

The Economic Contributions of Outdoor Recreation in Colorado: A regional and county-level analysis



Colorado Parks & Wildlife
Denver, CO

February 24, 2014



PO Box 6435
Fernandina Beach, FL 32035
Tel (904) 277-9765

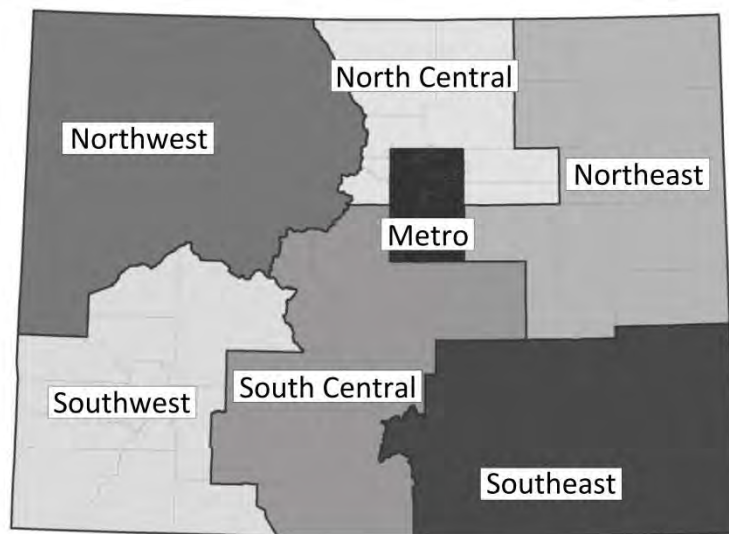
Executive Summary

This study, conducted by Southwick Associates for Colorado Parks and Wildlife, quantifies the economic contribution of outdoor recreation in Colorado and 7 regions within the state¹. Outdoor recreation constitutes a substantial part of the Colorado economy. The total economic output associated with outdoor recreation amounts to \$34.5 billion dollars, contributing \$19.9 billion dollars to the Gross Domestic Product of the state. This economic activity supports over 313,000 jobs in the state, which represents 13.2% of the entire labor force in Colorado and produces \$12.4 billion dollars in salaries and wages. In addition, this output contributes \$4.9 billion dollars in local, state and federal tax revenue.

Table S1. Total Economic Contribution of Outdoor Recreation in Colorado, by Region (\$millions)

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
Output	\$9,284	\$8,295	\$3,630	\$385	\$1,053	\$4,142	\$2,173	\$34,514
Salaries & Wages	\$3,355	\$2,940	\$1,460	\$116	\$324	\$1,344	\$714	\$12,431
GDP Contribution	\$5,432	\$4,734	\$2,216	\$204	\$580	\$2,282	\$1,242	\$19,931
State/Local Taxes	\$697	\$582	\$259	\$34	\$97	\$341	\$182	\$2,404
Federal Taxes	\$718	\$619	\$295	\$25	\$70	\$258	\$148	\$2,546
Jobs	91,822	78,521	34,057	4,528	12,705	47,017	24,568	313,404

Figure S1. SCORP Regions



¹ Part of the analysis for this study was based on work performed or supported by the Outdoor Industry Association (OIA). (<http://www.outdoorindustry.org/advocacy/recreation/economy.html>) This study uses a broader definition of outdoor recreation, and for this reason the results of these two studies should not be directly compared. Rather, these two studies should be used together to gain a better understanding of the economic contributions of outdoor recreation to the Colorado economy.

Table of Contents

Executive Summary	ii
1. Introduction	1
2. Data Sources & Methods	1
3. Outdoor Recreation Participation	2
4. Outdoor Recreation Expenditures	3
5. Economic Contributions of Outdoor Recreation	4
6. Economic Contributions of Fishing, Hunting, and Wildlife Watching	6
7. Hunting Economic Contributions by Destination County	7
8. Comparison to Previous Studies	11
References	12
Appendix A Definitions for Economic Contribution	13
Appendix B Methodology for Economic Contribution	15
Appendix C Spending Methodology	17
Appendix D Overall Activities Data Summary	21
Appendix E Non-Motorized Activities Data Summary	23
Appendix F Motorized Activities Data Summary	24
Appendix G Selected Activities Data Summary	25
Appendix H Retail Trade Sales by County	29
Appendix I Estimates of Spending and Days by Activity Group	31

1. Introduction

This study, conducted by Southwick Associates for Colorado Parks and Wildlife (CPW), was undertaken to quantify the economic contributions of outdoor recreation in Colorado. This investigation was part of a broader CPW effort to characterize outdoor recreation both statewide and regionally for the Colorado Statewide Comprehensive Outdoor Recreation Plan (SCORP, 2013). Recreation in fishing, hunting, and wildlife watching were of particular interest, and the specific contributions of these three activities were also examined. Additionally, the county-level contributions of hunting were estimated for a more detailed view of the economic contributions of hunting in Colorado.

Part of the analysis for this study was based on work performed or supported by the Outdoor Industry Association (OIA). In particular, the statewide economic contributions relied on data from a 2012 OIA study (OIA, 2011; OIA 2012).² Although components of the analysis presented here relied on OIA data, the results of this study differ somewhat from the state-level results of the OIA study for two reasons. First, this study incorporates a wider range of outdoor recreation activities, which leads to larger economic estimates of outdoor recreation. Second, this study relies principally on the SCORP survey data to characterize participation, and these numbers differ from the OIA-based participation numbers as a consequence of using different data sources. For this reason, the results of these two studies should not be directly compared, but rather should be used together to gain a broader understanding of the economic contributions of outdoor recreation to the Colorado economy.

2. Data Sources & Methods

Outdoor recreation in this study includes a set of 38 activities corresponding to questions in a CPW survey sent to 7,000 Colorado residents in 2013 as part of the Colorado Statewide Comprehensive Outdoor Recreation Plan (SCORP, 2013). Spending in Colorado was estimated by applying spending profiles to participation numbers for the 38 activities included in the 2013 SCORP survey. These activities were combined into 18 activity groups in order to match participation numbers to available spending data. Statewide spending was then estimated using appropriate data sources for each activity group (Appendix D). In constructing spending profiles for each activity, this study largely relied on spending data from two OIA surveys administered for the purpose of quantifying the economic contributions of outdoor recreation with the U.S. and each of the 50 states (OIA, 2011; OIA, 2012). Because this study incorporated a wider range of activities than the OIA study, additional data sources were incorporated in characterizing spending profiles for a number of activities. The estimation of spending varied by activity as a result. Detailed descriptions of these procedures are included in Appendix C.

² The Outdoor Recreation Economy (OIA, 2012).
<http://www.outdoorindustry.org/advocacy/recreation/economy.html>

State-level expenditures were allocated to regions using data that specified the proportion of spending activity within each region. Because outdoor recreationists often make equipment purchases in a different region from their trip destination, equipment and trip-related spending were allocated differently by region. Trip-related spending was allocated using the proportion of activity days by region (SCORP, 2013), while equipment spending was allocated based on the proportion of retail trade sales by region (CDOR, 2012). Details are included in Appendix C.

The spending estimates were analyzed using standard economic models to quantify economic contributions. The definitions of key economic terms are presented in Appendix A. The IMPLAN economic modeling software was used to estimate economic contributions. Details of the economic contribution methodology are presented in Appendix B.

3. Outdoor Recreation Participation

The 2013 SCORP survey of Outdoor Recreation was used to characterize participation in Colorado regionally and statewide for residents of the state (SCORP, 2013). The survey included a set of 38 activities that were grouped into 5 larger categories (Table 1). The survey results suggest that outdoor recreation is very popular among Colorado residents, with an estimated 3.4 million adults (90% of adult residents) having engaged in at least one of the 38 activities in 2012. Trail activities were the most popular, with nearly 83% of adults participating. The Northwest and North Central regions were notable in their popularity, with 54% and 51% of Colorado adults participating in each region respectively.

