

Apportionment of the U.S. House of Representatives: Will Indiana Lose a Seat After the 2000 Census?

Article 1, Section 2 of the United States Constitution states that the primary reason for conducting the decennial census is to serve as a basis for determining how the seats in the House of Representatives should be allocated to the states. The Constitution provides that each state will have at least one member in the House. With the current size of the House set at 435 members, the apportionment process will reallocate the remaining 385 seats to the states, based on the results of Census 2000.

The U.S. Department of Commerce will deliver the results of the census to the President by December 31, 2000. Within a week of the opening of the next session of Congress, the President must report the census counts to the Clerk of the House of Representatives, along with the number of representatives to which each state is entitled. The Clerk will report the numbers to each state's governor. Individual state legislatures are then responsible for the redistricting process, which involves defining the geographic boundaries of the state's congressional districts.

How is the Apportionment Calculated?

Several different methods have been used to calculate the apportionment. It should be noted that absolute mathematical equality in terms of the number of persons per representative is impossible without assigning fractional seats, which has never been attempted in the U.S. House.

The method that has been used to apportion the seats in the House following the most recent five censuses is called the *method of equal proportions*. A priority value is calculated for each state and for each potential seat assigned to that state by dividing the state's population by the geometric mean of its current and next seat numbers. The state with the highest priority value is assigned the 51st seat in the House, thus becoming that state's second seat. The remaining seats are similarly assigned, giving the next seat to the state with the next largest priority value, until all 435 seats have been filled. (Note that the District of Columbia is not included in the apportionment calculations.) The numbers used in the apportionment process following the 1990 census included certain segments of the U.S. population residing overseas and allocated to their home states.

The Projected Apportionment of the House Following Census 2000

To try to discover who might gain and who might lose seats after the upcoming census, the method of equal proportions was applied to state population projections for the year 2000 to project what the apportionment of the next House of Representatives might look like. The results are reflected in the **Map** below. Specifically, the Series A population projections released in 1996 by the Census Bureau for the year 2000 were used as the base population for the 2000 apportionment calculation. In an attempt to capture the over-

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A Summary of Gains and Losses

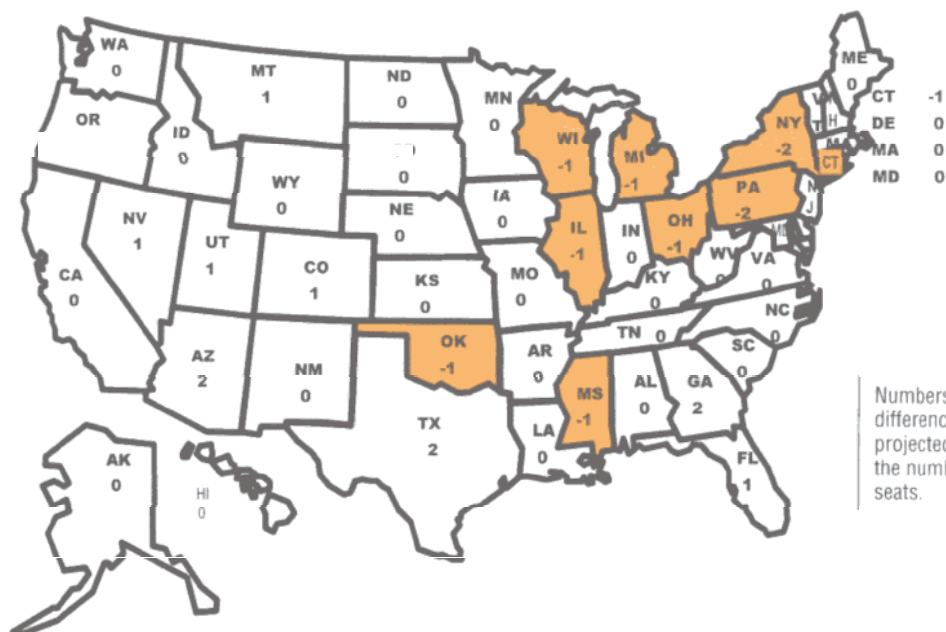
Projected to gain seats

- Arizona (2)
- Colorado
- Florida
- Georgia (2)
- Montana
- Nevada
- Texas (2)
- Utah

Projected to lose seats

- Connecticut
- Illinois
- Michigan
- Mississippi
- New York (2)
- Ohio
- Oklahoma
- Pennsylvania (2)
- Wisconsin

Possible Seat Gains and Losses by State in the U.S. House of Representatives After the 2000 Census



Numbers indicate the difference between the projected scenario and the number of current seats.

