures	\$21.92	\$32.27	\$19.59	\$31.66	\$52.49	\$41.60	\$20.24	\$69.06
	Average annual expenditures	\$290.38	\$402.82	\$241.38	\$348.01	\$706.28	\$450.64	\$122.11	\$1,010.07
Non-Resident Anglers:									
	Average daily expenditures	\$103.61	\$79.31	\$42.30	\$146.17	\$63.78	\$109.75	\$117.20	\$173.00
	Average annual expenditures	\$619.02	\$498.84	\$139.25	\$1,341.78	\$457.86	\$910.37	\$755.48	\$1,439.69

¹ These figures present the average expenditures for all anglers, regardless of species targeted. These figures include big-ticket items such as vehicles, boats, and other items that anglers could not assign to any specific species. Many of these big-ticket items are left out of the species specific expenditure estimates, thus the "All Freshwater 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, 2006 (Participants 16+ years)

GREAT LAKES FISHING

	Salmon	Trout	All Great Lakes
All Anglers:			
Average daily expenditures	\$50.98	\$20.22	\$67.98
Average annual expenditures	\$526.90	\$255.97	\$1,070.04
Resident Anglers:			
Average daily expenditures	\$26.99	\$20.76	\$45.19
Average annual expenditures	\$333.90	\$270.10	\$861.20
Non-Resident Anglers:			
Average daily expenditures	\$181.17	**	\$281.42
Average annual expenditures	\$989.19	**	\$1,684.20

Table 14. (Continued) Per Day and Per Person Expenditures, 2006 (Participants 16+ years)

WILDLIFE WATCHING:

<u>Average per participant, annually</u>	Residents	Non-Residents*	All Participants
On residential activities, annually	\$188.00	----	----
On non-residential activities, annually	\$573.00	\$618.00	\$594.00
 <u>Avg. per day, per participant</u>			
For non-residential activities, including equipment items:	\$54.28	\$113.74	\$73.43
For non-residential activities, travel expenses only (food, hotel, etc):	\$19.46	\$104.68	\$46.91

* Non-resident expenditures only includes money spent in Wisconsin. Expenditures made in other states are not included.

** Many expenditures made by state residents were for vehicles and boats. Even though efforts were made to only include vehicles and boats purchased for the primary purpose of viewing wildlife, some of these items may also be used for non-related activities.

Travel-Related Expenditures:

Table 15 presents travel-related expenditures made by Wisconsin 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, Wisconsin 2006 (Participants 16+ years)

Hunting:

Big Game	\$210,006,967
Small Game	\$52,421,636
Upland Game	\$57,135,193
Migratory Bird	\$12,014,967
Deer	\$182,698,767
Turkey	\$29,211,389
Pheasant	\$28,184,906
<i>All Hunting, all species</i>	<i>\$275,268,411</i>

Fishing:

Pike	\$94,132,734
Black Bass	\$97,433,997
Crappie	\$59,621,051
Panfish	\$142,263,827
White Bass	\$22,267,832
Walleye	\$103,052,334
Any	\$22,692,276
<i>All Freshwater Fishing, Except Great Lakes</i>	<i>\$565,691,783</i>

Lake Trout	\$19,773,395
Salmon	\$70,032,374
<i>All Great Lakes Fishing</i>	<i>\$181,239,928</i>

Wildlife Viewing:	\$260,165,539
(Non-residential only)	

Public and Private Land Activity, Expenditures and Impacts

Use of Public Lands

Hunters and 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 Wisconsin's wildlife resources. Table 16, using data from the 2006 National Survey, presents the percentage of Wisconsin wildlife viewers using public and private lands for non-residential activities (those occurring more one or more miles from home). Table 17, is also using data from the 2006 National Survey, presents the percentage of Wisconsin 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.

Although the sample sizes are quite small, wildlife viewers appear to be much more dependent on public lands. 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-Residential¹ Activity and Days Occurring on Public and Private Land (participants 16+ years)

	Residents	Nonresidents	Total
<u>Public Land Exclusively</u>			
Participants*	46.3%	31.5%	39.2%
Days of Participation*	38.5%	21.8%	33.1%
<u>Private Land Exclusively</u>			
Participants	**	**	**
Days of Participation	**	**	**
<u>Use Both Public and Private Lands</u>			
Participants	**	60.9%	**
Days of Participation	**	75.7%	**

“Non-Residential” describes people who watch, photograph and/or feed wildlife *one mile or more* from their place of residence.