Table 1. SCORP Survey Activity Groups (SCORP, 2013)

Activity Group	Activities in Group
Trail/Road	Walking, Jogging/Running (outdoors), Hiking/Backpacking, Horseback riding, Road biking, Mountain biking, Off-road motorcycling, ATV riding or 4-wheel driving
Water-based	Swimming (outdoors), Fishing, Power boating, Water skiing, Jet skiing, Sailing, Canoeing, Kayaking, Whitewater rafting, Stand up paddleboarding
Winter	Skiing or snowboarding at a ski area, Backcountry skiing, Sledding/tubing, Ice skating (outdoors), Snowmobiling, Snowshoeing or cross country skiing, Ice fishing
Wildlife-related	Big game hunting, Upland bird and small game hunting, Waterfowl hunting, Wildlife viewing (including birding)
Other Outdoor	Developed/RV camping, Tent camping, Picnicking, Target or skeet shooting, Rock climbing, Team or individual sports (outdoors), Playground activities, Golf, Geocaching

Table 2. SCORP Survey Participants (in thousands) for Activity Groups by Region (SCORP, 2013)

Activity	North		Metro	Northeast	Southeast	South		State
	Northwest	Central				Central	Southwest	
Trail/Road	1,513	1,706	1,140	204	285	1,006	570	3,164
Water-based	694	1,037	454	91	173	509	325	2,188
Winter	1,291	694	245	18	25	325	221	1,921
Wildlife-related	433	429	99	175	85	265	197	1,122
Other Outdoor	1,071	1,320	755	182	190	846	432	2,784
Any Outdoor Activity	2,071	1,962	1,352	423	399	1,274	755	3,434

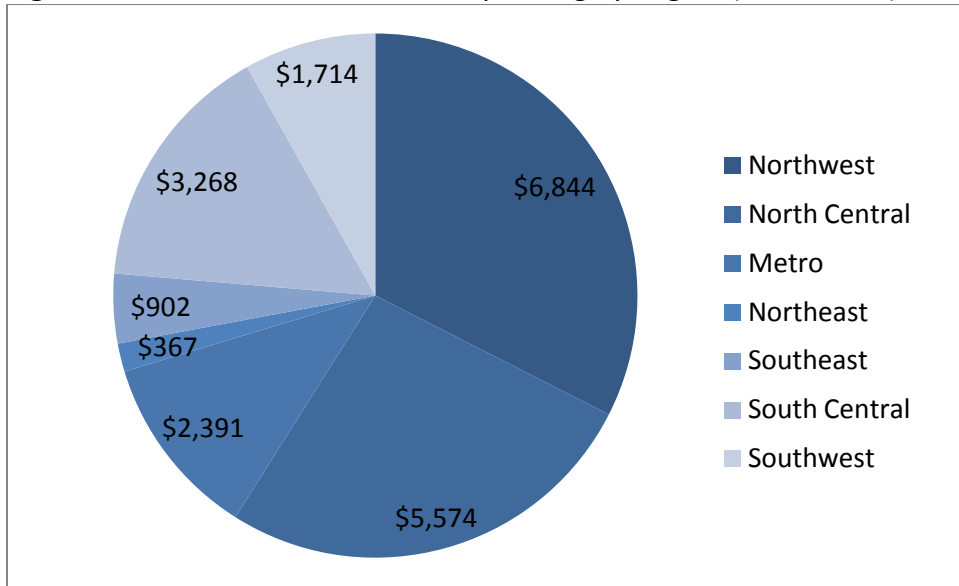
4. Outdoor Recreation Expenditures

The popularity of outdoor recreation by both Colorado residents and nonresidents leads to significant consumer spending in the Colorado economy. Outdoor recreationists in Colorado spent over \$21 billion dollars on trips and equipment in 2012 (Table 3). The Northwest region included the largest amount of outdoor recreation spending at \$6.84 billion, followed by the North Central region at \$5.57 billion (Figure 1). Combined, these two regions accounted for over half of all the outdoor recreation spending within Colorado. Also, because retail sales are concentrated in more populous regions, the ratio of equipment to trip-related sales varies widely from one region to the next (Table 3). Partly as a result of these differences, the nature of economic contributions (e.g., industries impacted, types of jobs supported) varies regionally.

Table 3. Spending by Region (Trip-Related versus Equipment Spending)

	North		Metro	Northeast	Southeast	South		State
	Northwest	Central				Central	Southwest	
Total Spending								
Trip-related	\$6,507	\$4,085	\$1,250	\$301	\$747	\$2,747	\$1,576	\$17,212
Equipment	\$337	\$1,490	\$1,141	\$66	\$156	\$521	\$138	\$3,848
Total	\$6,844	\$5,574	\$2,391	\$367	\$902	\$3,268	\$1,714	\$21,060
Percent Spending by Type								
Trip-related	95.1%	73.3%	52.3%	81.9%	82.8%	84.1%	92.0%	81.7%
Equipment	4.9%	26.7%	47.7%	18.1%	17.2%	15.9%	8.0%	18.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 1. Total Outdoor Recreation Spending by Region (in \$millions)



5. Economic Contributions of Outdoor Recreation

As a result of the economic multiplier effect, the \$21 billion dollars of outdoor recreation expenditures produce additional rounds of economic activity throughout the state's economy. These include indirect contributions, arising from additional spending within industries, and induced contributions, which result from spending of salaries and wages by employees of these industries. These indirect/induced effects total \$13.5 billion, and when combined with direct expenditures, contribute \$34.5 billion dollars to the Colorado economy (Table 4). This total output contributes \$19.9 billion to U.S. Gross Domestic Product (GDP), which amounts to 7.2% of the total GDP contribution of Colorado (BEA, 2013).³

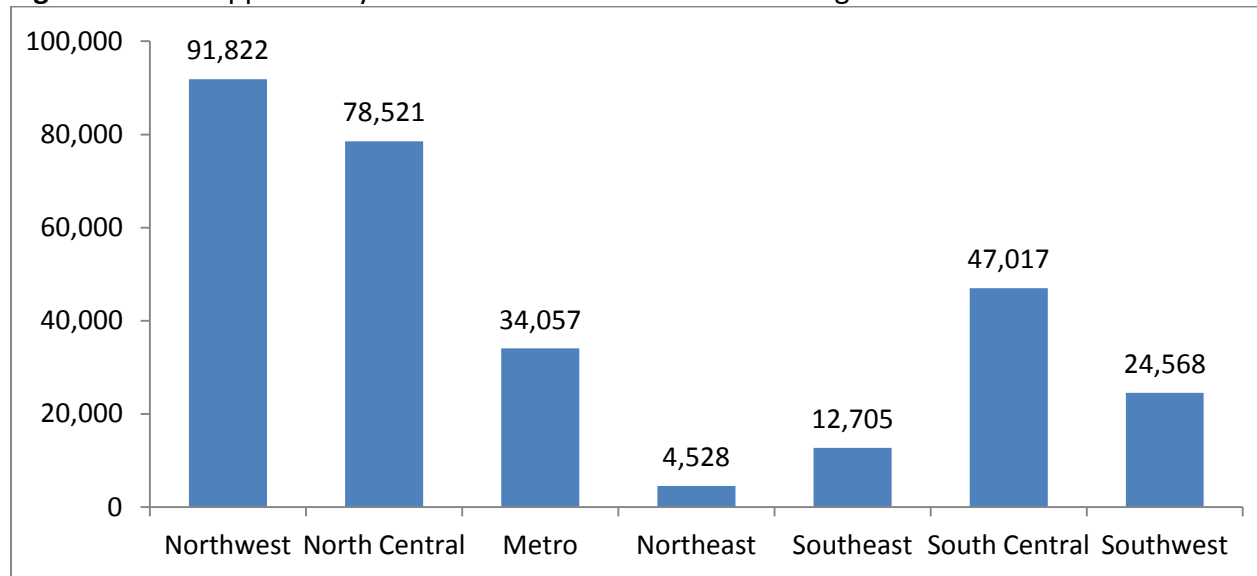
An important result of outdoor recreation spending is the number of jobs supported in the state. An estimated 313,000 jobs in Colorado are supported by outdoor recreation expenditures, which accounts for 13.2% of all jobs in Colorado, larger than the combined construction and manufacturing labor force in the state (BLS, 2013). These jobs are especially important to the economies of specific locales in the state. In the Northwest region alone nearly 92,000 jobs are supported by the total economic contribution of outdoor recreation, representing one third of the entire adult population in that region (Figure 2).

