U.S. Fish & Wildlife Service

2001 National and State Economic Impacts of Wildlife Watching

Addendum to the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation

Report 2001-2

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This report is intended to complement the National and State reports from the 2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. The conclusions are the authors and do not represent official positions of the U.S. Fish and Wildlife Service.

Introduction

Observing, feeding, and photographing wildlife in the United States is an important pastime for millions of Americans and contributes significantly to the national and state economies. In 2001, more than 66 million people 16 years of age and older spent over $38.4 billion on trips and equipment in pursuit of these activities. Wildlife-watching expenditures have contributed substantially to Federal and state tax revenues, jobs, earnings, and industry output.

The *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (FHWAR)* (U.S. Department of the Interior et al.) is the most comprehensive survey of wildlife-related recreation in the U.S. Over 40,000 detailed interviews were completed with anglers, hunters, and wildlife watchers. The survey focused on 2001 participation and expenditures by U.S. residents 16 years of age or older.

Two reports used the 2001 FHWAR to address the national and state economic impacts of hunting and fishing.[1] In this report, estimates of national and state economic impacts of wildlife watching based on the 2001 FHWAR are reported. The following topics are addressed: (1) national participation in wildlife watching; (2) expenditures associated with participation in wildlife watching; (3) estimates of the total economic activity generated by these expenditures; (4) total employment and employment income associated with these expenditures; and (5) estimates of associated state and federal tax revenue.

Summary of National Economic Impacts of Wildlife Watching: 2001

Participation	66.1 million
Total Expenditures	$38.4 billion
Total Industry Output	$95.8 billion
Employment	1,027,833 jobs
Employment Income	$27.8 billion
State Sales Tax	$2.1 billion
State Income Tax	$712 million
Federal Income tax	$3.3 billion

Figure 1. Wildlife Watching Expenditures by Major Category: 2001
$38.4 billion

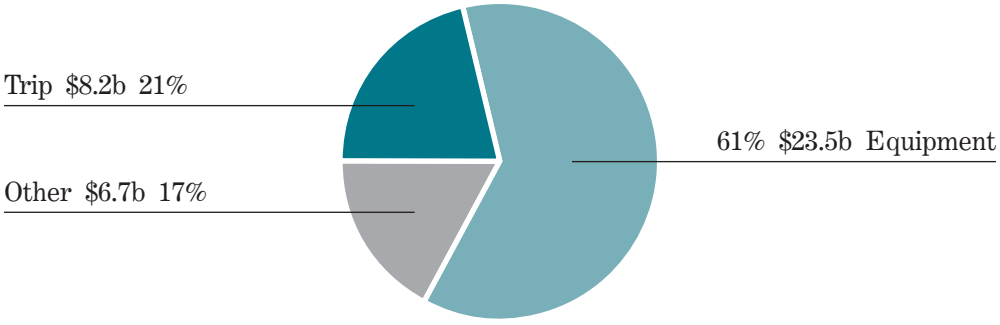
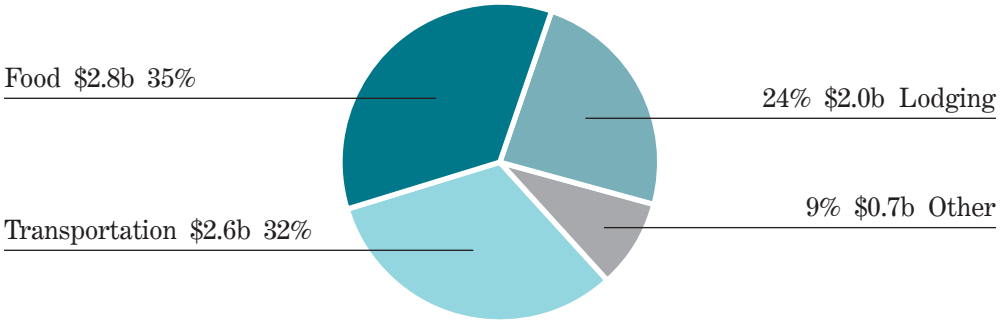


Figure 2. Trip Expenditures for Wildlife Watching: 2001
$8.2 billion



[1] See *The Economic Importance of Hunting in America*, International Association of Fish and Wildlife Agencies, Washington DC, 2002 and *Sportfishing in America*, American Sportfishing Association, Alexandria, VA, 2002.

Participation in Wildlife Watching

Wildlife-related recreation is one of the most popular forms of recreation in the United States. In 2001, 82 million people participated in hunting, fishing and wildlife watching. By comparison, total attendance in 2001 for all major league baseball and professional football games numbered about 89 million (Infoplease.com).