* = data based on a small sample size

** = sample size too small to report results reliably

Table 17. Percentage of Hunters and Hunting Days on Public and Private Land (participants 16+ years)

	<u>AllHunting</u>		<u>BigGame</u>		<u>SmallGame</u>		<u>UplandGame*</u>		<u>MigratoryBird*</u>	
NUMBER OF HUNTERS WHO USE:										
All Types of Land:	697,215	---	638,602	---	221,766	---	165,964	---	75,048	---
Residents:	649,009	---	612,664	---	197,634	---	143,695	---	72,102	---
Non-residents:	48,207	---	**	---	**	---	**	---	**	---
Public Lands Exclusively:	**	**	83,967	13.1%	**	**	**	**	**	**
Residents:	**	**	83,967	13.7%	**	**	**	**	**	**
Non-residents:	**	**	**	**	**	**	**	**	**	**
Private Lands Exclusively:	**	**	434,855	68.1%	127,030	57.3%	95,616	57.6%	50,365	67.1%
Residents:	**	**	417,816	68.2%	105,980	53.6%	76,428	53.2%	48,502	67.3%
Non-residents:	**	**	**	**	**	**	**	**	**	**
Both Public and Private Lands:	139,342	20.0%	88,968	13.9%	221,766	100.0%	46,563	28.1%	**	**
Residents:	129,361	19.9%	80,070	13.1%	197,634	100.0%	46,563	32.4%	**	**
Non-residents:	**	**	**	**	**	**	**	**	**	**
DAYS OF HUNTING:										
NUMBER OF HUNTERS WHO USE:	10,058,826	---	7,949,507	---	2,058,651	---	2,091,930	---	756,256	---
All Types of Land:	9,679,211	---	7,739,645	---	1,888,552	---	1,959,082	---	698,907	---
Residents:	379,614	---	**	---	**	---	**	---	**	---
Non-residents:	**	**	896,123	11.3%	**	**	**	**	**	**
Public Lands Exclusively:	**	**	896,123	11.6%	**	**	**	**	**	**
Residents:	**	**	**	**	**	**	**	**	**	**
Non-residents:	**	**	5,252,026	66.1%	922,085	44.8%	937,570	44.8%	467,343	61.8%
Private Lands Exclusively:	**	**	5,108,660	66.0%	767,389	40.6%	820,127	41.9%	433,817	62.1%
Residents:	**	**	**	**	**	**	**	**	**	**
Non-residents:	**	**	**	**	**	**	**	**	**	**
Both Public and Private Lands:	3,289,367	32.7%	1,581,209	19.9%	2,058,651	100.0%	1,044,476	49.9%	**	**
Residents:	37,349,521	385.9%	1,514,714	19.6%	1,888,552	100.0%	1,044,476	53.3%	**	**
Non-residents:	**	**	**	**	**	**	**	**	**	**

* = data based on a small sample size ** = no responses were received in the survey from non-resident hunters using this type of land. 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 here.

Table 18. Economic Activity Generated by Wildlife Viewers, by Type of Land Used, 2006 (Participants 16+ years)

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
Public Land						
Exclusively	\$119,644,752	\$201,106,847	\$61,388,404	2,628	\$13,867,634	\$13,462,456
Residents	\$85,399,147	\$144,078,452	\$45,101,490	2,006	\$10,166,709	\$9,689,502
Non-Residents	\$34,245,606	\$57,028,395	\$16,286,914	622	\$3,700,925	\$3,772,954
Private Land						
Exclusively*	**	**	**	**	**	**
Residents	**	**	**	**	**	**
Non-Residents	**	**	**	**	**	**
Both Public and Private Lands	\$225,737,351	\$376,681,036	\$117,232,432	5,098	\$26,891,729	\$27,743,884
Residents	**	**	**	**	**	**
Non-Residents*	\$165,934,933	\$278,314,291	\$81,678,977	3,808	\$19,024,078	\$20,568,988

* = data based on a small sample size

** = sample size too small to report results reliably

Table 19. Economic Activity Generated by Wisconsin Hunters, by Type of Land Used, 2006 (Participants 16+ years)

(Participants 16+ years)	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Types of Hunting:	\$1,394,050,097	\$2,197,983,789	\$604,107,177	25,298	\$153,773,662	\$197,141,705
Residents Only:	\$1,344,357,875	\$2,113,113,829	\$572,579,338	23,664	\$147,129,624	\$191,873,786
Non-Residents Only:*	\$49,692,222	\$84,869,960	\$31,527,839	1,634	\$6,644,038	\$5,267,919
Big Game Hunting:	\$1,053,003,101	\$1,630,127,571	\$437,166,478	18,467	\$114,956,948	\$156,269,346
Residents Only:	\$1,032,069,662	\$1,594,747,476	\$423,973,849	18,014	\$112,049,358	\$153,855,705
Non-Residents Only:	\$20,933,439	\$35,380,095	\$13,192,629	453	\$2,907,590	\$2,413,641
Migratory Bird Hunting:	\$183,350,657	\$288,353,869	\$86,169,374	4,123	\$21,030,781	\$25,289,467
Residents Only:	\$167,550,474	\$261,572,065	\$73,865,204	3,114	\$18,630,511	\$23,677,797
Non-Residents Only:*	\$15,800,183	\$26,781,804	\$12,304,170	1,009	\$2,400,270	\$1,611,670
Small Game Hunting:	\$157,725,993	\$246,586,158	\$71,331,586	3,555	\$17,469,625	\$21,292,711
Residents Only:	\$145,031,327	\$224,771,219	\$60,495,749	2,597	\$15,395,342	\$20,012,229
Non-Residents Only:	\$12,694,666	\$21,814,939	\$10,835,837	958	\$2,074,283	\$1,280,482

Hunters Who Use Private Lands Exclusively:

(Participants 16+ years)	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
All Types of Hunting:	**	**	**	**	**	**
Residents Only:*	**	**	**	**	**	**
Non-Residents Only:	**	**	**	**	**	**
Big Game Hunting:	\$639,847,718	\$984,070,760	\$263,710,002	11,094	\$69,959,568	\$96,913,644
Residents Only:*	\$632,371,990	\$971,500,693	\$258,511,583	10,924	\$68,835,813	\$96,124,827
Non-Residents Only:	**	**	**	**	**	**
Migratory Bird Hunting:	\$20,333,695	\$32,441,669	\$11,239,034	557	\$2,568,401	\$2,711,363
Residents Only:*	\$16,883,513	\$26,929,322	\$9,621,458	501	\$2,209,237	\$2,351,835
Non-Residents Only:	**	**	**	**	**	**
Small Game Hunting:	\$63,092,681	\$101,692,771	\$34,161,740	2,066	\$7,626,125	\$7,465,118
Residents Only:*	\$48,371,314	\$76,389,455	\$22,321,064	1,072	\$5,327,914	\$5,951,180
Non-Residents Only:	**	**	**	**	**	**

* = data based on a small sample size
 ** = sample size too small to report results reliably

Table 20. Economic Activity Generated by Hunters and Wildlife Viewers Combined, by Type of Land Used, 2006

	RETAIL SALES	OUTPUT	EARNINGS	JOBS	FEDERAL TAX REVENUE	STATE & LOCAL TAX REVENUE
Public Land						
Exclusively	\$119,644,752	\$201,106,847	\$61,388,404	2,628	\$13,867,634	\$13,462,456
Residents	\$85,399,147	\$144,078,452	\$45,101,490	2,006	\$10,166,709	\$9,689,502
Non-Residents	\$34,245,606	\$57,028,395	\$16,286,914	622	\$3,700,925	\$3,772,954
Private Land						
Exclusively	**	**	**	**	**	**
Residents	**	**	**	**	**	**
Non-Residents	**	**	**	**	**	**
Use Both Public and Private Lands	\$920,158,308	\$1,466,798,065	\$393,897,306	15,985	\$99,859,009	\$126,805,739
Residents	**	**	**	**	**	**
Non-Residents	**	**	**	**	**	**

* = data based on a small sample size

** = sample size too small to report results reliably

Conclusion

Fish and wildlife provide numerous recreation opportunities for Wisconsin residents. The recreation expenditures benefit Wisconsin 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 Wisconsin 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 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 B METHODS

The methods used to generate the economic impact estimates for Wisconsin 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 with through the use of an input-output model of the Wisconsin 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 Wisconsin 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 saltwater category was included though it had no bearing on this state's study).

Survey respondents reported expenditures for dozens of categories of product and services. In most cases – except the indices – expenditures for individual categories are not reported due to small sample sizes. When using the data from the appendices, do so with caution. Aggregated, the expenditure estimates are reliable.

For individuals who indicated their equipment expenditures were for non-Great Lakes freshwater fishing, we allocated the relevant expenditures to Wisconsin fishing. For individuals who indicated their equipment expenditures were for unspecified fishing, we allocated expenditures based on the number of days of reported fishing. 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 C
DETAILED HUNTING EXPENDITURES AND IMPACTS**

DETAILED EXPENDITURES BY ALL HUNTERS IN WISCONSIN, 2006.

	RESIDENTS	NONRESIDENTS	TOTAL
Food	\$95,259,569	\$7,828,874	\$103,088,443
Lodging	\$44,122,447	\$138,596	\$44,261,043
Airplane fare	\$0	\$1,859,145	\$1,859,145
Public transport	\$1,576,678	\$353,435	\$1,930,113
Automobile	\$92,881,207	\$7,679,225	\$100,560,432
Guide fees	\$319,870	\$395,415	\$715,285
Public land fees	\$367,328	\$60,076	\$427,404
Private land fees	\$8,317,959	\$6,061,101	\$14,379,060
Heat/cook fuel	\$6,696,781	\$580,044	\$7,276,825
Equip rentals	\$135,220	\$0	\$135,220
Boat fuel	\$404,754	\$57,393	\$462,147
Boat launch fee	\$102,390	\$16,763	\$119,153
Boat mooring	\$0	\$54,141	\$54,141
Rifles	\$23,177,299	\$27,685	\$23,204,984
Shotguns	\$31,916,392	\$0	\$31,916,392
Muzzle loader	\$5,380,062	\$0	\$5,380,062
Handgun	\$2,388,200	\$0	\$2,388,200
Bows	\$31,250,494	\$5,405,887	\$36,656,381
Scopes - guns	\$6,786,484	\$451,269	\$7,237,753
Decoys	\$6,043,942	\$249,092	\$6,293,034
Ammo	\$29,716,757	\$710,342	\$30,427,098
Handloading	\$2,587,344	\$88,098	\$2,675,441
Dogs	\$12,986,986	\$2,544,101	\$15,531,087
Other hunt equip	\$8,479,102	\$276,501	\$8,755,603
Camping gear	\$1,547,292	\$314,799	\$1,862,091
Binoculars	\$3,086,217	\$193,413	\$3,279,630
Foul weather gear	\$22,000,771	\$1,073,988	\$23,074,759
Taxidermy	\$26,727,696	\$394,015	\$27,121,711
Other items	\$2,117,133	\$698,471	\$2,815,604
Bass boat	\$0	\$0	\$0
Boat	\$0	\$0	\$0
Canoe	\$217,877	\$0	\$217,877
Boat motor	\$0	\$0	\$0
Van	\$77,456,255	\$6,841,064	\$84,297,319
Cabin	\$0	\$0	\$0
Off-road vehicle	\$90,247,140	\$0	\$90,247,140
Other special equip	\$2,475,866	\$0	\$2,475,866
Books	\$2,983,117	\$807,604	\$3,790,720
Dues	\$9,073,800	\$141,123	\$9,214,923
License	\$23,718,999	\$4,129,803	\$27,848,802
Land purchase	\$658,240,847	\$260,759	\$658,501,606
Land lease	\$13,567,600	\$0	\$13,567,600
TOTAL	\$1,344,357,875	\$49,692,222	\$1,394,050,097