³ GDP contribution is smaller than total output because GDP only measures the costs of final goods and services (i.e., any intermediate products are excluded). While total output is a broader measure of economic activity, GDP contribution is included for comparison to the other GDP-based measures.

Table 4. Economic Contributions by Region (dollar values in \$millions)

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Direct</u>								
Output	\$6,844	\$5,574	\$2,391	\$367	\$902	\$3,268	\$1,714	\$21,060
Salaries & Wages	\$2,314	\$1,832	\$844	\$93	\$232	\$948	\$520	\$7,097
GDP Contribution	\$3,455	\$2,713	\$1,209	\$153	\$405	\$1,506	\$857	\$10,563
State/Local Taxes	\$504	\$396	\$172	\$28	\$79	\$265	\$144	\$1,545
Federal Taxes	\$478	\$375	\$169	\$19	\$50	\$177	\$106	\$1,420
Jobs	64,247	53,330	23,051	3,780	9,881	35,674	18,420	201,442
<u>Indirect/Induced</u>								
Output	\$2,440	\$2,721	\$1,239	\$18	\$150	\$874	\$459	\$13,454
Salaries & Wages	\$1,041	\$1,109	\$616	\$24	\$92	\$396	\$194	\$5,334
GDP Contribution	\$1,977	\$2,021	\$1,007	\$51	\$175	\$776	\$385	\$9,368
State/Local Taxes	\$193	\$186	\$87	\$6	\$18	\$76	\$38	\$859
Federal Taxes	\$239	\$244	\$126	\$6	\$20	\$82	\$42	\$1,125
Jobs	27,575	25,191	11,006	748	2,825	11,343	6,148	111,962
<u>Total</u>								
Output	\$9,284	\$8,295	\$3,630	\$385	\$1,053	\$4,142	\$2,173	\$34,514
Salaries & Wages	\$3,355	\$2,940	\$1,460	\$116	\$324	\$1,344	\$714	\$12,431
GDP Contribution	\$5,432	\$4,734	\$2,216	\$204	\$580	\$2,282	\$1,242	\$19,931
State/Local Taxes	\$697	\$582	\$259	\$34	\$97	\$341	\$182	\$2,404
Federal Taxes	\$718	\$619	\$295	\$25	\$70	\$258	\$148	\$2,546
Jobs	91,822	78,521	34,057	4,528	12,705	47,017	24,568	313,404

Figure 2. Jobs Supported by Outdoor Recreation in Colorado Regions



6. Economic Contributions of Fishing, Hunting, and Wildlife Watching

Outdoor recreation includes a diverse set of activities that participants pursue in Colorado. Of particular interest for this study are the contributions of fishing, hunting, and wildlife watching. These three activities together produce over \$5 billion dollars of economic output, which supports nearly 50,000 jobs within the state. Wildlife watching alone contributes \$2.2 billion dollars in economic output per year, supporting over 19,000 jobs in Colorado (Table 5).

Table 5. Total Economic Contributions of Fishing, Hunting, and Wildlife Watching by Region

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Economic Output (\$millions)</u>								
Fishing	\$241	\$523	\$304	\$36	\$131	\$294	\$110	\$1,916
Hunting	\$181	\$208	\$139	\$28	\$35	\$112	\$82	\$919
Wildlife Watching	\$271	\$615	\$282	\$65	\$129	\$361	\$213	\$2,280
<u>Salaries & Wages (\$millions)</u>								
Fishing	\$81	\$178	\$123	\$11	\$39	\$92	\$37	\$673
Hunting	\$72	\$85	\$62	\$10	\$14	\$43	\$31	\$368
Wildlife Watching	\$88	\$197	\$106	\$17	\$37	\$109	\$69	\$771
<u>GDP Contribution (\$millions)</u>								
Fishing	\$134	\$288	\$186	\$18	\$69	\$157	\$63	\$1,081
Hunting	\$112	\$127	\$88	\$16	\$22	\$68	\$51	\$561
Wildlife Watching	\$146	\$329	\$165	\$30	\$66	\$188	\$117	\$1,261
<u>State and Local Taxes (\$millions)</u>								
Fishing	\$17	\$35	\$21	\$3	\$11	\$22	\$9	\$127
Hunting	\$13	\$13	\$9	\$2	\$3	\$8	\$6	\$60
Wildlife Watching	\$18	\$40	\$19	\$5	\$10	\$26	\$16	\$148
<u>Federal Taxes (\$millions)</u>								
Fishing	\$18	\$37	\$25	\$2	\$8	\$18	\$8	\$138
Hunting	\$15	\$17	\$12	\$2	\$3	\$8	\$6	\$73
Wildlife Watching	\$19	\$42	\$22	\$4	\$8	\$21	\$14	\$160
<u>Jobs</u>								
Fishing	2,222	4,698	2,730	347	1,388	2,968	1,119	16,413
Hunting	2,242	2,413	1,375	407	603	1,625	1,346	10,882
Wildlife Watching	2,514	5,501	2,878	657	1,332	3,682	2,135	19,541

Pursuing big game is the most popular form of hunting in Colorado among both residents of the state and those traveling from other locations. Residents make up a majority of days spent hunting big game in the state at 66.8 percent (CPW, 2013a). However, the average nonresident big game hunter spends more money per day than residents. As a result, the economic output contributed by nonresident big game hunters makes up nearly 50 percent of the statewide total (Table 6).

Table 6. Total Economic Contributions of Big Game Hunting in Colorado

	Output (\$millions)	Labor Income (\$millions)	GDP Contribution (\$millions)	State/Local Taxes (\$millions)	Federal Taxes (\$millions)	Jobs
Resident	322.6	111.1	191.5	22.5	26.9	2,953
Nonresident	286.4	133.9	199.2	17.9	29.4	3,895
Total	609.1	244.9	390.6	40.3	56.3	6,848

7. Hunting Economic Contributions by Destination County

Hunting is a popular form of outdoor recreation in Colorado, with participants that are typically active over many years. The type of hunting that Colorado residents and visitors engage in varies greatly by location. Through extensive surveys of hunters, CPW has been able to characterize hunting effort by destination county within the state over a range of species pursued (CPW, 2013a). Using these survey results allowed us to estimate hunter effort by county of activity for three species groups; big game, small game, and waterfowl (Appendix G, Table G2). Pursuing big game is the most popular hunting activity in Colorado, and the Northwest region includes the largest contribution of hunting effort by a fairly large margin (Table 7).

Table 7. Hunting Effort by Region (CPW, 2013a)

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
Hunter Days per Year								
Big Game	671,700	87,785	36,730	45,658	73,131	234,241	341,573	1,490,818
Small Game	104,898	64,725	4,171	114,212	36,398	43,565	37,422	405,391
Waterfowl	15,478	70,607	888	30,437	14,667	7,441	6,213	145,731

The detailed hunting effort data also allowed economic contributions of hunting effort to be examined at the county level. The economic contributions of the top ten counties by total output from hunting are included in Table 8. Detailed contributions for all counties are displayed in Table 9.