Over 66 million people participated in some form of wildlife watching, which refers to nonharvesting activities such as observing, feeding and photographing wildlife. The figure of 66 million includes only *primary* participants in wildlife-watching. Primary means that the principal motivation for the trip, activity or expenditure is wildlife-related. Primary participation is further categorized as *residential* or *nonresidential*. Primary residential participants include those whose activities[2] are within one mile of home and primary *nonresidential* participants refers to people who take trips or outings of at least one mile for the primary purpose of observing, feeding, or photographing wildlife. For the purposes of the survey, trips to zoos, circuses, aquariums, museums and for scouting game are not considered wildlife watching.

Table 1 summarizes the number of state residents and state nonresidents who participated in wildlife-watching activities by state in 2001.

Laura Riley, USFWS

[2] These activities include one or more of the following: (1) closely observing or trying to identify birds or other wildlife; (2) photographing wildlife; (3) feeding birds or other wildlife on a regular basis; (4) maintaining natural areas of at least one-quarter acre for which benefit to wildlife is the primary purpose; (5) maintaining plantings (shrubs, agricultural crops, etc.) for which benefit to wildlife is the primary concern, or (6) visiting public parks within one mile of home for the primary purpose of observing, feeding, or photographing wildlife (pp. 2–3, U.S. Department of the Interior et al. 2002).

Table 1. Number of Wildlife-Watching Participants by State: 2001
(Population 16 years and older. Number in thousands)

	Total participants		*Non-State Residents*		*State Residents*	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
United States, Total	**66,105**	**100**	**21,823**	**33**	**62,928**	**95**
Alabama	1,016	100	72	7	944	93
Alaska	420	100	185	44	235	56
Arizona	1,465	100	367	25	1,098	75
Arkansas	845	100	67	8	778	92
California	5,720	100	384	7	5,336	93
Colorado	1,552	100	362	23	1,190	77
Connecticut	965	100	90	9	875	91
Delaware	232	100	64	28	168	72
Florida	3,240	100	490	15	2,750	85
Georgia	1,494	100	178	12	1,317	88
Hawaii	220	100	96	43	125	57
Idaho	643	100	264	41	379	59
Illinois	2,621	100	176	7	2,445	93
Indiana	1,866	100	80	4	1,786	96
Iowa	1,028	100	63	6	966	94
Kansas	807	100	76	9	731	91
Kentucky	1,362	100	102	8	1,259	92
Louisiana	931	100	111	12	819	88
Maine	778	100	260	33	518	67
Maryland	1,524	100	234	15	1,290	85
Massachusetts	1,686	100	205	12	1,481	88
Michigan	2,666	100	250	9	2,416	91
Minnesota	2,155	100	171	8	1,984	92
Mississippi	631	100	55	9	576	91
Missouri	1,826	100	219	12	1,607	88
Montana	687	100	325	47	362	53
Nebraska	565	100	71	13	494	87
Nevada	543	100	222	41	320	59
New Hampshire	766	100	320	42	445	58
New Jersey	1,895	100	225	12	1,670	88
New Mexico	671	100	202	30	469	70
New York	3,887	100	392	10	3,495	90
North Carolina	2,168	100	300	14	1,868	86
North Dakota	190	100	56	29	134	71
Ohio	2,897	100	145	5	2,752	95
Oklahoma	1,131	100	105	9	1,026	91
Oregon	1,680	100	401	24	1,280	76
Pennsylvania	3,794	100	293	8	3,502	92
Rhode Island	298	100	58	19	240	81
South Carolina	1,186	100	128	11	1,059	89
South Dakota	358	100	110	31	248	69
Tennessee	2,084	100	382	18	1,701	82
Texas	3,240	100	174	5	3,066	95
Utah	806	100	244	30	562	70
Vermont	496	100	214	43	282	57
Virginia	2,460	100	313	13	2,147	87
Washington	2,496	100	286	11	2,210	89
West Virginia	605	100	105	17	500	83
Wisconsin	2,442	100	283	12	2,159	88
Wyoming	498	100	327	66	171	34

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

The Economic Impacts of Wildlife Watching

Spending associated with wildlife watching generates a substantial amount of economic activity across the U.S. Participants spend money on a wide variety of goods and services. Trip-related expenditures for nonresidential participants include expenses for food, lodging, and transportation. Both residential and nonresidential participants also buy equipment and related goods for the primary purpose of engaging in wildlife watching such as binoculars, cameras, wild bird food, memberships in wildlife organizations, camping equipment, motor homes, campers, and off-road vehicles.

If Wildlife Watching were a company, its sales of $38.4 billion would rank it 33rd in the Forbes 500 list for 2001—placing it just ahead of Motorola and Kmart.