ECONOMIC SECTORS STIMULATED BY NONRESIDENT HUNTER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	2,528,238	78.2	450,733
Mining	295,745	0.9	49367
Utilities	753,212	1.7	151,516
Construction	535,015	5.6	251,333
Manufacturing	21,657,360	64.5	3,657,900
Wholesale Trade	2,702,227	21.5	1,151,502
Transportation & Warehousing	9,081,731	42	2,311,392
Retail trade	11,691,388	270.3	5,638,246
Information	1,562,385	8.2	388,590
Finance & insurance	2,335,044	15	783,865
Real estate & rental	2,239,488	17.4	367,210
Professional- scientific & tech svcs	2,368,135	22.2	1,076,944
Management of companies	764,721	4.5	360,256
Administrative & waste services	1,269,788	25.9	595,046
Educational svcs	331,256	7	169,335
Health & social services	3,100,258	42.4	1,672,397
Arts- entertainment & recreation	1,310,406	31.6	404,380
Accomodation & food services	5,620,360	139	1,685,817
Other services	7,602,401	747.3	6,648,778
Government & non NAICs	7,089,199	88.5	3,713,234
TOTAL	84,838,357	1,634	31,527,841

ECONOMIC SECTORS STIMULATED BY RESIDENT HUNTER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	19,732,120	513.3	4,248,804
Mining	3,840,963	11.3	653,317
Utilities	25,182,784	57.2	5,133,627
Construction	22,079,164	217.2	9,674,785
Manufacturing	391,814,208	1311.2	72,564,104
Wholesale Trade	45,005,360	357.8	19,178,170
Transportation & Warehousing	99,960,296	500.9	27,769,138
Retail trade	210,183,568	5,676.80	106,413,776
Information	25,511,888	132.8	6,460,819
Finance & insurance	56,154,196	360.5	18,875,120
Real estate & rental	743,531,904	5993.9	116,867,184
Professional- scientific & tech svcs	62,376,008	612	30,562,804
Management of companies	14,857,343	87.1	6,999,207
Administrative & waste services	49,486,500	1056.5	23,503,332
Educational svcs	6,088,398	127.9	3,106,335
Health & social services	56,477,736	772.8	30,465,316
Arts- entertainment & recreation	39,760,208	1072.9	9,220,816
Accomodation & food services	122,434,032	2754.5	37,411,388
Other services	37,087,084	1482.1	19,290,774
Government & non NAICs	81,041,520	565.3	24,180,522
TOTAL	2,112,605,280	23,664	572,579,338

ECONOMIC SECTORS STIMULATED BY RESIDENT+NONRESIDENT HUNTER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	22,260,358	592	4,699,537
Mining	4,136,708	12	702,684
Utilities	25,935,996	59	5,285,143
Construction	22,614,179	223	9,926,118
Manufacturing	413,471,568	1,376	76,222,004
Wholesale Trade	47,707,587	379	20,329,672
Transportation & Warehousing	109,042,027	543	30,080,530
Retail trade	221,874,956	5,947	112,052,022
Information	27,074,273	141	6,849,409
Finance & insurance	58,489,240	376	19,658,985
Real estate & rental	745,771,392	6,011	117,234,394
Professional- scientific & tech svcs	64,744,143	634	31,639,748
Management of companies	15,622,064	92	7,359,463
Administrative & waste services	50,756,288	1,082	24,098,378
Educational svcs	6,419,654	135	3,275,670
Health & social services	59,577,994	815	32,137,713
Arts- entertainment & recreation	41,070,614	1,105	9,625,196
Accomodation & food services	128,054,392	2,894	39,097,205
Other services	44,689,485	2,229	25,939,552
Government & non NAICs	88,130,719	654	27,893,756
TOTAL	2,197,443,637	25,298	604,107,179

APPENDIX D
DETAILED FRESHWATER FISHING EXPENDITURES AND IMPACTS
DETAILED EXPENDITURES BY ALL FRESHWATER ANGLERS, EXCEPT GREAT LAKES, IN
WISCONSIN, 2006.