Table 8. Top 10 Counties for Total Hunting Economic Contributions by Output

County	Output (\$thousands)	Labor Income (\$thousands)	GDP Contribution (\$thousands)	State/Local Taxes (\$thousands)	Federal Taxes (\$thousands)	Jobs
Arapahoe	\$55,601	\$24,299	\$34,756	\$3,385	\$4,756	580
El Paso	\$51,495	\$21,366	\$31,899	\$3,493	\$3,723	604
Denver	\$44,854	\$20,640	\$28,653	\$2,485	\$3,548	411
Jefferson	\$43,155	\$19,199	\$27,187	\$2,894	\$3,641	513
Larimer	\$38,123	\$14,851	\$23,140	\$2,587	\$3,088	574
Mesa	\$33,688	\$12,468	\$20,007	\$2,438	\$2,694	484
Adams	\$31,593	\$13,852	\$20,171	\$2,704	\$2,163	392
Weld	\$26,164	\$11,396	\$16,433	\$1,793	\$2,156	520
Boulder	\$24,172	\$11,013	\$15,769	\$1,624	\$2,084	296
Garfield	\$22,593	\$9,463	\$14,874	\$1,747	\$2,008	322

Table 9. Total Hunting Economic Contributions by County

County	Output (\$thousands)	Labor Income (\$thousands)	GDP Contribution (\$thousands)	State/Local Taxes (\$thousands)	Federal Taxes (\$thousands)	Jobs
<u>Northwest Region</u>						
Eagle	\$16,523	\$7,225	\$11,118	\$1,259	\$1,576	203
Garfield	\$22,593	\$9,463	\$14,874	\$1,747	\$2,008	322
Grand	\$15,884	\$5,932	\$10,434	\$1,361	\$1,344	237
Jackson	\$4,891	\$1,503	\$2,912	\$595	\$306	62
Mesa	\$33,688	\$12,468	\$20,007	\$2,438	\$2,694	484
Moffat	\$15,628	\$5,809	\$9,262	\$1,091	\$1,323	248
Pitkin	\$5,980	\$2,864	\$4,203	\$452	\$532	70
Rio Blanco	\$13,737	\$6,487	\$9,626	\$1,098	\$1,260	191
Routt	\$19,889	\$8,663	\$13,355	\$1,445	\$1,818	292
Summit	\$6,669	\$2,887	\$4,475	\$500	\$615	103
<u>North Central Region</u>						
Adams	\$31,593	\$13,852	\$20,171	\$2,704	\$2,163	392
Arapahoe	\$55,601	\$24,299	\$34,756	\$3,385	\$4,756	580
Boulder	\$24,172	\$11,013	\$15,769	\$1,624	\$2,084	296
Clear Creek	\$1,997	\$776	\$1,212	\$167	\$172	32
Gilpin	\$636	\$313	\$454	\$50	\$62	15
Larimer	\$38,123	\$14,851	\$23,140	\$2,587	\$3,088	574
Weld	\$26,164	\$11,396	\$16,433	\$1,793	\$2,156	520
<u>Metro Region</u>						
Broomfield	\$4,903	\$2,164	\$3,019	\$280	\$396	57
Denver	\$44,854	\$20,640	\$28,653	\$2,485	\$3,548	411
Douglas	\$20,090	\$9,097	\$12,863	\$1,477	\$1,801	252
Jefferson	\$43,155	\$19,199	\$27,187	\$2,894	\$3,641	513
<u>Northeast Region</u>						
Cheyenne	\$580	\$232	\$387	\$58	\$54	12
Elbert	\$2,013	\$734	\$1,185	\$202	\$151	26
Kit Carson	\$1,816	\$630	\$1,062	\$181	\$135	34
Lincoln	\$2,098	\$767	\$1,270	\$202	\$146	36
Logan	\$4,755	\$1,937	\$2,986	\$384	\$368	91
Morgan	\$5,501	\$2,357	\$3,460	\$402	\$452	116
Phillips	\$879	\$241	\$474	\$83	\$59	10
Sedgwick	\$1,478	\$594	\$928	\$147	\$111	27
Washington	\$1,296	\$452	\$787	\$127	\$94	29
Yuma	\$3,494	\$1,081	\$1,861	\$307	\$218	46

Table 9 (Continued). Total Hunting Economic Contributions by County

County	Output (\$thousands)	Salaries & Wages (\$thousands)	GDP Contribution (\$thousands)	State/Local Taxes (\$thousands)	Federal Taxes (\$thousands)	Jobs
<u>Southeast Region</u>						
Baca	\$1,388	\$524	\$888	\$139	\$97	23
Bent	\$1,220	\$307	\$644	\$159	\$55	13
Crowley	\$416	\$204	\$298	\$38	\$28	10
Huerfano	\$3,264	\$1,079	\$1,944	\$327	\$238	73
Kiowa	\$798	\$193	\$427	\$106	\$54	8
Las Animas	\$5,317	\$2,200	\$3,486	\$460	\$431	127
Otero	\$2,213	\$901	\$1,427	\$199	\$184	54
Prowers	\$1,795	\$688	\$1,090	\$174	\$137	33
Pueblo	\$13,722	\$5,980	\$8,987	\$1,094	\$1,165	190
<u>South Central Region</u>						
Alamosa	\$3,392	\$1,409	\$2,130	\$287	\$265	57
Chaffee	\$6,425	\$2,236	\$3,998	\$556	\$482	133
Conejos	\$3,206	\$1,246	\$2,043	\$316	\$230	67
Costilla	\$1,069	\$452	\$721	\$107	\$82	25
Custer	\$2,744	\$813	\$1,577	\$272	\$199	59
El Paso	\$51,495	\$21,366	\$31,899	\$3,493	\$3,723	604
Fremont	\$5,841	\$2,157	\$3,438	\$529	\$333	87
Lake	\$1,520	\$546	\$936	\$153	\$106	30
Mineral	\$1,222	\$564	\$823	\$108	\$110	32
Park	\$6,944	\$2,156	\$3,995	\$742	\$465	213
Rio Grande	\$3,261	\$1,260	\$2,088	\$291	\$269	94
Saguache	\$6,905	\$2,700	\$4,457	\$696	\$494	184
Teller	\$3,902	\$1,515	\$2,424	\$342	\$319	84
<u>Southwest Region</u>						
Archuleta	\$6,618	\$2,463	\$4,233	\$530	\$520	138
Delta	\$7,303	\$2,630	\$4,532	\$641	\$558	171
Dolores	\$3,583	\$1,396	\$2,179	\$380	\$249	71
Gunnison	\$17,041	\$5,960	\$10,170	\$1,413	\$1,281	277
Hinsdale	\$2,177	\$895	\$1,412	\$231	\$166	47
La Plata	\$11,072	\$4,392	\$6,952	\$833	\$797	162
Montezuma	\$6,059	\$2,230	\$3,726	\$505	\$464	113
Montrose	\$12,021	\$4,621	\$7,609	\$931	\$936	218
Ouray	\$2,644	\$918	\$1,665	\$242	\$202	55
San Juan	\$972	\$257	\$568	\$115	\$66	13
San Miguel	\$4,637	\$1,926	\$3,086	\$367	\$385	63

8. Comparison to Previous Studies

Previous studies have been undertaken to estimate the economic impacts of fishing, hunting, and wildlife watching in Colorado. CPW supported studies in both 2004 and 2008 to estimate these economic contributions (CPW 2004; CPW 2008). Additionally, USFWS estimates expenditures for fishing, hunting, and wildlife watching by state every five years based on a National Survey (USFWS, 2011). The direct expenditure estimates of these three studies are comparable in scope; retail trip and equipment expenditures made by fishing, hunting, and wildlife watchers in a given year. The spending estimates from each of these studies are summarized in Table 10.

