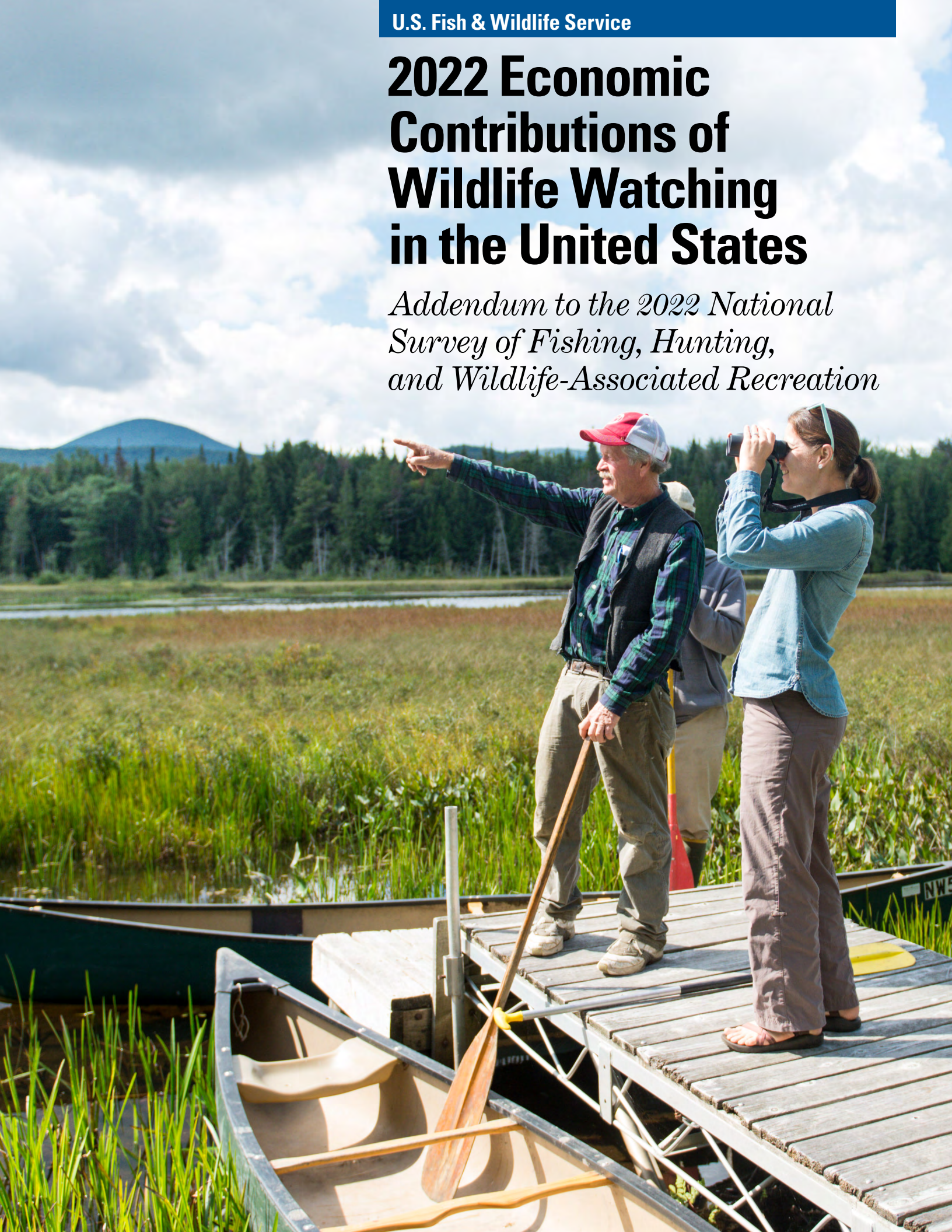
U.S. Fish & Wildlife Service

2022 Economic Contributions of Wildlife Watching in the United States

Addendum to the 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation



2022 Economic Contributions of Wildlife Watching in the United States

Addendum to the 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

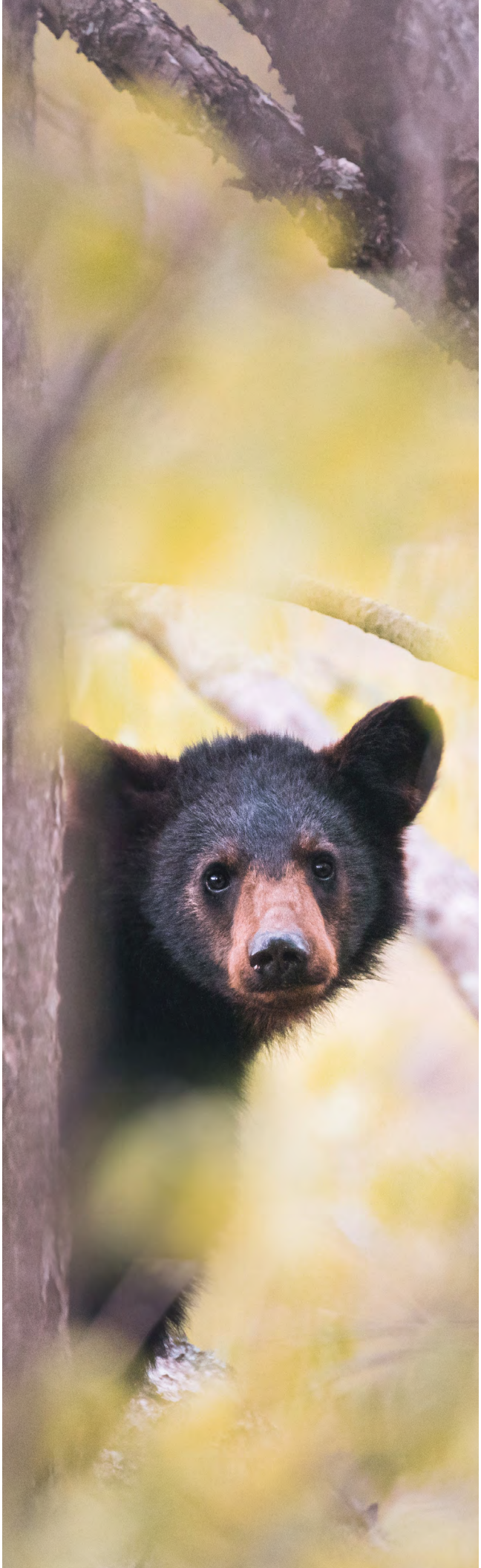
Office of
CONSERVATION INVESTMENT

By James Caudill, PhD
Chief Economist, U.S. Fish and Wildlife Service

Division of Policy, Economics, Risk Management and Analytics

This report complements the *2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*. The conclusions are the author's and do not represent official positions of the U.S. Fish and Wildlife Service.

Photos courtesy J.R. Absher, Jake Bonello, Doug Racine, Tom Rogers, Craig Springer, Shaun Terhune, and the Council to Advance Hunting and Shooting Sports.



This Project was supported by a Multistate Conservation Grant F20AP00134, a grant funded from the the Wildlife Restoration Fund and the Sport Fish Restoration and Boating Trust Fund, and jointly managed by the U.S. Fish and Wildlife Service and the Association of Fish and Wildlife Agencies.

The U.S. Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated Island Communities. The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people. The Service is responsible for national programs of vital importance to our natural resources, including administration of Wildlife and Sport Fish Restoration grants. These two grants provide financial assistance to the states, commonwealths and territories for projects to enhance and protect fish and wildlife resources and to ensure their availability to the public for recreational purposes.

Suggested Citation

U.S. Department of the Interior, U.S. Fish and Wildlife Service, *2022 Economic Contributions of Wildlife Watching in the United States: Addendum to the 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.*

Contents

Introduction

Wildlife is important in the lives of the American public. Wild animals have intrinsic, utilitarian, and cultural values to people that touch them at a personal level. Watching a hummingbird zip past a kitchen window to drink from a feeder or a person who travels miles from home on an expedition to photograph bears feeding on salmon, or see prairie grouse displaying on their courtship grounds at daybreak—these activities have immeasurable values that contribute to the quality of life. These outdoor endeavors inherently—and impressively—also contribute to the economy.