	RESIDENTS	NONRESIDENTS	TOTAL
Food	\$98,211,245	\$66,467,585	\$164,678,830
Lodging	\$43,953,793	\$60,257,029	\$104,210,822
Airfare	\$588,155	\$1,913,197	\$2,501,353
Public transportation	\$80,609	\$837,855	\$918,464
Private transportation	\$103,112,067	\$70,808,439	\$173,920,506
Boat fuel	\$21,384,441	\$22,597,941	\$43,982,382
Guides	\$433,675	\$474,290	\$907,965
Public land use fees	\$1,533,669	\$1,120,249	\$2,653,917
Private land use fees	\$60,039	\$930,453	\$990,492
Boat launching	\$1,586,010	\$620,700	\$2,206,709
Boat mooring	\$11,963,625	\$8,945,025	\$20,908,650
Equipment rental	\$1,851,903	\$1,676,189	\$3,528,092
Bait (live, cut, prepared)	\$27,624,264	\$6,047,721	\$33,671,986
Ice	\$3,415,720	\$1,999,600	\$5,415,321
Heating & cooking fuel	\$3,880,933	\$1,315,360	\$5,196,294
Rods, reels & components	\$32,102,575	\$4,496,170	\$36,598,745
Lines & leaders	\$10,087,799	\$2,085,211	\$12,173,009
Lures, flies & artificial bait	\$19,854,397	\$3,455,171	\$23,309,568
Hooks, sinkers, other terminal tackle	\$6,255,325	\$745,111	\$7,000,435
Tackle boxes	\$2,705,534	\$319,219	\$3,024,753
Creels, strings, landing nets, etc.	\$1,539,354	\$227,706	\$1,767,060
Bait buckets, minnow traps, etc.	\$862,252	\$137,672	\$999,924
Depth finder, fish finders, other electronics	\$13,236,417	\$1,330,389	\$14,566,806
Ice fishing equipment	\$8,912,244	\$1,610,114	\$10,522,358
Other fishing equipment	\$2,196,683	\$34,945	\$2,231,628
Camping gear	\$3,607,056	\$5,443,362	\$9,050,418
Binoculars	\$628,646	\$0	\$628,646
Special fishing clothing, foul weather gear	\$3,467,149	\$1,113,521	\$4,580,670
Bass boats	\$49,624,812	\$106,004	\$49,730,816
Other motorized boats	\$99,577,852	\$41,551,873	\$141,129,725
Canoes, non-motorized boats	\$927,171	\$1,152,814	\$2,079,985
Boat motors, trailers, hitches, etc.	\$26,172,700	\$4,049,002	\$30,221,702
Pick-ups, campers, motor homes, etc.	\$145,044,367	\$3,420,532	\$148,464,899
Cabins	\$0	\$0	\$0
4x4 and off-road vehicles	\$93,765,247	\$462,136	\$94,227,383
Other special equipment	\$36,312	\$0	\$36,312
Taxidermy & processing	\$117,633	\$0	\$117,633
Books & magazines	\$1,617,328	\$273,559	\$1,890,887
Dues and contributions	\$2,161,586	\$177,579	\$2,339,165
Other misc. fishing expenditures	\$1,073,117	\$474,124	\$1,547,241
Land purchased for fishing	\$81,834,469	\$161,899,525	\$243,733,994
Land leased for fishing	\$0	\$2,464,070	\$2,464,070
SubTotal	\$927,088,174	\$483,041,441	\$1,410,129,615

**ECONOMIC SECTORS STIMULATED BY NONRESIDENT FRESHWATER ANGLERS,
EXCEPT GREAT LAKES, SPENDING**

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	10,141,809	251.9	2,090,305
Mining	3173836	9.2	523581
Utilities	9,738,837	22.1	1,976,299
Construction	8,775,376	89	3,978,789
Manufacturing	142,494,496	463.6	22,513,580
Wholesale Trade	18,991,806	151	8,092,994
Transportation & Warehousing	58,592,168	238.7	14,656,456
Retail trade	76,337,656	1888.6	37,059,636
Information	9,156,518	48.8	2,360,966
Finance & insurance	20,455,956	131.5	6,892,346
Real estate & rental	186,074,864	1501.2	29,673,352
Professional- scientific & tech svcs	22,852,474	214.7	10,420,699
Management of companies	6,159,375	36.1	2,901,645
Administrative & waste services	16,971,956	360.2	8,093,526
Educational svcs	2,213,838	46.5	1,128,153
Health & social services	20,590,326	281.8	11,107,132
Arts- entertainment & recreation	11,782,322	246.7	4,233,486
Accomodation & food services	105,460,264	2229.5	32,423,448
Other services	11,807,386	297.7	5,116,024
Government & non NAICs	28,015,962	83.7	3,916,107
TOTAL	817,868	8,593	209,158,524