Table 1
Apportionment of the U.S. House of Representatives:
Actual 1990 and Projected 2000 Calculations

	<i>Apportionment Population in 1990 (Actual)</i>	<i>Apportionment Population in 2000 (Projected)</i>	<i>Number of Seats in 1990 (Actual)</i>	<i>Number of Seats in 2000 (Projected)</i>
Alabama	4,062,608	4,473,021	7	7
Alaska	551,947	654,904	1	1
Arizona	3,677,985	4,810,757	6	8
Arkansas	2,362,239	2,642,514	4	4
California	29,839,250	32,600,229	52	52
Colorado	3,307,912	4,181,518	6	7
Connecticut	3,295,669	3,292,553	6	5
Delaware	668,696	770,528	1	1
Florida	13,003,362	15,298,436	23	24
Georgia	6,508,419	7,905,203	11	13
Hawaii	1,115,274	1,264,045	2	2
Idaho	1,011,986	1,352,237	2	2
Illinois	11,466,682	12,087,080	20	19
Indiana	5,564,228	6,065,069	10	10
Iowa	2,787,424	2,910,669	5	5
Kansas	2,485,600	2,676,026	4	4
Kentucky	3,698,969	4,008,673	6	6
Louisiana	4,238,216	4,443,243	7	7
Maine	1,233,223	1,264,295	2	2
Maryland	4,798,622	5,292,154	8	8
Massachusetts	6,029,051	6,211,626	10	10
Michigan	9,328,784	9,712,487	16	15
Minnesota	4,387,029	4,841,930	8	8
Mississippi	2,586,443	2,829,227	5	4
Missouri	5,137,804	5,560,731	9	9
Montana	803,655	954,590	1	2
Nebraska	1,584,617	1,711,232	3	3
Nevada	1,206,152	1,875,319	2	3
New Hampshire	1,113,915	1,228,663	2	2
New Jersey	7,748,634	8,196,446	13	13
New Mexico	1,521,779	1,866,710	3	3
New York	18,044,505	18,200,050	31	29
North Carolina	6,657,630	7,805,993	12	12
North Dakota	641,364	664,564	1	1
Ohio	10,887,325	11,359,210	19	18
Oklahoma	3,157,604	3,385,019	6	5
Oregon	2,853,733	3,408,412	5	5
Pennsylvania	11,924,710	12,245,067	21	19
Rhode Island	1,005,984	1,000,520	2	2
South Carolina	3,505,707	3,877,004	6	6
South Dakota	699,999	780,995	1	1
Tennessee	4,896,641	5,676,456	9	9
Texas	17,059,805	20,192,295	30	32
Utah	1,727,784	2,211,934	3	4
Vermont	564,964	619,206	1	1
Virginia	6,216,568	7,026,210	11	11
Washington	4,887,941	5,879,249	9	9
West Virginia	1,801,625	1,849,148	3	3
Wisconsin	4,906,745	5,340,976	9	8
Wyoming	455,975	527,387	1	1

seas population while keeping the process relatively simple, the overseas population that was included in the apportionment process following the 1990 census was added to the projections for each state.

Table 1 shows the actual House apportionment following the 1990 census, along with the projected apportionment for 2000. Eight states are projected to gain a total of 11 seats, which will be collectively lost by nine states. Those gaining seats are states that have experienced large amounts of population growth since 1990 and are located in the South and West. States projected to lose seats are located mainly in the East and Midwest. **Table 2** shows the states and seat numbers that are projected to be “on the bubble,” including the last five seats assigned, followed by the first five states that just miss being assigned seats.

Following the 1990 census, Indiana was allocated 10 seats, with the tenth seat being in position 424 out of 435. In this projection for 2000, Indiana is again assigned 10 seats, with its tenth seat falling to 431 out of 435. Hence, Indiana is projected to hold onto its tenth seat, despite experiencing population growth that is slower than the average growth for the nation.