Table 10. Estimates of Annual Fishing, Hunting, and Wildlife Watching Expenditures from Comparable Data Sources

Data Source	Fishing and Hunting Expenditures	Wildlife Watching Expenditures
CPW (2004)	\$845,300,000	\$526,000,000
CPW (2008)	\$1,017,800,000	\$703,200,000
USFWS (2011)	\$1,551,577,000	\$1,432,579,000
Current Study	\$1,604,218,256	\$1,322,968,136

Because different studies incorporate different data sources to characterize participation and spending habits of outdoor recreationists, the resulting expenditure estimates vary as a result. The current study relies largely on the USFWS National Survey to characterize average spending for fishers, hunters, and wildlife watchers. Because the participation numbers used in this study are similar to those estimated by USFWS, the overall statewide expenditures estimates are also similar.

References

- BEA (2013). National Economic Accounts. *U.S. Department of Commerce, Bureau of Economic Analysis*. Retrieved on 11-17-2013 from www.bea.gov.
- BLS (2013). State and Metro Area Employment, Hours, and Earnings. *U.S. Department of Labor, Bureau of Labor Statistics*. Retrieved on 11-17-2013 from www.bls.gov.
- CDOR (2012). Colorado Department of Revenue Annual Report. *Colorado Department of Revenue*.
- CPW (2004). The Economic Impacts of Hunting, Fishing and Wildlife Watching in Colorado. *Colorado Parks & Wildlife, BBC Research and Consulting*
- CPW (2008). The Economic Impacts of Hunting, Fishing and Wildlife Watching in Colorado. *Colorado Parks & Wildlife, BBC Research and Consulting*
- CPW (2013a). Hunter days by County. *Colorado Parks & Wildlife*. Unpublished data.
- CPW (2013b). Resident fishing licenses sold in 2012. *Colorado Parks & Wildlife*. Unpublished data.
- Davies, S., Watson, P., Cramer, A., & Thilmany, D. (2004). The Economic Contribution of Colorado's Golf Industry. *Department of Agricultural and Resource Economics*. Fort Collins, CO.
- Martinson, K., Schneider, I., Earing, J., Date, A., & Venegas, E. (2009). Economic Contribution and Demographics of Recreational Horse Trail Users in Minnesota. *University of Minnesota*.
- NGF (2004-2011). Rounds played in the United States. *National Golf Foundation*.
- NSSF (2012). Survey of Target Shooting in the United States. *National Shooting Sports Foundation*. Unpublished raw data.
- OIA (2011). Survey of Outdoor Recreation in the U.S. *Outdoor Industry Association*. Unpublished data.
- OIA (2012). Survey of Outdoor Recreation in U.S. states. *Outdoor Industry Association*. Unpublished data.
- SCORP (2013). Survey of Outdoor Recreation in Colorado. *Colorado Parks & Wildlife, Statewide Comprehensive Outdoor Recreation Plan*. Unpublished data.
- Venegas, E. (2009). Economic Contribution of Recreational Trail Use in Different Regions of Minnesota. *University of Minnesota Tourism Center*.
- USDOL (2013). Consumer Price Index for All Urban Consumers, Annual Average. *U.S. Department of Labor*. Retrieved on 9-17-2013 from <http://www.bls.gov/cpi/>.
- USFWS (2011). 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. *U.S. Fish & Wildlife Service, U.S. Census Bureau*.

Appendix A Definitions for Economic Contribution

Economic benefits can be estimated by two types of economic measures: economic contributions and economic values. An **economic contribution** addresses the business and financial activity resulting from the use of a resource. **Economic value**, on the other hand, is a non-business measure that estimates the value people receive from an activity after subtracting for their costs and expenditures. This concept is also known as consumer surplus.

There are three types of economic contribution: direct, indirect and induced. A **direct contribution** is defined as the economic contribution of the initial purchase made by the consumer (the original retail sale). **Indirect contributions** are the secondary effects generated from a direct contribution, such as the retailer buying additional inventory, and the wholesaler and manufacturers buying additional materials. Indirect contributions affect not only the industry being studied, but also the industries that supply the first industry. An **induced contribution** results from the salaries and wages paid by the directly and indirectly effected industries. The employees of these industries spend their income on various goods and services. These expenditures are induced contributions, which, in turn, create a continual cycle of indirect and induced effects.

The direct, indirect and induced contribution effects sum together to provide the overall economic contribution of the activity under study. As the original retail purchase (direct contribution) goes through round after round of indirect and induced effects, the economic contribution 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 lost 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.

This study presents several important measures:

Retail Sales – these include expenditures made by outdoor recreationists for equipment, travel expenses and services related to their outdoor activities over the course of the year. These combined initial retail sales represent the “direct output”.

Total Economic Effect – also known as “total output” or “total multiplier effect,” this measure reports the sum of the direct, indirect and induced contributions resulting from the original retail sale. This figure explains the total activity in the economy generated by a retail sale. Another way to look at this figure is, if the activity in question were to disappear and participants did not spend their money elsewhere, the economy would contract by this amount.

Salaries & Wages – this figure reports the total salaries and wages paid in all sectors of the economy as a result of the activity under study. These are not just the paychecks of those employees directly serving recreationists or manufacturing their goods, it also includes portions of the paychecks of, for example, the truck driver who delivers food to the restaurants serving recreationists and the accountants who manage the books for companies down the supply chain, etc. This figure is based on the direct, indirect and

induced effects, and is essentially a portion of the total economic effect figure reported in this study.

Jobs – much like Salaries and Wages, this figure reports the total jobs in all sectors of the economy as a result of the activity under study. These are not just the employees directly serving recreationists or manufacturing their goods, they also include, for example, the truck driver who delivers food to the restaurants serving recreationists and the accountants who manage the books for companies down the supply chain, etc. This figure is based on direct, indirect and induced effects.

GDP Contribution – this represents the total “value added” contribution of economic output made by the industries involved in the production of outdoor recreation goods and services. For a given industry, value added equals the difference between gross output (sales and other income) and intermediate inputs (goods and services imported or purchased from other industries). It represents the contribution to GDP in a given industry for production related to outdoor recreation.

Appendix B Methodology for Economic Contribution

The extent of the economic contributions associated with spending for outdoor recreation can be estimated in two ways:

- **Direct effects:** These include the jobs, income and tax revenues that are tied directly to the spending by outdoor recreationists without including multiplier effects.
- **Total effects:** These include the jobs, income and tax revenues that are tied directly to the spending by outdoor recreationists plus the jobs, income and tax revenues that result from the multiplier effects of outdoor recreation spending. The multiplier effect occurs when a direct purchase from a business leads to increased demand for goods and services from other businesses along their supply chain. Also included is economic activity associated with household spending of incomes earned in the affected businesses.

The economic contributions from outdoor recreation, both direct effects and total effects, were estimated with an IMPLAN input-output model for the state and regional economies of Colorado, and the county economies for hunting economic contributions. The IMPLAN model was developed by MIG, Inc. originally for use by the U.S. Forest Service. Inherent in each IMPLAN model is the relationship between the economic output of each industry (i.e. sales) and the jobs, income and taxes associated with a given level of output. Through those models, it is possible to determine the jobs, income and taxes supported directly by wildlife-based recreationists with and without the multiplier effects.

Input-output models describe how sales in one industry affect other industries. For example, once a consumer 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 the flow of dollars from the consumer through all of the businesses that are affected, either directly or indirectly.

To apply the IMPLAN model, each specific expenditure for outdoor recreation activities was matched to the appropriate industry sector affected by the initial purchase. The spending was estimated with models of the Colorado economy, therefore all of the resulting contributions represent salaries and wages, total economic effects, jobs and tax revenues that occur within the state of Colorado. Likewise, models based on specific regions or counties represent the economic effects within the selected region or county. The results do not include any economic activity or indirect contributions that leak out of the state, region, or county of interest. As a result of this leakage, economic contributions at the state level are larger than the sum of corresponding regional or county contributions. This occurs because a portion spending in a particular region (or county) leaks to other regions (or counties) within the state, and this within-state leakage is captured in the Colorado model.