About 45 percent of the age 16 and older U.S. population, 148.3 million people, enjoyed closely observing, feeding, and photographing wildlife (wildlife watching) in 2022. Of those individuals, 99 percent watched wildlife around their homes, 49 percent took trips away from home to observe wildlife. Because of changes to the *2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation Survey* (National Survey), these results are not directly comparable to prior wildlife-watching estimates derived from past national surveys. Nevertheless, it is reasonable to conclude that watching wildlife is more popular than it has ever been. First, technological change has made it easier and arguably more enjoyable. Today, nearly everyone carries a cell phone that makes photographing wildlife easier, and there are apps for these phones than can enable users to identify wildlife via their images, sounds, and tracks. Apart from cellphones, game cameras and bird-watching cameras have become more popular. Second, wildlife-watching participation is highest for those 65 years of age and older, and baby-boomers now swell this age category.

In addition to contributing significantly to people's enjoyment of the outdoors, wildlife watching has a substantial impact on the nation's economy. The $250.2 billion spent on wildlife equipment and trips contributed substantially to federal, state and local tax revenues, jobs, earnings, and economic output.

This report presents estimates of national economic contributions of wildlife watching and contributions are further refined by the U.S. Census Bureau's nine Divisions. Estimates were derived using expenditure data from the National Survey. The following topics are addressed: (1) national participation in wildlife watching; (2) expenditures associated with 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 revenues.

All Wildlife Watching

Participation

The 148.3 million people who engaged in wildlife watching activities in 2022 are further categorized as around-the-home and away-from-home participants. Around-the-home participants engaged in wildlife watching within one mile of their home. These participants totaled 146.5 million. The 73.3 million people who took trips of at least one mile from home to watch wildlife are referred to as away-from-home participants. Those who engaged in both categories numbered 71.6 million.

Economic contributions of wildlife watching

Spending associated with wildlife watching generates a substantial amount of economic activity across the United States. Table 1 shows wildlife watching expenditures by category for 2022. Participants spent $250.2 billion on a wide variety of goods and services. Trip-related expenditures by away-from-home participants include expenses for food, lodging, and transportation. Both around-the-home and away-from-home participants bought equipment and related goods for watching wildlife such as binoculars, cameras, feed for birds and other animals, memberships in wildlife organizations, camping equipment, motor homes, campers, and off-road vehicles.

These direct expenditures are only part of the total picture. Businesses and industries that supply the retailers where the purchases are made also benefit from wildlife-watching expenditures. For example, a family may purchase a pair of binoculars to use primarily for birdwatching on an upcoming vacation. Part of the total purchase price will go to the retailer such as 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 has a substantial impact on economic activity, employment, and household income throughout the economy.

Method

The 2022 National Survey contains estimates of annual travel and equipment expenditures by wildlife-watching participants. These expenditures were used in conjunction with an economic modeling method known as input-output analysis[1] to estimate total industry output, employment, employment income, value added, and state and Federal tax revenue associated with these expenditures.

Direct Expenditures

Table 1 shows national expenditures by category for wildlife watching in 2022. Total direct expenditures by participants were $250.2 billion. Trip-related expenditures accounted for about $42.1 billion (16.8 percent of total expenditures). Food and drink accounted for 18.9 percent of total trip-related expenditures and transportation and lodging accounted for 35.9 and 28.8 percent, respectively. Other trip-related expenditures, such as land use fees, rentals, and boating costs, accounted for 16.4 per cent of trip-related expenditures.

Equipment and other expenditures accounted for $208.1 billion (83 percent of total expenditures). Wildlife watching equipment such as binoculars, spotting scopes, game cameras, rangefinders, and attractants such as bird food, boxes for cavity-nesting birds, bat roost boxes, squirrel feeders and roost boxes accounted for $24.6 billion for 9.8 percent of total expenditures. Auxiliary equipment such as backpacking gear, camping equipment, blinds and GPS equipment for the primary purpose of wildlife watching accounted for $8.9 billion and 3.6 percent of total expenditures. Special equipment such as off-road vehicles, tent trailers, motor homes, pick-up trucks, and boats accounted for $85.1 billion and 34 percent of total expenditures. Other items such as magazines, books, land leasing and ownership accounted for $89.5 billion and 35.8 percent of total expenditures.