Doug Canfield, USFWS

These direct expenditures are only part of the total picture, however. Those businesses and industries that supply the local retailers where the purchases are made also benefit from wildlife-watching expenditures. For example, a family may decide to purchase a pair of binoculars to use primarily for birdwatching on an upcoming vacation. Part of the total purchase price will go to the local retailer, say a sporting goods store. The sporting goods store in turn pays a wholesaler that in turn pays the manufacturer of the binoculars. The manufacturer then spends a portion of this income to pay businesses supplying the manufacturer.

In this fashion, each dollar of local retail expenditures can affect a variety of businesses at the local, regional and national level. Consequently, consumer spending associated with wildlife watching can have a significant impact on economic activity, employment, and household income across the nation.

Methods

The 2001 FHWAR contains estimates of annual travel and equipment expenditures by wildlife-watching participants. Travel expenditures were obtained only for nonresidential participants[3] while equipment expenditures were obtained for both residential and nonresidential participants. These expenditures were used in conjunction with an economic modeling method known as *input-output analysis*[4] to estimate total industry output, employment and employment income associated with these expenditures.

Wildlife Watching Expenditures Close to Home:
Each year wildlife watchers spend over $3.1 billion on food for birds and other wildlife; and $733 million on bird houses and feeders.

Rick Bohn, USFWS

Direct Expenditures

Total direct expenditures by participants was $38.4 billion in 2001. Trip-related expenditures accounted for about $8.2 billion (21.2 percent of total expenditures). Food and drink accounted for 34.7 percent of total trip-related expenditures and transportation and lodging accounted for 31.8 and 24.3 percent, respectively.

Equipment and other expenditures accounted for $30.3 billion (78.8 percent of total expenditures). Off-road vehicles, tent trailers, motor homes and pick-up trucks accounted for 42.8 percent of total equipment and other expenditures. Packaged and bulk wild bird food accounted for 8.7 percent of equipment and related expenditures, while film purchases (including developing) and photographic equipment accounted for 3.0 and 5.5 percent, respectively.

Table 2 summarizes nationwide expenditures for wildlife watching in 2001.

High-Tech Wildlife Watchers

- *In one year, wildlife watchers spent more than $2.6 billion on cameras, video cameras and associated photographic equipment.*
- *Binoculars and spotting scopes accounted for $507 million in spending.*

[3] Theoretically, residential participants would not have any travel expenses since all wildlife-associated activity took place within one mile of their home.

[4] The estimates of total economic activity, employment, employment income and federal and state taxes in this report were derived using IMPLAN, a regional input-output model and software system. For additional information, see MIG, Inc. *IMPLAN System* (1998 data and software) and Olson and Lindall, *IMPLAN Professional Software, Analysis and Data Guide*. For additional information on input-output modeling, see Miller and Blair *Input-Output Analysis* .

Table 2. National Expenditures for Wildlife Watching: 2001

Expenditure item	*Total Expenditures (in millions)*	*Percent of Category Expenditures*	*Percent of Total Expenditures*
(1) Travel-related			
Food	$2,835.9	34.7 %	7.4 %
Lodging	$1,983.0	24.3 %	5.2 %
Public Transportation	$702.2	8.6 %	1.8 %
Private Transportation	$1,893.3	23.2 %	4.9 %
Guide fees, pack trip or package fees	$113.0	1.4 %	0.3 %
Public land use/access fees	$114.8	1.4 %	0.3 %
Private land use/access fees	$50.4	0.6 %	0.1 %
Equipment rental	$105.2	1.3 %	0.3 %
Boat costs	$326.5	4.0 %	0.8 %
Heating and cooking fuel	$38.1	0.5 %	0.1 %
Total, Travel-related	**$8,162.4**	**100.0 %**	**21.2 %**
(2) Equipment and other items			
a. Wildlife-Watching Equipment and related items			
Binoculars, spotting scopes	$507.4	1.7 %	1.3 %
Cameras, video cameras, special lenses and other photographic equipment	$1,656.8	5.5 %	4.3 %
Film and developing	$910.4	3.0 %	2.4 %
Packaged wild bird food	$2,034.8	6.7 %	5.3 %
Bulk wild bird food	$569.9	1.9 %	1.5 %
Feed for other wildlife	$503.0	1.7 %	1.7 %
Nest boxes, bird houses, feeders, baths	$732.7	2.4 %	2.4 %
Other wildlife-watching equipment	$116.0	0.4 %	0.4 %
Day packs, carrying cases, and special clothing	$323.0	1.1 %	1.1 %
Wildlife-watching, sub-total	*$7,353.9*	*24.3 %*	*19.1 %*
b. Auxiliary Equipment			
Tents and tarps	$185.6	0.6 %	0.5 %
Frame packs and backpacking equipment	$129.4	0.4 %	0.3 %
Other camping equipment	$266.4	0.9 %	0.7 %
Other auxiliary equipment	$135.6	0.4 %	0.4 %
Auxiliary, sub-total	*$716.9*	*2.4 %*	*1.9%*
c. Special Equipment			
Off-the-road vehicles	$6,677.7	22.1 %	17.4 %
Travel or tent trailer, pick-up, camper, van, motor home	$6,272.3	20.7 %	16.3 %
Boats, boat accessories	$996.5	3.3 %	2.6 %
Cabins*	—	—	—
Other equipment	$572.4	1.9 %	1.5 %
Special, sub-total	*$15,468.7*	*51.1 %*	*40.3 %*
d. Other items			
Magazines and books	$332.0	1.1 %	0.9 %
Membership dues and contributions	$920.2	3.1 %	2.4 %
Land leasing and ownership	$4,761.0	15.7 %	12.4 %
Plantings	$699.3	2.3 %	1.8 %
Other items, sub-total	*$6,712.5*	*22.2 %*	*17.5 %*
Total, Equipment and other items	**$30,252.0**	**100 %**	**78.8 %**
National Total	**$38,414.5**	**—**	**100.0 %**