**ECONOMIC SECTORS STIMULATED BY RESIDENT FRESHWATER ANGLERS,
EXCEPT GREAT LAKES, SPENDING**

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	29,728,000	883.7	5,434,884
Mining	4,601,319	13.3	771,803
Utilities	14,456,721	32.6	2,918,161
Construction	11,461,286	118.3	5,300,429
Manufacturing	580,369,024	1851.6	101,554,224
Wholesale Trade	48,459,548	385.3	20,650,106
Transportation & Warehousing	115,255,640	496.4	29,646,702
Retail trade	232,678,080	6,213.80	118,510,576
Information	18,920,188	101.9	4,914,954
Finance & insurance	39,018,544	251.5	13,213,403
Real estate & rental	118,681,728	947.5	19,269,540
Professional- scientific & tech svcs	45,142,528	412	19,883,458
Management of companies	16,869,486	98.9	7,947,116
Administrative & waste services	22,537,678	490.4	11,007,580
Educational svcs	4,764,710	99.9	2,435,356
Health & social services	43,556,932	596	23,495,872
Arts- entertainment & recreation	18,288,886	392	6,669,400
Accomodation & food services	116,411,008	2607.9	35,520,764
Other services	28,153,814	473.4	10,747,511
Government & non NAICs	46,880,696	95	4,422,133
TOTAL	1,347,722	16,561	444,313,972

ECONOMIC SECTORS STIMULATED BY RESIDENT+NONRESIDENT FRESHWATER ANGLER SPENDING, EXCEPT GREAT LAKES,

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	39,869,809	1,136	7,525,189
Mining	7,775,155	23	1,295,384
Utilities	24,195,558	55	4,894,460
Construction	20,236,662	207	9,279,218
Manufacturing	722,863,520	2,315	124,067,804
Wholesale Trade	67,451,354	536	28,743,100
Transportation & Warehousing	173,847,808	735	44,303,158
Retail trade	309,015,736	8,102	155,570,212
Information	28,076,706	151	7,275,920
Finance & insurance	59,474,500	383	20,105,749
Real estate & rental	304,756,592	2,449	48,942,892
Professional- scientific & tech svcs	67,995,002	627	30,304,157
Management of companies	23,028,861	135	10,848,761
Administrative & waste services	39,509,634	851	19,101,106
Educational svcs	6,978,548	146	3,563,509
Health & social services	64,147,258	878	34,603,004
Arts- entertainment & recreation	30,071,208	639	10,902,886
Accomodation & food services	221,871,272	4,837	67,944,212
Other services	39,961,200	771	15,863,535
Government & non NAICs	74,896,658	179	8,338,240
TOTAL	2,326,023,041	25,154	653,472,496

APPENDIX E
DETAILED GREAT LAKES FISHING EXPENDITURES AND IMPACTS
DETAILED EXPENDITURES BY ALL GREAT LAKES ANGLERS IN WISCONSIN, 2006.

	RESIDENTS	NONRESIDENTS	TOTAL
Food	\$39,867,722	\$20,106,280	\$59,974,002
Lodging	\$7,096,329	\$15,784,174	\$22,880,503
Airfare	\$203,348	\$213,559	\$416,908
Public transportation	\$62,007	\$1,805,289	\$1,867,296
Private transportation	\$31,822,000	\$13,861,640	\$45,683,640
Boat fuel	\$15,371,213	\$2,451,654	\$17,822,868
Guides	\$1,831,638	\$3,931,151	\$5,762,789
Public land use fees	\$576,822	\$0	\$576,822
Private land use fees	\$0	\$24,039	\$24,039
Boat launching	\$1,976,613	\$261,883	\$2,238,496
Boat mooring	\$5,193,310	\$604,865	\$5,798,176
Equipment rental	\$10,387,886	\$1,232,798	\$11,620,684
Bait (live, cut, prepared)	\$1,751,580	\$206,632	\$1,958,212
Ice	\$3,731,607	\$18,029	\$3,749,637
Heating & cooking fuel	\$865,857	\$0	\$865,857
Rods, reels & components	\$4,090,474	\$0	\$4,090,474
Lines & leaders	\$5,561,102	\$0	\$5,561,102
Lures, flies & artificial bait	\$3,049,974	\$375,718	\$3,425,692
Hooks, sinkers, other terminal tackle	\$2,836,140	\$164,839	\$3,000,979
Tackle boxes	\$0	\$0	\$0
Creels, strings, landing nets, etc.	\$665,856	\$66,914	\$732,770
Bait buckets, minnow traps, etc.	\$87,602	\$0	\$87,602
Depth finder, fish finders, other electronics	\$791,071	\$0	\$791,071
Ice fishing equipment	\$11,225,886	\$0	\$11,225,886
Other fishing equipment	\$706,261	\$0	\$706,261
Camping gear	\$0	\$0	\$0
Binoculars	\$0	\$0	\$0
Special fishing clothing, foul weather gear	\$555,625	\$0	\$555,625
Bass boats	\$0	\$0	\$0
Other motorized boats	\$0	\$39,482,813	\$39,482,813
Canoes, non-motorized boats	\$0	\$0	\$0
Boat motors, trailers, hitches, etc.	\$0	\$0	\$0
Pick-ups, campers, motor homes, etc.	\$0	\$0	\$0
Cabins	\$0	\$0	\$0
4x4 and off-road vehicles	\$0	\$0	\$0
Other special equipment	\$0	\$0	\$0
Taxidermy & processing	\$0	\$0	\$0
Books & magazines	\$72,811	\$0	\$72,811
Dues and contributions	\$262,120	\$0	\$262,120
Other misc. fishing expenditures	\$0	\$0	\$0
Land purchased for fishing	\$623,335	\$0	\$623,335
Land leased for fishing	\$0	\$0	\$0
Total	\$151,266,188	\$100,592,280	\$251,858,468

