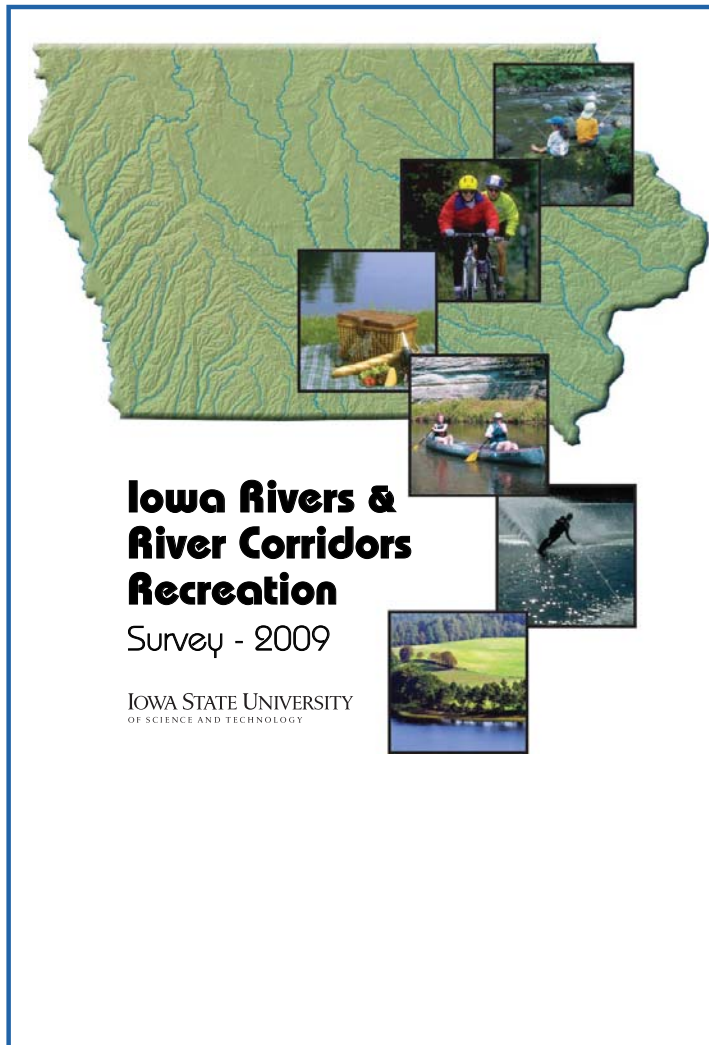


Economic Impacts of River Trail Recreation in Iowa

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Iowa's rivers and streams are valued for providing recreational opportunities. They also generate an economic impact to local economies through spending on materials and supplies by users and visitors. The 2010 river visitor survey conducted by CARD researchers with DNR support provides information on the number of trips to popular recreation segments of major rivers in Iowa. These river usage estimates can be combined with river and water-based recreation spending profiles to estimate the economic impacts associated with this form of recreation.

Although the 2010 survey did not collect data from river visitors on their spending patterns, a number of sources are available to provide estimates of spending levels by recreational users of Iowa's rivers and streams. A symposium on measuring the economic impacts of long-distance recreation trails provides an overview of recent studies of spending associated with water trails in different parts of the U.S. (Pollack et al. 2007). Pollock's study of the Northern Forest Canoe Trail in Northern Maine to northern New York estimated each visitor spent \$46 per day on their recreation (Pollock). A 1992 study of the Upper Mississippi River Water system estimated average general spending per visitor day was \$15.84, or \$25.99 in 2009 dollars (ACE). In addition, visitors engaged in fishing and boating recreation spent an additional \$12.54 per person, for a combined total of \$28.38, or \$46.56 in 2009 dollars.

A 1989 National Park Service study of River Trails in the NE United States estimated canoers spent \$15-\$20, or \$24.95-\$34.60 in 2009 dollars per visitor on their river recreation (National Park Service). A study of the Closer to Iowa, a 2002 case study of water trails on the Kickapoo River in Wisconsin and the Superior Trail in northern Minnesota estimated visitor spending ranging from \$34.50 to \$87.94 per visitor per day (Johnson, 2002). The spending estimates from these studies are summarized in Table 1.