Estimating Tax Revenues

The IMPLAN model estimates detailed tax revenues at the state and local level and at the federal level. The summary estimates provided in this report represent the total taxes estimated by the IMPLAN model including all income, sales, property and other taxes and fees that accrue to the various local, state and federal taxing authorities.

Appendix C Spending Methodology

I. Overview

Spending in Colorado was estimated by applying spending profiles to participation numbers for 18 activity groups (Table D2). The procedure involved first estimating participation and spending at the state level and then allocating spending to each region.

A. Estimating Participation

For the majority of the 18 activity groups, a single data source was not sufficient to characterize both resident and nonresident participation in Colorado (Table D2).⁴ Procedures used to estimate final participation numbers varied between activity groups as a result of differences in the data available for each group. The specific procedures used are detailed within sections II through IV.

B. Estimating Spending at the State Level

Spending profiles for each activity group included a set of expenditures by item for a typical participant. Each spending profile included two components; equipment spending, and trip-related spending.⁵ Spending profiles were applied differently by activity due to differences in source data (Sections II through IV).

C. Allocating Spending to each Region

Spending totals were allocated to regions differently for equipment and trip spending. We assumed that most consumers would not make many equipment purchases during a trip. Instead, they would likely purchase equipment prior to going on a trip. As a result many equipment purchases would be expected to occur in different regions than trip-related purchases. In order to more accurately reflect locations of equipment purchases, we used retail trade sales data by county (CDOR, 2012; Appendix H) to allocate these expenditures regionally. SCORP survey data was used to allocate trip-related expenditures.⁶ The percentages used to allocate regional expenditures are shown in Tables E2, F2, and G3.

Regional Allocation Calculations:

$$\begin{aligned} \text{equipment spending in region } j &= (\text{equipment spending}) \times (\text{retail trade \% in region } j) \\ \text{trip spending in region } j &= (\text{trip spending}) \times (\text{participation days \% in region } j) \end{aligned}$$

⁴ For horseback riding and target shooting, only resident expenditures were estimated in this analysis due to lack of reliable data for characterizing nonresident participation. The resulting underestimation is negligible assuming that nonresident spending for these activities is a small fraction of total spending.

⁵ For golfing, only trip-related expenditures were included because the spending data consisted of purchases made at golf courses only (Davies et al., 2004). As a result, the golf-related spending estimates included in this analysis are likely more conservative than estimates for the other activities.

⁶ For hunting, participation data from Colorado Parks and Wildlife were used to allocate trip-related spending regionally (CPW, 2013a).

II. Non-Motorized Activity Details

Trip spending profiles for non-motorized activities were specified on a per trip basis (OIA, 2012). In order to apply these profiles we estimated the total number of trips (resident/nonresident, day/overnight) taken for each non-motorized activity.

State-level Spending Calculations:

$$\begin{aligned} \text{equipment spending} &= (\text{resident participants}) \times (\text{equipment spending profile}) \\ \text{trip spending} &= (\text{adjusted trips}) \times (\text{trip spending profile}) \end{aligned}$$

Estimating Trips by Activity in Colorado

The SCORP survey was used as the primary data source for participation. In order to align the SCORP data with OIA spending profiles, the days of participation estimates were converted to trip estimates. These were estimated using OIA data that included recreation in the U.S. Mountain Region.⁷

OIA Trip Estimation Data for Non-Motorized Activities:

- Ratio of day to overnight trips
- Average days per overnight trip
- Ratio of nonresident to resident trips

During a single trip a participant might engage in more than one outdoor recreation activity and may or may not spend money during the trip. In order to avoid overestimating expenditures, we accounted for these effects by adjusting the trip estimates using OIA data based on responses from the U.S. Mountain Region:

- Percent of trips where participants spent money
- Percent of trips taken for the primary purpose of the selected activity

State-level Trip Calculations:

1. *average day trips* = (SCORP ave days) × (OIA % day trip days)
2. *average overnight trips* = (SCORP ave days) × (OIA % overnight trip days) ÷ (OIA days per overnight trip)
3. *resident trips* = (SCORP participants) × (average trips)
4. *nonresident trips* = (resident trips) × (OIA nonresident to resident trip ratio)
5. *adjusted trips* = (trips) × (OIA % trips with money spent) × (OIA % primary purpose trips) × (0.1 × OIA % non primary purpose trips)

⁷ Because OIA survey sample sizes for Colorado were small, data on the 7 states in the Mountain Region (Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming) were included to produce more robust estimates.

III. Motorized Activity Details

Spending for motorized activities was estimated using the non-motorized activity procedure, with 2 additional steps. Because a particular motorized vehicle is often used for outdoor recreation as well as other purposes, additional adjustments were made to exclude the economic contributions of non-outdoor recreation related activities and also to reallocate part of motorized vehicle expenditures to relevant outdoor recreation categories (e.g., powerboat expenditures used for fishing).⁸ These adjustments were made using OIA survey data for activity responses in the U.S. Mountain Region.

A. Adjusting Trip Estimates to Exclude Non-Outdoor Recreation

In the OIA survey respondents were asked to identify the percentage of trips by motorized activity for 4 primary purposes (outdoor recreation, cruising, special events, or other uses). The final trip estimation was adjusted by excluding the percentage for “special events” and “other uses.”

Final Trip Calculation:

$$\text{final trips} = (\text{adjusted trips}) \times (\% \text{ cruising trips} + \% \text{ outdoor recreation trips})$$

B. Reallocating Contributions to Non-motorized Activities

In order to attribute motorized expenditures made for the purposes of other outdoor activities (e.g., fishing, hunting, etc.) a portion of the motorized economic contributions were reallocated to 8 non-motorized activities. The “outdoor recreation” portion of each motorized activity was allocated to non-motorized activities based on an OIA survey question indicating the proportion of outdoor recreation trips for each activity.

Reallocation Calculation:

$$\% \text{ allocated to nonmotor activity } j = (\text{economic estimate for motor activity}) \times (\% \text{ outdoor recreation trips}) \div (\% \text{ cruising trips}) \times (\% \text{ outdoor trips for activity } j)$$

IV. Selected Activity Details

Spending for each activity in the “selected” group was estimated in a unique way due to the particular nature of the data that were used. Each of the following 6 sub-sections includes the estimation details for the corresponding activity.

⁸ For equipment expenditures, a primary purpose adjustment was included when constructing spending profiles. For this reason, no additional adjustments were made to equipment spending in order to exclude contributions of non-outdoor recreation related activities.

A. Fishing

In 2012 there were 739,885 resident anglers who purchases fishing licenses in Colorado (CPW, 2013b). The ratio of resident to nonresident anglers in Colorado, taken from the 2011 USFWS National survey, was used to produce the estimate of 218,286 nonresident anglers. The per participant spending profile (excluding motorized items) from the National Survey was applied to estimate total fishing spending at the state level.

B. Hunting

Hunting spending profiles were constructed using the USFWS 2011 National Survey. Hunter days by county (Table G2) were combined to estimate total hunter days in Colorado for residents and nonresidents combined (CPW, 2013a). For each hunting type (big game, small game, and waterfowl) hunter day estimates were applied to the respective spending profiles to estimate total spending for hunting in Colorado.⁹ Trip spending by county was allocated using CPW participation estimates, and equipment spending by county was allocated using county trade sales data (CDOR, 2012; Appendix H).

C. Wildlife Watching

An estimated 713,581 Colorado residents participated in wildlife watching within the state in 2013 (SCORP, 2013). The ratio of resident to nonresident wildlife viewers in Colorado, taken from the 2011 USFWS National survey, was used to produce the estimate of 451,129 nonresident wildlife viewers. Spending for wildlife watching was estimated by using the non-motorized per participant spending profile taken from the 2011 USFWS National Survey.