---

1 The estimates of total economic activity, employment, employment income and federal, state and local taxes in this report were derived using IMPLAN, a regional input-output modeling system. For additional information, see IMPLAN LCC (**http://implan.com/**) and Miller and Blair for further information on Input-Output analysis.

Table 1. National Wildlife Watching Expenditures by Category in 2022 ('000s)

Category	*Expenditures*	*Percent of Category Expenditures*	*Percent of Total Expenditures*
Trip-related Expenditures			
Food and drinks	$7,943,534	18.9%	3.2%
Lodging	$12,116,523	28.8%	4.8%
Public transportation	$2,300,832	5.5%	0.9%
Private transportation	$7,517,095	17.9%	3.0%
Airfare	$5,254,653	12.5%	2.1%
Guide fees, pack trip or package fees	$1,432,286	3.4%	0.6%
Public land use fees	$994,707	2.4%	0.4%
Private land use fees	$789,048	1.9%	0.3%
Equipment rental	$1,438,276	3.4%	0.6%
Boating costs	$774,050	1.8%	0.3%
Heating and cooking fuel	$1,498,315	3.6%	0.6%
Total Trip-related Expenditures	$42,059,319	100.0%	16.8%
Wildlife-Watching Equipment			
Binoculars, spotting scopes	$2,796,749	11.4%	1.1%
Cameras, video cameras, special lenses, and other photographic equipment	$7,352,055	29.8%	2.9%
Commercially prepared and packaged wild bird food	$4,192,579	17.0%	1.7%
Other bulk foods used to feed wild birds	$1,599,650	6.5%	0.6%
Feed for other wildlife	$2,234,873	9.1%	0.9%
Nest boxes, bird houses, feeders, baths	$1,650,820	6.7%	0.7%
Day packs, carrying cases and special clothing	$3,611,091	14.7%	1.4%
Other wildlife-watching equipment (such as field guides and maps)	$1,198,144	4.9%	0.5%
Total Wildlife-Watching Equipment	$24,635,961	100.0%	9.8%
Auxiliary Equipment			
Nature journals or tools for measurement such as magnifying lenses	$906,753	10.2%	0.4%
Frame packs and backpacking equipment	$1,703,258	19.1%	0.7%
Other camping equipment	$4,480,875	50.3%	1.8%
Other items such as blinds or GPS devices	$1,820,050	20.4%	0.7%
Total Auxiliary Equipment	$8,910,936	100.0%	3.6%
Special Equipment			
Off-road vehicle	$22,387,977	26.3%	8.9%
Travel or tent trailer, pickup, camper, van, motor home, recreational vehicle	$46,329,887	54.4%	18.5%
Motorized boat	$9,768,618	11.5%	3.9%
Canoe, kayak, or other non-motorboat	$2,372,539	2.8%	0.9%
Boat motor, boat trailer or hitch, or other boat accessories	$2,131,458	2.5%	0.9%
Other big-ticket items such as an airplane	$2,106,691	2.5%	0.8%
Total Auxiliary Equipment	$85,097,170	100.0%	34.0%
Other items			
Magazines, books	$686,717	0.8%	0.3%
Land leasing and ownership	$76,339,449	85.3%	30.5%
Membership dues and contributions	$1,215,665	1.4%	0.5%
Plantings	$10,824,257	12.1%	4.3%
Mobile apps, membership on online discussion boards or forums, or other online subscriptions	$429,194	0.5%	0.2%
Total Other	$89,495,282	100.0%	35.8%
National Total, All Items	$250,198,668		100.0%

National economic contributions of wildlife watching expenditures

Table 2 shows the national economic contributions of wildlife watching expenditures in 2022.

Expenditures totaled $250.2 billion in 2022. These expenditures contributed to over 2.7 million jobs with labor income of $168.6 billion. Value added is the difference between the value of industry production (output) and the cost of intermediate inputs required to produce the goods and services, it is the contribution to Gross Domestic Product. Value added totaled $298.8 billion from total industry output of $590.3 billion. Total state and Federal tax revenue was $60.1 billion with state tax revenue of $18.1 billion and Federal tax revenue of $42.0 billion.