An Iowa study looking at spending by visitors to 5 Iowa lakes: Storm Lake and Rock Creek Lake in 2002 and Clear Lake, Lake Manawa and Pleasant Creek Lake in 2009. The visitor surveys were used to generate estimates of daily per party spending ranging from \$67.95 at Rock Creek Lake to \$163.37 at Clear Lake (Herriges et al.) The amenities at these 5 lakes varied considerably with highest spending occurring at the lake with high level of amenities. The lowest level of spending occurred at Rock Creek Lake which had only tent camping and no motor boats. The activities and amenities of Rock Creek Lake seem very similar to river recreation. In addition the per-person spending of \$26.23 is very comparable to values found in other river recreation studies when adjusted to \$34.75 (2009 dollars). Therefore, our estimate of spending by visitors to interior Iowa rivers is

based on the \$34.75 per person spending observed at Rock Creek Lake in Iowa. An expenditure of \$46.56 per person for Mississippi River visitors is used along segments of the Mississippi and Missouri River segments (#66-73) adjusted for the share of parties engaged in fishing activities.

Using the weighted average spending per visitor times the estimated number of visitors to each lake allows us to estimate the total annual spending for each water trail segment (Table 2). The number of visits is reported by individual persons and by household in columns 3 and 4. The “direct spending” column is simply the product of the per-visitor spending and number of visits (column 5). An Input-Output model is used to estimate the secondary impacts (also known as multiplier effects) that the initial spending has on the regional economy and to also convert that total spending into estimates of income and jobs. The “total income effects” is the share of “total expenditure impacts” that go to wages and salaries. The “total job effects” is an estimate of the number of jobs supported by the total expenditure impacts. These results are also displayed in Table 2. Most of the spending occurs in the retail and service sectors supporting the visitors and include part time jobs. The overall economic impact from recreation on these 73 river segments in the 2010 study is substantial. Over 6,350 jobs are supported with \$824 million in sales and \$130 million of personal income.

520,434,407 823,847,666 129,969,384 6,351

Table 1. Summary of Studies of River Trail Spending Estimates

Year	Author	Site	Spending /day per visitor
1989	National Park Service	North East U.S.	\$24.95
1992	US Army Corps of Engineers	Upper Mississippi	\$25.99
2002	Johnson	Lake Superior, MN	\$34.50
		Kickapoo, WI	\$87.94
2007	Pollard	University Maine, Upper NY	\$46.00
2002	Herriges et al	Rock Creek Lake, IA	\$26.23

Table 2. Economic Impacts associated with River visits in Iowa, 2010

River Segment	Trips	State-wide Trips(Person)	State-wide Trips (hh)	Total Spending (\$)	Multiplier Spending (\$)	Income Effects(\$)	Job Effects
1	369	268,286	108,459	7,369,757	11,666,325	1,840,468	90
2	253	183,947	74,363	5,052,977	7,998,863	1,261,893	62
3	193	140,323	56,728	3,854,643	6,101,899	962,630	47
4	76	55,257	22,338	1,517,890	2,402,820	379,067	19
5	290	210,848	85,238	5,791,950	9,168,657	1,446,438	71
6	143	103,970	42,031	2,856,030	4,521,096	713,244	35
7	52	37,807	15,284	1,038,557	1,644,035	259,361	13
8	23	16,722	6,760	459,362	727,169	114,718	6
9	59	42,897	17,342	1,178,362	1,865,347	294,275	14
10	61	44,351	17,929	1,218,307	1,928,580	304,251	15
11	105	76,342	30,862	2,097,085	3,319,686	523,710	26
12	37	26,901	10,875	738,973	1,169,794	184,546	9
13	183	133,052	53,788	3,654,920	5,785,739	912,752	45
14	80	58,165	23,514	1,597,779	2,529,285	399,017	19
15	113	82,158	33,214	2,256,863	3,572,615	563,612	28
16	154	111,968	45,265	3,075,725	4,868,873	768,109	38
17	25	18,177	7,348	499,306	790,401	124,693	6
18	60	43,624	17,636	1,198,334	1,896,963	299,263	15
19	59	42,897	17,342	1,178,362	1,865,347	294,275	14
20	171	124,328	50,261	3,415,253	5,406,346	852,900	42
21	314	228,298	92,293	6,271,284	9,927,442	1,566,143	77
22	194	141,050	57,022	3,874,615	6,133,515	967,617	47
23	979	711,794	287,753	19,552,824	30,952,120	4,882,976	239
24	1513	1,100,045	444,709	30,218,001	47,835,095	7,546,417	369
25	675	490,767	198,400	13,481,263	21,340,839	3,366,709	165
26	399	290,098	117,276	7,968,924	12,614,807	1,990,099	97
27	84	61,073	24,690	1,677,668	2,655,749	418,968	20
28	123	89,429	36,153	2,456,586	3,888,775	613,489	30
29	175	127,236	51,437	3,495,142	5,532,810	872,851	43
30	104	75,614	30,568	2,077,113	3,288,070	518,723	25
31	58	42,170	17,048	1,158,390	1,833,731	289,288	14
32	82	59,619	24,102	1,637,724	2,592,517	408,993	20
33	193	140,323	56,728	3,854,643	6,101,899	962,630	47
34	468	340,265	137,557	9,347,009	14,796,315	2,334,252	114
35	234	170,133	68,779	4,673,504	7,398,157	1,167,126	57
36	272	197,761	79,948	5,432,450	8,599,568	1,356,659	66
37	20	14,541	5,879	399,445	632,321	99,754	5
38	116	84,339	34,095	2,316,780	3,667,463	578,575	28
39	68	49,440	19,987	1,358,112	2,149,892	339,165	17
40	293	213,029	86,120	5,851,867	9,263,505	1,461,401	71