The 1990 Census Undercount

The Bureau has estimated that the 1990 census resulted in a net undercount of approximately 4 million people, or about 1.6% of the nation's population. This net undercount is not distributed evenly among the 50 states. It ranges from a high in California of more than 837,000 people to a low in Rhode Island of some 1,350 people. Indiana's estimated undercount of 28,000 (0.5% of its population) is the nation's nineteenth smallest in terms of numbers, and the sixth lowest in terms of percentages.

The Effects of Including 1990 Undercounts in the Apportionment Process

If the apportionment of the House following the 1990 census had been calculated using the so-called adjusted population counts for each state (by adding in the net undercounts), only two states would have been allocated different numbers of seats. California would have been allocated an additional seat (its 53rd), and Wisconsin would have received one seat fewer (eight instead of nine).

If the net undercounts are added to the projected populations for 2000, again only two states are projected to receive different numbers of seats. Indiana would lose its tenth seat in this scenario, whereas Mississippi would hold onto its fifth seat, rather than only receive the four projected seats in the original 2000 scenario.

Table 3 shows the states and seat numbers that are projected to be on the bubble in this scenario for 2000. Indiana's tenth seat becomes the 436th seat in the House (the first seat that just misses assignment).

Conclusions

It is important to note that the accuracy of the projected House apportionment is directly related to the quality of the data used in its development. If a state's census count in 2000 varies widely from the population projection used in the calculation, it could obviously affect the allocation of seats to that and other states. In addition, if a state's overseas population or undercount in 2000 changes significantly from 1990 levels, this could also affect the apportionment process, if these data sets are used in the apportionment process in 2000. Despite these qualifications, the actual apportionment will likely result in the shift of some seats from states in the East and Midwest,

where population increase is generally not keeping pace with the nation, to rapidly growing states in the West and South.

The second conclusion that can be drawn from comparing the results of the various scenarios is that few states will be affected by the decision to use or not use sampling in an attempt to improve coverage of the next census, if the levels of undercount are similar to those from 1990. However, Indiana is "on the bubble" regarding whether or not it can hold on to its tenth seat in the House. It is one of the small number of states whose level of representation in the House is apt to depend on whether or not adjusted census counts are used in the apportionment process.

Details of the method of equal proportions, along with more information regarding the apportionment of seats in the House of Representatives, can be found at the Census Bureau's Web site, www.census.gov/dmd/www/apportionment.html.

Table 2
Seats "On the Bubble": Projected House Apportionment after 2000 Census

<i>House Seat</i>	<i>State</i>	<i>Population</i>	<i>State's Seat</i>	<i>Priority</i>
431	Indiana	6,065,069	10	639,314
432	New York	18,200,050	29	638,697
433	Utah	2,211,934	4	638,530
434	California	32,600,229	52	633,044
435	Georgia	7,905,203	13	632,923
436	Mississippi	2,829,227	5	632,634
437	Wisconsin	5,340,976	9	629,440
438	Pennsylvania	12,245,067	20	628,159
439	Michigan	9,712,487	16	626,938
440	North Carolina	7,805,993	13	624,980

Table 3
Seats "On the Bubble": Projected House Apportionment for 2000, Including 1990 Undercount

<i>House Seat</i>	<i>State</i>	<i>Population</i>	<i>State's Seat</i>	<i>Priority</i>
431	California	33,437,786	52	649,308
432	New York	18,472,086	29	648,243
433	Utah	2,242,272	4	647,288
434	Mississippi	2,885,559	5	645,231
435	Georgia	8,047,628	13	644,326
436	Indiana	6,092,967	10	642,255
437	California	33,437,786	53	636,939
438	Texas	20,678,323	33	636,331
439	Maryland	5,393,138	9	635,587
440	Florida	15,558,265	25	635,164

Census 2000 Update for Indiana



Washington is abuzz over the upcoming census. Well, maybe not just about the census.... But there has been significant activity since our last update in the July *IBR*. A panel of federal judges determined that the count of the population in 2000 should not include a sampling effort to rectify an undercount. The Clinton Administration has appealed this decision and the Supreme Court will hear arguments in the case just after the Thanksgiving holiday, November 30th. A decision is due sometime in the spring. The sampling for non-response in the 100% count portion of the census is a significant issue that can affect both apportionment of congressional representation and how much federal money each state receives for programs that are population-based.