* Sample size is too small to report data reliably.

Total Industry Output

The direct expenditures of $38.4 billion in 2001 generated $95.8 billion in total industrial output (TIO) across the U.S. TIO includes the direct, indirect and induced effects[5] of wildlife-watching expenditures. The ratio of TIO to direct expenditures, 2.49, means that for each $1 of direct spending associated with wildlife watching, an additional $1.49 of economic activity is generated. Major sectors affected include manufacturing which accounted for $37.3 billion (39 percent); service sector $17 billion (17.8 percent); trade (both wholesale and retail) $17.9 billion (18.7 percent); and finance-insurance-real estate which accounted for $10.1 billion (10.5 percent) of output.

Employment and Employment Income

The total industrial output of $95.8 billion resulted in 1,027,833 jobs (full and part time) with total wages and salaries of $27.8 billion. This results in a national average of $27,047 per job per year. With respect to employment, major industrial sectors affected include trade with over 350,000 jobs (34.1 percent); services with 301,000 jobs (29.3 percent); manufacturing with 176,000 jobs (17.1 percent) and agriculture with over 59,000 jobs (5.8 percent).

The trade sector accounted for the largest portion of employment income at $7.8 billion (28.3 percent); services accounted for $7.3 billion (26.3 percent); manufacturing with $7.3 billion (26.2 percent) and finance-insurance-real estate at $1.9 billion (6.8 percent). Table 3 summarizes economic impacts by major business sector (column sums may not equal column totals due to rounding).

Federal and State Taxes

Wildlife-watching expenditures generate taxes at both the state and federal level in two ways. First, direct and indirect expenditures generate state sales tax (except in those states without sales tax). Second, employment earnings are taxed at both the state (with the exception of states which do not tax income) and federal levels. Based on 2001 expenditures on wildlife-watching, associated total industrial output and associated employment and employment income, 2001 tax revenue is estimated as follows:

12 States derived 1% or more of their total Economic Gross Product from the impacts of wildlife-watching expenditures.

(1) total state sales tax revenue: $2.1 billion;

(2) total state income tax revenue: $712 million; and

(3) total federal individual income tax revenue: $3.3 billion.

Table 3. National Economic Impacts of Wildlife-Watching by Major Industrial Sector, 2001
(all dollar amounts in millions)

Sector	*Total Industrial Output*	*Sector as Percent of Total*	*Employment*	*Sector as Percent of Total*	*Employment Income*	*Sector as Percent of Total*
Agriculture	$2,754.6	2.9 %	59,741	5.8 %	$452.7	1.6 %
Mining	$874.0	0.9 %	3,693	0.4 %	$162.2	0.6 %
Construction	$1,242.5	1.3 %	17,733	1.7 %	$507.5	1.8 %
Manufacturing	$37,322.2	39.0 %	176,233	17.1 %	$7,266.7	26.2 %
TCPU (1)	$6,560.6	6.8 %	47,561	4.6 %	$1,663.6	6.0 %
Trade	$17,922.2	18.7 %	350,958	34.1 %	$7,845.0	28.3 %
FIRE (2)	$10,088.7	10.5 %	53,454	5.2 %	$1,899.3	6.8 %
Services	$17,047.1	17.8 %	300,985	29.3 %	$7,298.1	26.3 %
Government	$1,281.6	1.3 %	11,606	1.1 %	$607.0	2.2 %
Other	$62.4	0.1 %	5,871	0.6 %	$62.4	0.2 %
Totals	**$95,784.1**	**100.0 %**	**1,027,833**	**100.0 %**	**$27,754.5**	**100.0 %**

(1) TCPU: Transportation, Communications, Public Utilities

(2) FIRE: Finance, Insurance, Real Estate

[5] *Direct effects* are production changes associated with the immediate effects of changes in final demand (in this case, changes in wildlife associated expenditures); *indirect effects* are production changes in those industries which supply the inputs to industries directly affected by final demand; *induced effects* are changes in regional household spending patterns caused by changes in regional employment (generated from the direct and indirect effects) (Taylor et al. 1993, Appendix E, p. E-1).