D. Golfing

Spending for golfing was characterized by updating an estimate of total spending at golf courses in Colorado in 2002 (Davies et al., 2004). The 2002 estimate was adjusted to 2011 dollars using consumer price indices (USDOL, 2013). An adjustment for change in participation was applied based on rounds played data produced annually from 2004 to 2011 (National Golf Foundation).

E. Horseback Riding

The horseback riding spending profile was based on a 2009 study that included trip spending estimates by day (Venegas et al., 2009) and annual equipment spending estimates by person (Martinson et al., 2009) for horseback riders in Minnesota. These profiles were adjusted to 2011 dollars using consumer price indices (USDOL, 2013). Participation was characterized using the 2013 SCORP survey (Table G1).

F. Target Shooting

A recent survey by the National Shooting Sports Foundation was used to estimate spending profiles for target shooters in Colorado (NSSF, 2012). Spending and participation data for Colorado residents were used to construct the target shooter spending profile. This profile was applied to the 2013 SCORP participation numbers to estimate total spending.

⁹ The “migratory bird” spending profile from the 2011 USFWS National Survey was used to estimate waterfowl expenditures.

Appendix D Overall Activities Data Summary

Table D1. SCORP Outdoor Recreation Activities and Combined Activity Groups

SCORP Survey Activity	Activity Group for Economic Estimates
<u>Trail</u>	
Walking	Trail (apparel only)
Jogging/Running (outdoors)	Trail (apparel only)
Hiking/Backpacking	Trail
Horseback riding	Horseback Riding
Road biking	Biking
Mountain biking	Biking
Off-road motorcycling	Off-road (motorcycle)
ATV riding or 4-wheel driving	Off-road (other)
<u>Water-based</u>	
Swimming (outdoors)	Trail (apparel only)
Fishing	Fishing
Power boating	Boating
Water skiing	Boating
Jet skiing	Boating
Sailing	Water Sports
Canoeing	Water Sports
Kayaking	Water Sports
Whitewater rafting	Water Sports
Stand up paddleboarding	Water Sports
<u>Winter</u>	
Skiing or snowboarding at a ski area	Snow Sports
Backcountry skiing	Snow Sports
Sledding/tubing	Snow Sports (apparel only)
Ice skating (outdoors)	Snow Sports (apparel only)
Snowmobiling	Snowmobiling
Snowshoeing or cross country skiing	Snow Sports
Ice fishing	Fishing
<u>Wildlife-based</u>	
Big game hunting	Hunting
Upland bird and small game hunting	Hunting
Waterfowl hunting	Hunting
Wildlife Watching (including birding)	Wildlife Watching
<u>Other Outdoor</u>	
Developed/RV camping	RV Camping
Tent camping	Tent Camping
Picnicking	Trail (apparel only)
Target or skeet shooting	Target Shooting
Rock climbing	Trail
Team or individual sports (outdoors)	Trail (apparel only)
Playground activities	Trail (apparel only)
Golf	Golfing
Geocaching	Trail (apparel only)

Note: For "apparel only" categories, only apparel expenditures were included in the economic estimates.

Table D2. Data Sources Used to Estimate Participation and Spending Profiles

Activity Group	Spending Profile Data Sources	Participation Data Sources
<u>Motorized Activities</u>		
Boating	OIA (2011)	SCORP (2013), OIA (2012)
Off-road (motorcycle)	OIA (2011)	SCORP (2013), OIA (2012)
Off-road (other)	OIA (2011)	SCORP (2013), OIA (2012)
RV Camping	OIA (2011)	SCORP (2013), OIA (2012)
Snowmobiling	OIA (2011)	SCORP (2013), OIA (2012)
<u>Non-Motorized Activities</u>		
Biking	OIA (2011)	SCORP (2013), OIA (2012)
Snow Sports	OIA (2011)	SCORP (2013), OIA (2012)
Snow Sports (apparel only)	OIA (2011)	SCORP (2013), OIA (2012)
Tent Camping	OIA (2011)	SCORP (2013), OIA (2012)
Trail	OIA (2011)	SCORP (2013), OIA (2012)
Trail (apparel only)	OIA (2011)	SCORP (2013), OIA (2012)
Water Sports	OIA (2011)	SCORP (2013), OIA (2012)
<u>Selected Activities</u>		
Fishing	USFWS (2011)	CPW (2013b), SCORP (2013), USFWS (2011)
Hunting	USFWS (2011)	CPW (2013a)
Wildlife Watching	USFWS (2011)	SCORP (2013), USFWS (2011)
Golfing	Davies (2004)	SCORP (2013), Davies (2004), NGF (2004-2011)
Horseback Riding	Venegas (2009), Martinson (2009)	SCORP (2013)
Target Shooting	NSSF (2012)	SCORP (2013)

Appendix E Non-Motorized Activities Data Summary

Table E1. SCORP Survey Annual Non-Motorized Participation

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Numbers of Participants (thousands)</u>								
Biking	400	658	482	53	98	245	127	1,386
Tent Camping	593	582	123	16	59	411	231	1,357
Snow Sports	1,133	493	75	5	8	232	165	1,533
Trail Sports	1,073	1,077	360	48	85	645	355	2,066
Water Sports	214	208	74	1	53	155	146	625
Trail (apparel only)	1,095	1,424	1,129	271	251	721	388	3,043
Snow (apparel only)	256	278	174	12	13	70	46	709
<u>Average Days per Participant</u>								
Biking	17.1	27.2	27.2	18.1	21.8	20.1	18.4	34.8
Tent Camping	7.3	7.1	5.5	6.4	6.0	7.4	6.8	10.4
Snow Sports	13.2	9.1	6.0	1.6	6.1	9.3	11.4	15.6
Trail Sports	12.1	16.4	15.9	7.6	11.4	15.3	10.8	24.9
Water Sports	9.7	8.9	7.7	5.1	12.0	14.4	7.1	13.5
<u>Number of Respondents</u>								
Biking	117	87	72	17	27	60	75	316
Tent Camping	128	64	20	11	22	93	102	329
Snow Sports	234	69	10	4	8	61	109	399
Trail Sports	249	150	60	18	33	160	180	531
Water Sports	67	29	13	3	14	34	56	177
Trail (apparel only)	310	219	193	105	104	213	242	875
Snow (apparel only)	58	27	21	6	5	16	44	159

Table E2. Regional Spending Allocation for Non-Motorized Activities

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Equipment Spending</u>								
All Activities	8.8%	38.7%	29.7%	1.7%	4.0%	13.5%	3.6%	100.0%
<u>Trip Spending</u>								
Biking	14.2%	37.1%	27.2%	2.0%	4.4%	10.2%	4.8%	100.0%
Tent Camping	30.4%	29.0%	4.8%	0.7%	2.5%	21.4%	11.1%	100.0%
Snow Sports	62.2%	18.8%	1.9%	0.0%	0.2%	9.0%	7.9%	100.0%
Trail Sports	25.3%	34.3%	11.2%	0.7%	1.9%	19.2%	7.5%	100.0%
Water Sports	24.7%	22.0%	6.8%	0.1%	7.6%	26.6%	12.2%	100.0%