Other news of note...

- LUCA—the Local Update of Census Addresses—became a household word among city and town planners this summer as they attended workshops by the Census Bureau throughout our state. So far, 13 such workshops have been held in Indiana, with a total of 156 participants. These numbers fall well below those of our regional partners, Wisconsin (397 attendees) and Illinois (354). (The Chicago office is responsible for these three states.) In terms of jurisdictions (local governments) that plan to participate in this review process, we are also not quite keeping pace with our partners. As of September, 231 Indiana jurisdictions were committed to this program—122 cities and towns and 85 townships.

If you're a local official or planner, it isn't too late to contact the regional office of the Census Bureau and sign the necessary forms for participation. Call 1-800-688-6948 (the Indiana team leader is Joe Virruso). There is also a LUCA Web site now available at www.census.gov/geo/www/luca

Note: Phase 2 of LUCA begins next year when rural areas are targeted for participation.

- Complete Count Committees are the next step local governments can take to work toward a comprehensive count in their communities. The idea behind these committees (we had dozens of them around Indiana who worked successfully in 1990 to "get the count out") is to promote response to the census. The general structure is that of business, government, not-for-profit, citizenry, and education in each community banding together to develop a strategy that will work in that community. The Census Bureau has lots of suggestions that can help prime the pump as a city or town gets its committee and plan going.

- Census Field Offices will open in Indiana on or about October 8, 1998. These offices (currently planned for South Bend and Bloomington, with Evansville and Muncie coming on line by November 5) will focus on address list canvassing in rural areas of our state. We understand that recruitment is currently taking place in these areas. If you know any hard-working people looking for a temporary job, have them call (312) 353-9790 at the regional office in Chicago.
- Data users will be glad to note that plans are under way to ensure that the information collected from the census—in its summarized form, of course (thus protecting privacy)—will be available via the Internet. Those of us who work with census tapes, CD-ROMs, and files on a daily basis are previewing the table outlines currently in draft form at the Bureau. Because disk space is cheap and technology more prevalent, be prepared for a plethora of statistical tables. Just trying to comprehend the race category iterations is enough to cause eye strain. A few issues back we reported that the race question would now be multiple choice. For tabulation purposes, this creates an exponential nightmare of sorts, because there are potentially so many new race categories.

Questions? Comments? Suggestions for items to include in this quarterly update on Census 2K activities? E-mail us at rogersc@indiana.edu or call us at 317-274-2979. Your interest is greatly appreciated.

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THIS IS YOUR FUTURE.
DON'T LEAVE IT BLANK.

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Whither Goest EDIN?



The casual reader might first ask, “What is EDIN and who cares where it goes?” However, up until very recently nearly a thousand people in Indiana had access codes to dial into the Economic Development Information Network and peruse economic and demographic data about Indiana and its counties from a wide assortment of source agencies. Thousands more benefited from the availability of this information, as it was republished and retransmitted in other forms throughout the state.

We can’t trace EDIN back to the days of the Garden (for which it was not named), but it did evolve as a revolutionary way of accessing statistics back in the 1970s, when it was called INDIRS. People could go to selected public libraries in Indiana and ask the reference librarian to pull up population and income figures for their county. At the time, a modem going at 300 baud was considered fast, since it doubled the speed of the previously available 150-baud gadgets. “Dumb” terminals were the name of the game, printing out on thermal paper much like the early fax machines, with which more of us are familiar.

By the 1980s, EDIN was able to take advantage of personal computer technology and became available—at the high speeds of 1200 and 2400 baud—to a broader range of individuals in government and industry, the primary users of the data. For people who needed current economic and demographic statistics about their communities, EDIN made it possible to garner that information quickly, any time of the day or week, and use it in a way that allowed for electronic manipulation. Computer-savvy users

“By the mid-1990s, we saw the handwriting on the wall and it spelled out W-E-B.”

could use the data directly as input to forecasting models or to create community profiles. Those wanting a more “print-oriented” approach could make the standard tables look better by using a word processor (anyone remember Wordstar?) and a laser printer.