State Impacts

Table 4 shows the economic impacts of wildlife-watching expenditures by state for 2001. U.S. totals are shown at the bottom of Table 4. With the exception of state sales and income tax revenue totals for the U.S., state totals do not add up to U.S. totals. The state impact figures show only those impacts which occur within the state. For example, a Boise, Idaho, sporting goods store may carry a brand of fishing tackle that is manufactured in Salt Lake City, Utah. When an angler purchases the fishing tackle, only a portion of the money is kept by the retailer. Part of the total selling price goes to the Salt Lake City manufacturer. This transaction between the sporting goods store and the manufacturer (or wholesaler, depending on the situation) will not appear in the Idaho state totals. The U.S. totals capture these interstate impacts, however.

To help put these numbers in context, Table 5 shows the estimated impacts as a percentage of commensurate state totals for 2001. The first column shows total industry output as a percentage of Gross State Product (GSP).[6] The second column shows estimated employment as a percentage of total (annual) state employment. Finally, the third column shows estimated employment income as a percentage of total state wage and salary disbursements (U.S. Department of Commerce, 2003 a,b). Twelve states derive 1 percent or more of their gross state product from wildlife watchers' activities.

An additional way to help place wildlife-watching expenditures in context is to think of these expenditures as the 2001 annual sales revenue of a particular company. With a total of $38.4 billion in sales, this company would rank 33rd on the Forbes 500 list for 2001, just behind Proctor and Gamble and WorldCom and just ahead of Motorola and Kmart (Forbes.com).

Table 6 shows the economic impacts of wildlife watching expenditures by state for 2001 for nonresidents (out-of-state visitors).

Top 10 States Ranked by Economic Output*

	Economic Output	*Wildlife Watchers*
California	$5,169,100,000	5,720,000
Florida	$2,815,400,000	3,240,000
New York	$2,625,300,000	3,887,000
Texas	$2,455,900,000	3,240,000
Wisconsin	$2,453,600,000	2,442,000
New Jersey	$2,264,700,000	1,895,000
Pennsylvania	$1,955,200,000	3,794,000
Washington	$1,781,500,000	2,496,000
Maryland	$1,772,900,000	1,524,000
North Carolina	$1,593,900,000	2,168,000

*Total industry output which includes direct, indirect, and induced effects of wildlife-watching expenditures.

Top 10 States Ranked by Nonresident Wildlife-Watching Economic Impacts

	*Nonresident Economic Output**	*Nonresident State Wildlife Watchers*
California	$943,300,000	384,000
Florida	$750,300,000	490,000
Maryland	$749,800,000	234,000
Colorado	$667,100,000	362,000
Alaska	$660,100,000	185,000
Georgia	$609,500,000	178,000
New York	$537,800,000	392,000
Oregon	$500,600,000	401,000
Indiana	$434,600,000	80,000
Arizona	$388,600,000	185,000

*Total industry output which includes direct, indirect, and induced effects of wildlife-watching expenditures

Nan Rollison, USFWS

[6] Gross state product (GSP) is the sum of gross state products originating in all industries in a particular state. An industry's GSP is equivalent to its gross output (sales or receipts and other operating income, commodity taxes, and inventory change) minus its intermediate inputs (consumption of goods and services purchased from other industries or imported). GSP is sometimes referred to as the State counterpart of the nation's gross domestic product (GDP) (U.S. Department of Commerce, 2003a).

Table 4. Total Wildlife-watching Expenditures and Economic Impacts, State and National Totals: 2001
(all dollar amounts in millions)