ECONOMIC SECTORS STIMULATED BY NONRESIDENT GREAT LAKES ANGLER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	1,795,989	30.7	393,389
Mining	554,583	1.6	91,690
Utilities	1,780,161	4	359,688
Construction	1,334,767	13.8	616,207
Manufacturing	54,373,084	231.8	10,502,964
Wholesale Trade	5,182,788	41.2	2,208,546
Transportation & Warehousing	13,285,893	68.7	3,645,201
Retail trade	22,367,500	643.4	11,417,473
Information	2,137,965	11.7	560,669
Finance & insurance	4,434,690	28.6	1,504,595
Real estate & rental	5,887,042	49.2	1,247,853
Professional- scientific & tech svcs	4,825,521	44.5	2,131,420
Management of companies	1,819,558	10.7	857,183
Administrative & waste services	2,468,607	51.8	1,183,572
Educational svcs	539,870	11.4	275,415
Health & social services	5,066,265	69.3	2,732,914
Arts- entertainment & recreation	5,007,812	100.9	1,760,255
Accommodation & food services	28,565,028	608.4	8,760,361
Other services	2,549,803	46.8	1,001,673
Government & non NAICs	5,247,716	8.9	465,616
TOTAL	169,224,642	2,077	51,716,684

ECONOMIC SECTORS STIMULATED BY RESIDENT GREAT LAKES ANGLER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	4,266,322	93.2	875,676
Mining	1,581,149	4.6	259,832
Utilities	2,592,434	5.8	518,531
Construction	2,274,653	24.1	1,084,323
Manufacturing	58,290,436	170.4	8,235,900
Wholesale Trade	8,605,518	68.4	3,667,076
Transportation & Warehousing	29,499,282	99.8	6,813,879
Retail trade	38,871,144	935.30	18,681,082
Information	3,439,977	19	899,142
Finance & insurance	6,645,701	42.8	2,251,211
Real estate & rental	17,696,284	179.9	5,386,920
Professional- scientific & tech svcs	8,102,657	74.5	3,597,164
Management of companies	2,497,256	14.6	1,176,443
Administrative & waste services	4,022,998	91.5	2,040,741
Educational svcs	790,094	16.6	402,957
Health & social services	7,344,916	100.5	3,962,045
Arts- entertainment & recreation	9,143,738	182.8	3,197,161
Accomodation & food services	30,990,040	726.2	9,363,034
Other services	4,172,917	69.4	1,577,013
Government & non NAICs	7,722,557	19.8	888,978
TOTAL	248,550,073	2,939	74,879,108

ECONOMIC SECTORS STIMULATED BY RESIDENT+NONRESIDENT GREAT LAKES ANGLER SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	6,062,311	124	1,269,065
Mining	2,135,732	6	351,522
Utilities	4,372,595	10	878,219
Construction	3,609,420	38	1,700,530
Manufacturing	112,663,520	402	18,738,864
Wholesale Trade	13,788,306	110	5,875,622
Transportation & Warehousing	42,785,175	169	10,459,080
Retail trade	61,238,644	1,579	30,098,555
Information	5,577,942	31	1,459,811
Finance & insurance	11,080,391	71	3,755,806
Real estate & rental	23,583,326	229	6,634,773
Professional- scientific & tech svcs	12,928,178	119	5,728,584
Management of companies	4,316,814	25	2,033,626
Administrative & waste services	6,491,605	143	3,224,313
Educational svcs	1,329,964	28	678,372
Health & social services	12,411,181	170	6,694,959
Arts- entertainment & recreation	14,151,550	284	4,957,416
Accomodation & food services	59,555,068	1,335	18,123,395
Other services	6,722,720	116	2,578,686
Government & non NAICs	12,970,273	29	1,354,594
TOTAL	417,774,715	5,017	126,595,792