River Segment	Trips	State-wide Trips(Person)	State-wide Trips (hh)	Total Spending (\$)	Multiplier Spending (\$)	Income Effects(\$)	Job Effects
41	232	168,678	68,191	4,633,560	7,334,925	1,157,150	57
42	113	82,158	33,214	2,256,863	3,572,615	563,612	28
43	303	220,300	89,059	6,051,589	9,579,665	1,511,278	74
44	31	22,539	9,112	619,139	980,098	154,619	8
45	533	387,524	156,662	10,645,205	16,851,359	2,658,454	130
46	800	581,650	235,140	15,977,793	25,292,846	3,990,174	195
47	737	535,845	216,623	14,719,542	23,301,035	3,675,948	180
48	76	55,257	22,338	1,517,890	2,402,820	379,067	19
49	462	335,903	135,794	9,227,175	14,606,619	2,304,326	113
50	381	277,011	111,986	7,609,424	12,045,718	1,900,320	93
51	116	84,339	34,095	2,316,780	3,667,463	578,575	28
52	1071	778,684	314,794	21,390,270	33,860,798	5,341,846	261
53	877	637,633	257,773	17,515,655	27,727,283	4,374,228	214
54	653	474,772	191,933	13,041,873	20,645,286	3,256,980	159
55	308	223,935	90,529	6,151,450	9,737,746	1,536,217	75
56	742	539,480	218,093	14,819,403	23,459,115	3,700,886	181
57	85	61,800	24,984	1,697,640	2,687,365	423,956	21
58	659	479,134	193,697	13,161,707	20,834,982	3,286,906	161
59	84	61,073	24,690	1,677,668	2,655,749	418,968	20
60	248	180,311	72,894	4,953,116	7,840,782	1,236,954	60
61	142	103,243	41,737	2,836,058	4,489,480	708,256	35
62	232	168,678	68,191	4,633,560	7,334,925	1,157,150	57
63	111	80,704	32,626	2,216,919	3,509,382	553,637	27
64	314	228,298	92,293	6,271,284	9,927,442	1,566,143	77
65	208	151,229	61,137	4,154,226	6,576,140	1,037,445	51
66	884	642,723	259,830	19,810,487	31,360,001	4,947,322	242
67	245	178,130	72,012	5,245,901	8,304,261	1,310,072	64
68	676	491,494	198,694	15,897,434	25,165,638	3,970,106	194
69	1246	905,919	366,231	29,107,472	46,077,127	7,269,082	355
70	1578	1,147,304	463,815	35,641,667	56,420,758	8,900,882	435
71	1591	1,156,756	467,636	35,946,096	56,902,670	8,976,908	439
72	483	351,171	141,966	11,535,781	18,261,142	2,880,859	141
73	740	538,026	217,505	17,523,117	27,739,094	4,376,092	214
total				520,434,407	823,847,666	129,969,384	6,351

Meantrip-1:definedastripnumbers/wholesample

Meantrip-2:definedastripnumbers/subsampleoftriptakers

Meantrip-3:definedastripnumbers/vistorstoeachsite

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