State	Expenditures/ Sales	Output	Jobs	Job Income	State Sales Tax Revenue	State Income Tax Revenue	Federal Income Tax
Alabama	$624.4	$1,216.4	17,479	$348.1	$29.8	$7.7	$34.2
Alaska	$498.9	$791.9	12,828	$236.9	$2.1	$0.0	$27.0
Arizona	$820.7	$1,411.8	17,939	$424.6	$39.8	$7.0	$46.7
Arkansas	$244.0	$351.2	5,094	$94.1	$12.8	$2.6	$8.5
California	$2,580.9	$5,169.1	61,360	$1,599.9	$132.3	$46.9	$190.3
Colorado	$624.4	$1,186.7	15,994	$368.0	$32.5	$8.8	$44.1
Connecticut	$225.0	$406.2	4,300	$130.0	$9.0	$3.6	$21.0
Delaware	$42.3	$74.1	1,031	$23.0	$0.0	$0.8	$2.5
Florida	$1,575.5	$2,815.4	35,231	$874.0	$76.5	$0.0	$109.0
Georgia	$535.8	$1,062.7	12,506	$312.5	$28.4	$8.5	$34.7
Hawaii	$131.6	$207.6	2,536	$62.2	$7.4	$2.5	$5.4
Idaho	$227.5	$384.0	5,938	$100.7	$9.0	$3.2	$9.3
Illinois	$596.2	$1,277.3	13,168	$375.0	$23.6	$7.6	$46.9
Indiana	$721.9	$1,453.6	21,583	$425.1	$30.1	$14.0	$46.2
Iowa	$188.4	$342.7	5,140	$91.9	$7.6	$2.8	$9.1
Kansas	$128.7	$243.7	3,925	$66.5	$6.3	$1.8	$7.5
Kentucky	$601.6	$1,018.1	18,523	$300.4	$22.4	$11.5	$29.2
Louisiana	$138.4	$274.8	4,129	$78.4	$9.6	$1.3	$8.0
Maine	$513.6	$856.5	13,638	$255.2	$16.1	$8.1	$25.5
Maryland	$862.7	$1,772.9	24,667	$571.9	$29.2	$24.3	$68.1
Massachusetts	$469.3	$881.5	9,992	$289.0	$15.3	$11.9	$37.9
Michigan	$692.8	$1,307.0	17,350	$392.1	$34.2	$11.0	$45.8
Minnesota	$531.1	$1,021.7	12,730	$296.3	$21.1	$10.9	$32.7
Mississippi	$303.5	$461.5	6,268	$116.2	$13.7	$2.1	$10.4
Missouri	$448.8	$926.2	11,365	$258.7	$25.9	$7.0	$26.4
Montana	$350.3	$575.9	10,302	$160.0	$0.0	$4.3	$14.3
Nebraska	$129.7	$247.1	3,248	$69.2	$4.8	$1.7	$6.8
Nevada	$250.1	$372.7	4,207	$106.7	$11.4	$0.0	$13.7
New Hampshire	$342.9	$567.3	8,239	$172.9	$0.0	$0.0	$22.4
New Jersey	$1,243.8	$2,264.7	20,033	$672.8	$32.9	$14.3	$90.3
New Mexico	$558.3	$931.5	14,761	$273.2	$30.0	$6.2	$25.2
New York	$1,407.2	$2,625.3	31,450	$831.2	$55.6	$37.4	$98.6
North Carolina	$826.9	$1,593.9	20,597	$456.9	$37.8	$15.0	$46.7
North Dakota	$27.1	$45.1	725	$11.5	$0.8	$0.2	$1.0
Ohio	$623.1	$1,299.6	15,714	$371.4	$28.8	$13.9	$38.6
Oklahoma	$193.2	$370.0	6,141	$96.9	$12.1	$2.8	$9.7
Oregon	$769.4	$1,485.5	21,535	$450.2	$0.0	$18.2	$43.4
Pennsylvania	$961.8	$1,955.2	22,298	$566.3	$39.0	$16.6	$65.2
Rhode Island	$169.6	$259.6	3,073	$80.0	$4.6	$2.1	$8.5
South Carolina	$256.4	$488.3	7,032	$140.5	$12.9	$3.8	$14.1
South Dakota	$92.0	$147.9	2,607	$38.7	$3.8	$0.0	$4.3
Tennessee	$448.5	$895.4	12,756	$251.5	$29.9	$0.0	$28.2
Texas	$1,282.9	$2,455.9	28,377	$664.2	$56.1	$0.0	$83.1
Utah	$555.7	$1,037.7	16,374	$316.6	$29.4	$9.5	$29.5
Vermont	$203.7	$348.0	6,951	$109.7	$4.1	$2.8	$11.9
Virginia	$788.6	$1,548.0	25,135	$489.2	$27.6	$13.9	$56.6
Washington	$979.7	$1,781.5	22,439	$527.7	$58.1	$0.0	$68.3
West Virginia	$163.5	$252.5	3,946	$74.7	$6.4	$1.9	$6.3
Wisconsin	$1,311.6	$2,453.6	34,010	$711.8	$41.1	$26.3	$75.6
Wyoming	$264.9	$426.0	6,557	$108.4	$8.6	$0.0	$14.4
United States	**$38,414.5**	**$95,784.1**	**1,027,833**	**$27,754.6**	**$2,073.8**	**$712.0**	**$3,250.1**