Table 2. 2022 Economic Contributions of National Wildlife Watching (Dollar figures in millions)

Expenditures	*Employment*	*Labor Income*	*Value Added*	*Output*	*State Tax Revenue*	*Federal Tax Revenue*
$250,198.7	**2,742,010**	**$168,642.5**	**$298,770.2**	**$590,287.2**	**$18,079.2**	**$42,014.2**

Regional economic contributions of wildlife watching expenditures

The U.S. Census Bureau has designated nine divisions from four regions which include all 50 states plus Washington D.C. Table 3 shows the states included in each division. Economic contribution estimates were developed for each division, shown in Table 4.

Table 3. States Included in U.S. Census Bureau Divisions

Pacific	*New England*	*Middle Atlantic*	*East North Central*	*West North Central*	*South Atlantic*	*East South Central*	*West South Central*	*Mountain*
Alaska	Connecticut	New Jersey	Illinois	Kansas	Delaware	Alabama	Arkansas	Arizona
California	Maine	New York	Indiana	Iowa	Washington D.C.	Kentucky	Louisiana	Idaho
Hawaii	Massachusetts	Pennsylvania	Michigan	Minnesota	Florida	Mississippi	Oklahoma	Montana
Oregon	New Hampshire		Ohio	Missouri	Georgia	Tennessee	Texas	Nevada
Washington	Rhode Island		Wisconsin	Nebraska	Maryland			New Mexico
	Vermont			North Dakota	North Carolina			Utah
				South Dakota	South Carolina			Wyoming
					Virginia			
					West Virginia			

Table 4. 2022 Economic Contributions of Wildlife Watching: By Census Divisions (Dollar figures in millions)

Census Division	*Expenditures*	*Employment*	*Labor Income*	*Value Added*	*Output*	*State Tax Revenue*	*Federal Tax Revenue*
Pacific	$35,712.4	247,724	$16,670.7	$28,527.9	$48,052.6	$2,444.3	$4,144.0
East North Central	$23,073.1	211,840	$12,327.5	$20,537.7	$39,175.1	$1,380.3	$2,876.0
East South Central	$17,072.2	139,245	$6,890.9	$12,176.0	$24,753.0	$902.0	$1,595.6
Middle Atlantic	$33,999.7	242,959	$14,442.4	$26,697.1	$47,155.1	$1,700.0	$3,738.6
Mountain	$14,940.2	119,567	$6,371.5	$10,884.3	$20,168.7	$688.6	$1,555.2
New England	$16,973.6	131,717	$7,708.9	$13,729.3	$25,222.4	$806.0	$2,011.4
South Atlantic	$49,548.7	435,631	$21,421.5	$39,748.2	$76,687.7	$2,251.5	$5,559.6
West North Central	$17,640.8	151,147	$7,427.4	$13,404.0	$27,423.3	$803.8	$1,764.0
West South Central	$41,238.0	339,460	$17,058.0	$31,904.1	$63,515.4	$1,648.5	$4,072.5

The divisional economic contribution figures do not add up to the national figures since the divisional estimates only include those contributions within the division. For example, if a Utah firm purchases some of its manufacturing inputs from an Ohio firm, those impacts are not included in the Mountain Division contributions.

This report principally documents the economic considerations of wildlife watching and its effects on local, regional, and national economies. The total value of wildlife in the United States exceeds any number reported herein. Wildlife inherently possesses ecological, biological, spiritual, and utilitarian values. Robust and sustainable populations of wildlife contribute to the quality of life and the health and social well-being of all Americans.

References

IMPLAN. IMPLAN cloud-based software. 16905 Northcross Drive, Suite 120, Huntersville, NC 28078. www.implan.com. 2024

Miller, Ronald E. and Peter D. Blair. *Input-Output Analysis: Foundations and Extensions.* Englewood Cliffs, NJ: Prentice-Hall, 1985.

U.S. Department of the Interior, U.S. Fish and Wildlife Service, *2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.*

Office of

CONSERVATION INVESTMENT

U.S. Department of the Interior
U.S. Fish & Wildlife Service
Office of Conservation Investment
https://www.fws.gov

May 2024