APPENDIX F
DETAILED WILDLIFE WATCHING EXPENDITURES AND IMPACTS

DETAILED EXPENDITURES BY ALL WILDLIFE WATCHING IN WISCONSIN, 2006.*

	RESIDENTS	NONRESIDENTS	TOTAL
Food	\$23,951,248	\$87,590,731	\$111,541,978
Lodging	\$16,574,604	\$43,656,006	\$60,230,610
Airfare	\$8,602,009	\$4,146,156	\$12,748,165
Public transportation	\$3,820,272	\$0	\$3,820,272
Private transportation	\$18,799,358	\$44,513,024	\$63,312,383
Guide fees	\$29,708	\$290,002	\$319,710
Public land access fees	\$672,484	\$215,899	\$888,383
Private land access fees	\$0	\$2,625,124	\$2,625,124
Equipment rental	\$0	\$215,374	\$215,374
Boat fuel	\$216,423	\$3,056,862	\$3,273,285
Other boat costs	\$0	\$666,876	\$666,876
Heating & cooking fuel	\$523,378	\$0	\$523,378
Cameras	\$21,562,696	\$5,061,458	\$26,624,154
Film & developing	\$10,795,428	\$0	\$10,795,428
Binoculars & spotting scopes	\$12,030,394	\$3,895,491	\$15,925,885
Commercial bird food	\$84,487,301	\$1,120,168	\$85,607,469
Other bird food	\$21,587,559	\$655,953	\$22,243,513
Food for other wildlife	\$12,208,468	\$148,569	\$12,357,036
Nest boxes, feeders	\$18,452,578	\$395,340	\$18,847,918
Other special equipment	\$1,916,902	\$102,926	\$2,019,828
Tents, tarps	\$1,245,451	\$0	\$1,245,451
Backpacking equipment	\$9,378,869	\$0	\$9,378,869
Other camping equipment	\$13,380,274	\$0	\$13,380,274
Day packs	\$4,829,581	\$617,210	\$5,446,791
Magazines & books	\$5,400,713	\$655,349	\$6,056,062
Membership dues, contributions	\$18,587,499	\$735,979	\$19,323,478
Other equipment	\$2,917,882	\$681,480	\$3,599,362
Off-road vehicles	\$57,712,800	\$0	\$57,712,800
Pickup, camper, motor home	\$0	\$0	\$0
Boat	\$0	\$0	\$0
Trailer, boat accessories	\$0	\$0	\$0
Cabin	\$0	\$0	\$0
Other equipment	\$0	\$0	\$0
Land purchases	\$46,798,906	\$6,461,231	\$53,260,137
Land leases	\$0	\$13,245,524	\$13,245,524
Plantings	\$107,453,842	\$0	\$107,453,842
TOTAL	\$523,936,627	\$220,752,733	\$744,689,360

**ECONOMIC SECTORS STIMULATED BY NONRESIDENT WILDLIFE WATCHING
SPENDING**

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	6,882,495	137	1,490,213
Mining	1,653,831	5	272,153
Utilities	3,853,471	9	776,355
Construction	2,680,655	28	1,257,650
Manufacturing	65,694,068	178	8,546,526
Wholesale Trade	13,275,244	106	5,656,991
Transportation & Warehousing	76,279,152	403	20,031,438
Retail trade	42,171,984	923	19,601,242
Information	5,516,773	30	1,427,561
Finance & insurance	9,827,472	63	3,327,467
Real estate & rental	29,701,676	236	4,759,997
Professional- scientific & tech svcs	11,155,001	106	5,171,532
Management of companies	3,392,016	20	1,597,959
Administrative & waste services	10,262,648	174	4,271,475
Educational svcs	1,137,752	24	579,865
Health & social services	10,594,498	145	5,714,970
Arts- entertainment & recreation	2,355,373	60	940,407
Accomodation & food services	55,508,888	1,358	16,631,851
Other services	8,481,693	412	4,862,640
Government & non NAICs	11,803,856	23	1,082,006
TOTAL	372,228,546	4,440	108,000,298

ECONOMIC SECTORS STIMULATED BY RESIDENT WILDLIFE WATCHING SPENDING

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	139,913,600	3,952	46,168,112
Mining	1,085,686	3	181,436
Utilities	8,444,752	19	1,724,499
Construction	6,052,439	62	2,771,022
Manufacturing	147,197,216	557	26,203,344
Wholesale Trade	22,347,108	178	9,522,790
Transportation & Warehousing	85,454,912	443	22,643,042
Retail trade	160,086,864	3,607.00	77,626,872
Information	15,896,807	85	4,000,231
Finance & insurance	23,339,678	150	7,810,735
Real estate & rental	70,177,072	561	11,171,469
Professional- scientific & tech svcs	23,485,516	228	10,997,735
Management of companies	8,704,915	51	4,100,835
Administrative & waste services	15,140,974	300	6,924,237
Educational svcs	2,956,994	62	1,492,722
Health & social services	27,002,470	370	14,564,552
Arts- entertainment & recreation	3,230,300	84	1,370,999
Accomodation & food services	34,937,344	810	10,646,207
Other services	30,927,924	525	12,192,395
Government & non NAICs	29,278,414	59	2,854,444
TOTAL	855,660,985	12,106	274,967,678

**ECONOMIC SECTORS STIMULATED BY RESIDENT+NONRESIDENT WILDLIFE
WATCHING SPENDING**

	Total Output (Sales)	Employment	Income
Ag, Forestry, Fish & Hunting	146,796,095	4,089	47,658,325
Mining	2,739,517	8	453,589
Utilities	12,298,223	28	2,500,854
Construction	8,733,094	90	4,028,672
Manufacturing	212,891,284	735	34,749,870
Wholesale Trade	35,622,352	284	15,179,781
Transportation & Warehousing	161,734,064	846	42,674,480
Retail trade	202,258,848	4,530	97,228,114
Information	21,413,580	115	5,427,792
Finance & insurance	33,167,150	213	11,138,202
Real estate & rental	99,878,748	797	15,931,466
Professional- scientific & tech svcs	34,640,517	334	16,169,267
Management of companies	12,096,931	71	5,698,794
Administrative & waste services	25,403,622	474	11,195,712
Educational svcs	4,094,746	86	2,072,587
Health & social services	37,596,968	515	20,279,522
Arts- entertainment & recreation	5,585,673	144	2,311,406
Accomodation & food services	90,446,232	2,168	27,278,058
Other services	39,409,617	937	17,055,035
Government & non NAICs	41,082,270	82	3,936,450
TOTAL	1,227,889,531	16,546	382,967,976