Table 5. Economic Impacts as Percentage of State Totals, 2001

State	*Total Output as Percentage of Gross State Product*	*Generated Employment as Percentage of Total State Employment*	*Generated Employment Income as Percentage of Total State Wage and Salary Disbursements*
Alabama	1.0 %	0.9 %	0.6 %
Alaska	2.8 %	4.0 %	2.1 %
Arizona	0.9 %	0.8 %	0.5 %
Arkansas	0.5 %	0.4 %	0.3 %
California	0.4 %	0.4 %	0.2 %
Colorado	0.7 %	0.7 %	0.4 %
Connecticut	0.2 %	0.2 %	0.2 %
Delaware	0.2 %	0.2 %	0.1 %
Florida	0.6 %	0.5 %	0.4 %
Georgia	0.4 %	0.3 %	0.2 %
Hawaii	0.5 %	0.4 %	0.3 %
Idaho	1.0 %	1.0 %	0.6 %
Illinois	0.3 %	0.2 %	0.2 %
Indiana	0.8 %	0.7 %	0.4 %
Iowa	0.4 %	0.3 %	0.2 %
Kansas	0.3 %	0.3 %	0.2 %
Kentucky	0.8 %	1.0 %	0.5 %
Louisiana	0.2 %	0.2 %	0.1 %
Maine	2.3 %	2.2 %	1.4 %
Maryland	0.9 %	0.9 %	0.6 %
Massachusetts	0.3 %	0.3 %	0.2 %
Michigan	0.4 %	0.4 %	0.2 %
Minnesota	0.5 %	0.5 %	0.3 %
Mississippi	0.7 %	0.5 %	0.4 %
Missouri	0.5 %	0.4 %	0.3 %
Montana	2.5 %	2.5 %	1.5 %
Nebraska	0.4 %	0.3 %	0.3 %
Nevada	0.5 %	0.4 %	0.3 %
New Hampshire	1.2 %	1.3 %	0.8 %
New Jersey	0.6 %	0.5 %	0.4 %
New Mexico	1.7 %	1.8 %	1.2 %
New York	0.3 %	0.4 %	0.2 %
North Carolina	0.6 %	0.5 %	0.4 %
North Dakota	0.2 %	0.2 %	0.1 %
Ohio	0.3 %	0.3 %	0.2 %
Oklahoma	0.4 %	0.4 %	0.2 %
Oregon	1.2 %	1.3 %	0.8 %
Pennsylvania	0.5 %	0.4 %	0.3 %
Rhode Island	0.7 %	0.6 %	0.5 %
South Carolina	0.4 %	0.4 %	0.3 %
South Dakota	0.6 %	0.7 %	0.4 %
Tennessee	0.5 %	0.5 %	0.3 %
Texas	0.3 %	0.3 %	0.2 %
Utah	1.5 %	1.4 %	0.9 %
Vermont	1.8 %	2.2 %	1.2 %
Virginia	0.6 %	0.7 %	0.4 %
Washington	0.8 %	0.8 %	0.5 %
West Virginia	0.6 %	0.5 %	0.4 %
Wisconsin	1.4 %	1.2 %	0.8 %
Wyoming	2.1 %	2.5 %	1.5 %
United States	**0.9 %**	**0.7 %**	**0.6 %**

Table 6. Non-Resident Wildlife-Watching Expenditures and Economic Impacts, State Totals: 2001
(all dollar amounts in millions)