By the mid-1990s, we saw the handwriting on the wall and it spelled out W-E-B. The World Wide Web made it much easier to find information, with more attractive formatting and downloading options. We began to develop a new process for making the data we collected from other agencies available dynamically or interactively via the Web. The terms “dynamic” and “interactive” are used to describe the process by which the Web user submits a request or query to the database and the database ships back the information in a basic Web page format. And all of

this can happen more quickly than we can describe it; in the best of worlds, it should take only nanoseconds for the page to come back to the user.

However, we are focusing on designs that accommodate the broad range of technology our current and potential users have available on their desktops. Modem speed is an issue, because some users have modems as slow as 14.4K baud and other users have direct Internet connections (bypassing dial-up to a Net service) as fast as T1 (1 million kilobytes per second) or higher.



Browser type is an issue as well, although the playing field here is generally competition between Netscape and Microsoft’s Internet Explorer. However, even between those two brands of browsers, users can have versions as old as 1.5 or as current as the company may have released today. Older browsers support fewer technological feats of cyber-wizardry, so we must be careful in our design not to exclude folks who are just plain happy with their older versions. Because most of these browsers are free nowadays, we encourage anyone using the Web to download more current versions, just to keep up with the groundswell toward better and faster bells and whistles.

Content and User Needs Become Top Dog...

Technological whiz-bangs are not our focus. The power of the World Wide Web is that it is easier to use and much easier to look at. We want to continue to do what we’ve been doing for nearly three decades.

A survey of current users is under way to determine which data series are most crucial and how often they are used. Preliminary results show that employment, income, age of the population, consumer price indices, and earnings of workers by industry type are all very important. A prototype, or beta test, version of the new system will be accessible sometime this fall. Current users of EDIN will be notified of its availability as soon as possible; potential users will find it by hearing about it from other users, reading about it in promotional materials, or doing a Web search. Though the database will be somewhat small at first, we are working to ensure that it has the most needed data available first.

Comments or questions? Please don’t hesitate to e-mail us at rogersc@indiana.edu to discuss them.

Carol O. Rogers

Editor, and Information Services
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Indiana Demographics in Brief

5-yr. % Change

Population

Current (1997 estimate)	5,864,108	2.87
Projected (2005)	6,215,000	2.81

By age (1997 estimate):

Under 5 years	407,103	0.04
5-14	825,050	1.94
15-24	834,006	-1.57
25-34	859,489	-2.79
35-44	960,749	6.61
45-54	747,954	15.36
55-64	495,910	3.13
65 years and over	733,847	1.65

Households

Current (1996 estimate)	2,209,000	3.56
Projected (2005)	2,241,000	3.21

Student Population Enrollment

K through 12, public (1997-98)	984,029	2.04
K through 12, private (1997-98)	115,622	23.31
Hoosiers enrolled in Indiana institutions of higher education (1996-97)	309,129	1.23

Births

1996	83,157	-1.06
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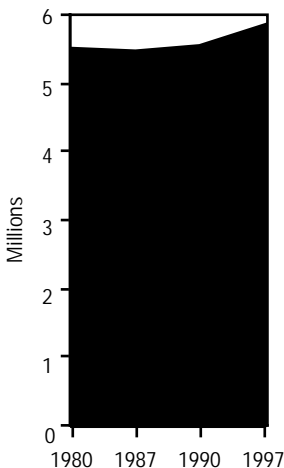
Deaths

1996	52,927	6.18
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Marriages

1996	49,294	-2.35
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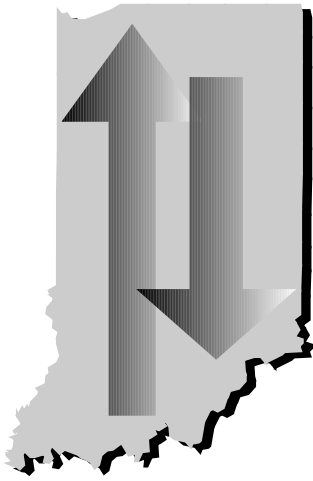
Indiana's Population Growth



1980	5,490,210
1987	5,473,000
1990	5,544,156
1997	5,864,108

Sources:

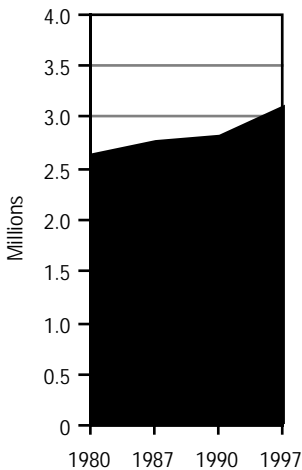
- U.S. Bureau of the Census (population estimate, projection and estimates by age, household estimate)
- Indiana Business Research Center (household projection)
- Indiana Department of Education (K-12 public and private enrollment)
- Indiana Commission for Higher Education (higher education enrollment)
- Indiana State Department of Health (births, deaths, and marriages)



Indiana Economics in Brief

		5-yr. % Change
Resident Labor Force (1997)	3,093,900	5.09
Employed	2,985,300	7.17
Unemployed	108,600	-31.43
Rate	3.5	---
Total Personal Income (1996)	\$131,906,308,000	24.06
Per Capita Income (1996)	\$22,633	20.22
Earnings by Place of Work (1996)	\$94,921,732,000	23.98
Wage & Salary	\$75,975,301,000	23.56
Other labor income	\$9,959,634,000	26.08
Proprietors' Income	\$8,986,797,000	25.27
Farm	\$687,316,000	98.95
Non-farm	\$8,299,481,000	21.54
Private	\$82,460,338,000	25.44
Manufacturing	\$30,533,242,000	25.49
Construction	\$6,004,638,000	34.33
Services	\$19,923,684,000	25.10
Retail	\$8,811,941,000	26.52
FIRE*	\$5,325,148,000	28.04
TPU*	\$5,793,124,000	17.96
Government	\$11,565,598,000	12.70
Business Establishments (1995)	141,253	9.07
Payroll (March 1995)	\$59,553,716,000	29.00
Farms (1997)	62,000	-1.58
Value in land and buildings	\$31,323,000,000	40.34
Building Permits Issued for Residential Housing Units (1997)	35,382	13.1
Vehicle Registrations (1997)	5,343,638	7.9
Cars	3,472,661	4.4
Trucks	1,237,612	13.8

Indiana's Labor Force



1980	2,630,000
1987	2,752,000
1990	2,794,400
1997	3,093,900

Sources:

Indiana Department of Workforce Development
 U.S. Bureau of Economic Analysis
 U.S. Census Bureau
 U.S. Department of Agriculture
 Indiana Bureau of Motor Vehicles

*FIRE = Finance, Insurance, Real Estate
 TPU = Transportation & Public Utilities

Gone Fishin'

Spending one's leisure time watching birds and other wildlife in the woods or fishing in one of Indiana's many lakes or streams can do a lot for the soul. More than three million people enjoyed such outdoor activities in Indiana in 1996, according to the recently released *1996 National Survey of Fishing, Hunting, and Wildlife-Association Recreation*.

Recreation can also mean money, and \$1.7 billion was spent on wildlife-associated recreation in the state of Indiana in 1996. Most of it—\$1.25 billion—was spent on equipment purchases; another \$315 million was spent on trip-related expenses; and the remaining \$125 billion went for licenses, contributions, land ownership and leasing, and miscellaneous items and services.

Sportsmen (would that be "sportspersons"?) numbered 1.1 million in Indiana that year, including both resident and nonresident folks who fished or hunted in our Hoosier forests or fields or streams. Of these, 992,000 were anglers (81% Hoosiers) and 357,000 were hunters (94% Hoosiers). There is some redundancy between the two groups—that is, some are both hunters and anglers.

Summary Statistics of Participants' Activities (Residents and Nonresidents 16 and Older)

Fishing

Number of anglers	992,000
Total days spent fishing	15,811,000
Average days per angler	16
Total expenditures	\$799,254,000
Average spent per angler	\$678
Average trip expenditure per day	\$13

Hunting

Number of hunters	357,000
Total days spent hunting	6,204,000
Average days per hunter	17
Total expenditures	\$272,693,000
Average per hunter	\$729
Average trip expenditure per day	\$8

Wildlife Watching

Number of participants	1,723,000
Total expenditures	\$285,665,000
Average per participant	\$161

More detailed information is available at: www.census.gov/prod/www/abs/fishing.html