State	Expenditures/ Sales	Output	Jobs	Job Income	State Sales Tax Revenue	State Income Tax Revenue	Federal Income Tax
Alabama	$25.0	$43.8	653	$13.2	$1.3	$0.3	$1.3
Alaska	$411.8	$660.1	11,055	$198.6	$1.7	$0.0	$22.6
Arizona	$226.2	$388.6	5,718	$122.4	$11.5	$2.1	$13.7
Arkansas	$12.0	$17.6	273	$4.9	$0.6	$0.1	$0.5
California	$471.7	$943.3	10,891	$293.2	$25.2	$8.8	$35.5
Colorado	$349.4	$667.1	9,060	$209.5	$18.1	$5.0	$25.0
Connecticut	$60.0	$95.8	908	$30.6	$2.1	$0.8	$4.9
Delaware	$10.3	$16.4	221	$5.1	$0.0	$0.2	$0.5
Florida	$402.1	$750.3	10,548	$249.1	$22.1	$0.0	$31.4
Georgia	$308.2	$609.5	6,602	$176.0	$14.4	$4.7	$19.1
Hawaii	$52.8	$84.9	1,042	$27.2	$3.3	$1.0	$2.3
Idaho	$89.9	$149.0	2,330	$39.3	$3.5	$1.2	$3.6
Illinois	$57.3	$121.0	1,427	$40.0	$2.8	$0.8	$4.9
Indiana	$213.3	$434.6	4,382	$120.9	$8.0	$3.8	$12.6
Iowa	$17.7	$29.3	368	$8.0	$0.5	$0.2	$0.7
Kansas	$31.7	$56.9	913	$16.8	$1.7	$0.4	$1.8
Kentucky	$122.5	$233.1	5,950	$77.8	$4.6	$3.0	$7.7
Louisiana	$33.9	$56.6	836	$17.0	$1.9	$0.3	$1.7
Maine	$109.2	$188.8	3,319	$59.3	$3.9	$1.9	$5.9
Maryland	$352.5	$749.8	13,839	$271.4	$12.2	$11.8	$33.2
Massachusetts	$148.8	$282.7	3,351	$94.4	$4.8	$3.9	$12.5
Michigan	$121.8	$223.8	3,109	$70.7	$5.7	$2.0	$8.1
Minnesota	$57.7	$109.8	1,539	$34.7	$2.4	$1.3	$3.8
Mississippi	$37.2	$54.7	703	$13.7	$1.5	$0.2	$1.2
Missouri	$117.8	$229.8	3,135	$68.3	$6.8	$1.8	$6.9
Montana	$169.2	$277.6	5,456	$80.4	$0.0	$2.1	$7.2
Nebraska	$19.6	$34.4	533	$10.3	$0.8	$0.3	$1.0
Nevada	$61.0	$95.0	1,177	$30.4	$3.2	$0.0	$4.0
New Hampshire	$178.7	$322.7	5,075	$103.3	$0.0	$0.2	$13.4
New Jersey	$53.9	$100.0	1,085	$32.1	$1.7	$0.7	$4.4
New Mexico	$107.3	$183.8	3,088	$56.2	$6.1	$1.3	$5.1
New York	$265.0	$537.8	8,570	$186.3	$11.2	$8.8	$23.2
North Carolina	$176.7	$340.0	6,095	$108.4	$8.4	$3.6	$11.2
North Dakota	$7.1	$12.1	217	$3.3	$0.2	$0.0	$0.3
Ohio	$64.3	$129.1	1,630	$37.6	$2.8	$1.4	$3.9
Oklahoma	$33.3	$62.2	909	$16.9	$1.8	$0.5	$1.6
Oregon	$263.6	$500.6	8,198	$163.5	$0.0	$6.6	$15.9
Pennsylvania	$95.6	$191.6	2,197	$55.5	$3.7	$1.6	$6.3
Rhode Island	$147.8	$217.5	2,519	$66.5	$3.8	$1.8	$7.1
South Carolina	$48.6	$87.2	1,345	$26.1	$2.3	$0.7	$2.6
South Dakota	$48.1	$78.1	1,389	$21.4	$2.1	$0.0	$2.2
Tennessee	$189.7	$360.4	4,964	$107.7	$12.5	$0.0	$11.9
Texas	$81.9	$149.3	1,824	$42.8	$3.7	$0.0	$5.4
Utah	$148.9	$292.4	4,972	$92.3	$8.5	$2.8	$8.6
Vermont	$122.6	$228.9	4,964	$75.0	$2.6	$1.9	$8.1
Virginia	$109.3	$202.8	2,810	$63.1	$3.8	$1.8	$7.3
Washington	$135.4	$243.2	3,149	$76.7	$8.2	$0.0	$10.0
West Virginia	$29.2	$45.1	776	$13.5	$1.1	$0.3	$1.1
Wisconsin	$203.2	$380.4	5,570	$113.4	$6.5	$4.2	$12.1
Wyoming	$178.7	$284.9	4,554	$74.4	$5.9	$0.0	$9.8

USFWS

Summary

Wildlife-based recreation in the U.S. has significant economic impacts at the local, regional, state and national levels. Hunting, fishing, and wildlife watching together generated over $236 billion in total economic output in 2001. Wildlife watching is a significant portion of this total and its continued popularity gives evidence to the importance that people attach to diverse, accessible and robust fish and wildlife populations.

The sheer magnitude of its economic impacts prove that wildlife watching is a major force, driving billions in spending around the country. These economic impacts can be the life-blood of a local economy. Rural areas can attract thousands of wildlife watchers each year, generating millions of dollars.

Bruce Eilerts, USFWS

Quick Facts

Over 66 million Wildlife Watchers spent $38.4 billion on their activities in 2001. These expenditures rippled through the economy resulting in—

$95.8 Billion in Total Industry Output

$6.1 Billion in State and Federal Tax Revenues

1,027,833 Jobs

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