Appendix F Motorized Activities Data Summary

Table F1. SCORP Survey Annual Motorized Participation

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Numbers of Participants</u>								
Boating	172,199	235,905	92,424	31,770	58,216	62,827	31,206	556,489
Off-road (motorcycle)	108,927	23,828	12,286	17,713	14,755	41,996	18,615	213,490
Off-road (other)	277,655	158,497	24,082	52,996	87,963	225,052	167,565	646,152
RV Camping	271,326	184,777	66,372	54,738	56,780	140,125	113,905	562,840
Snowmobiling	125,882	4,928	4,721	482	1,753	39,871	48,150	191,592
<u>Average Days per Participant</u>								
Boating	8.3	11.8	18.8	20.1	39.1	30.8	14.2	20.2
Off-road (motorcycle)	7.5	4.2	14.7	6.0	8.7	20.9	11.1	11.3
Off-road (other)	12.1	14.2	15.9	14.5	16.8	13.4	11.5	20.4
RV Camping	6.3	7.9	4.9	4.6	5.9	10.7	7.8	11.5
Snowmobiling	6.1	27.4	10.0	20.0	5.3	12.3	10.4	10.2
<u>Number of Respondents</u>								
Boating	43	27	17	15	16	13	31	141
Off-road (motorcycle)	22	6	3	4	6	17	19	61
Off-road (other)	92	32	6	13	22	66	101	240
RV Camping	84	37	17	10	25	59	73	212
Snowmobiling	33	2	2	1	2	5	26	66

Table F2. Regional Spending Allocation for Motorized Activities

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Equipment Spending</u>								
All Activities	8.8%	38.7%	29.7%	1.7%	4.0%	13.5%	3.6%	100.0%
<u>Trip Spending</u>								
Boating	12.7%	24.8%	15.5%	5.7%	20.2%	17.2%	3.9%	100.0%
Off-road (motorcycle)	33.9%	4.2%	7.4%	4.4%	5.3%	36.3%	8.5%	100.0%
Off-road (other)	25.6%	17.0%	2.9%	5.8%	11.2%	22.8%	14.6%	100.0%
RV Camping	26.4%	22.6%	5.1%	3.9%	5.2%	23.1%	13.7%	100.0%
Snowmobiling	39.0%	6.9%	2.4%	0.5%	0.5%	25.1%	25.6%	100.0%

Appendix G Selected Activities Data Summary

Table G1. Participation for Selected Activities (SCORP, 2013)

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Numbers of Participants</u>								
Fishing	406,418	634,220	182,522	67,415	142,606	428,749	240,813	1,399,845
Golfing	171,190	259,190	251,529	23,900	36,718	161,947	42,547	713,581
Horseback Riding	105,052	129,865	53,406	25,340	8,745	66,666	20,585	282,247
Hunting	252,899	166,360	13,660	148,581	73,799	135,314	103,885	593,619
Shooting	89,653	259,045	35,765	31,943	40,822	119,859	52,738	520,724
Wildlife Watching	218,917	304,051	89,706	43,355	56,542	192,707	143,801	733,220
<u>Average Days per Participant</u>								
Fishing	12.6	12.6	18.2	6.9	16.8	15.9	11.7	20.7
Golfing	8.2	13.6	9.5	16.6	9.2	15.7	13.4	15.7
Horseback Riding	7.7	6.6	8.1	8.2	10.2	3.9	11.0	10.2
Hunting	10.1	10.4	28.1	6.9	20.6	13.3	14.1	17.6
Shooting	11.3	9.3	3.6	8.6	17.1	12.9	5.5	12.2
Wildlife Watching	9.8	12.7	10.2	16.3	20.2	17.3	16.2	19.7
<u>Number of Respondents</u>								
Fishing	151	111	37	37	57	129	138	482
Golfing	63	39	51	21	20	47	39	222
Horseback Riding	25	14	4	13	7	12	26	85
Hunting	86	32	6	59	27	48	80	255
Shooting	34	31	11	28	18	35	32	167
Wildlife Watching	87	56	19	35	21	62	96	272

Note: Not all of the above numbers were included in specifying participation for this analysis (see Appendix D, Section IV for details).

Table G2. Hunting Participation by County in Hunter Days (CPW, 2013a)

County	Big Game	Small Game	Waterfowl
<u>Northwest Region</u>			
Eagle	64,716	7,164	1,486
Garfield	91,843	9,828	1,978
Grand	87,672	4,445	1,952
Jackson	50,316	3,054	905
Mesa	73,920	40,582	6,062
Moffat	75,224	23,974	1,659
Pitkin	27,286	1,342	47
Rio Blanco	87,070	2,685	740
Routt	92,686	7,659	508
Summit	20,967	4,165	142
<u>North Central Region</u>			
Adams	3,645	3,300	6,570
Arapahoe	4,768	4,141	675
Boulder	9,597	8,711	5,448
Clear Creek	7,552	4,420	0
Gilpin	4,763	1,132	0
Larimer	49,027	13,145	13,886
Weld	8,433	29,876	44,028
<u>Metro Region</u>			
Broomfield	485	0	0
Denver	1,890	43	132
Douglas	9,484	1,190	644
Jefferson	24,871	2,938	113
<u>Northeast Region</u>			
Cheyenne	4,577	649	0
Elbert	7,876	2,141	126
Kit Carson	5,080	9,509	180
Lincoln	8,134	3,856	105
Logan	4,313	20,011	8,138
Morgan	5,160	17,345	17,266
Phillips	581	8,739	97
Sedgwick	2,260	14,902	2,816
Washington	3,916	10,249	347
Yuma	3,761	26,811	1,360

Table G2 (Continued). Hunting Participation by County in Hunter Days (CPW, 2013a)

County	Big Game	Small Game	Waterfowl
<u>Southeast Region</u>			
Baca	5,411	4,036	125
Bent	4,493	7,211	2,786
Crowley	2,606	646	710
Huerfano	15,833	574	150
Kiowa	5,154	1,034	558
Las Animas	22,841	2,019	1,710
Otero	3,619	6,469	2,766
Prowers	2,833	4,735	1,300
Pueblo	10,341	9,674	4,564
<u>South Central Region</u>			
Alamosa	6,982	2,887	1,422
Chaffee	22,696	4,533	889
Conejos	20,704	2,860	131
Costilla	7,571	65	237
Custer	12,729	1,821	173
El Paso	17,677	4,313	548
Fremont	20,682	3,359	265
Lake	5,584	5,963	14
Mineral	10,515	374	38
Park	34,735	5,648	1,122
Rio Grande	14,265	5,340	1,348
Saguache	46,775	3,713	972
Teller	13,326	2,690	279
<u>Southwest Region</u>			
Archuleta	30,091	6,864	62
Delta	33,894	5,314	2,509
Dolores	25,501	1,598	0
Gunnison	83,731	4,723	603
Hinsdale	16,192	122	0
La Plata	37,096	5,278	446
Montezuma	22,293	2,710	119
Montrose	45,767	7,486	2,412
Ouray	14,891	258	20
San Juan	9,148	926	0
San Miguel	22,969	2,142	43

Table G3. Regional Spending Allocation for Miscellaneous Activities

	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Equipment Spending</u>								
All Activities	8.8%	38.7%	29.7%	1.7%	4.0%	13.5%	3.6%	100.0%
<u>Trip Spending</u>								
Fishing	17.7%	27.6%	11.5%	1.6%	8.3%	23.5%	9.8%	100.0%
Golfing	12.6%	31.6%	21.4%	3.6%	3.0%	22.7%	5.1%	100.0%
Horseback Riding	28.0%	29.6%	15.1%	7.3%	3.1%	9.0%	7.8%	100.0%
Shooting	16.0%	37.9%	2.0%	4.3%	10.9%	24.3%	4.6%	100.0%
Wildlife Watching	14.8%	26.8%	6.3%	4.9%	7.9%	23.1%	16.2%	100.0%
<u>Trip Spending for Hunting</u>								
Big Game	45.1%	5.9%	2.5%	3.1%	4.9%	15.7%	22.9%	100.0%
Small Game	25.9%	16.0%	1.0%	28.2%	9.0%	10.7%	9.2%	100.0%
Waterfowl	10.6%	48.4%	0.6%	20.9%	10.1%	5.1%	4.3%	100.0%

Table G4. Trail Activities Participation by Percent of Population

Trail Activities	Northwest	North Central	Metro	Northeast	Southeast	South Central	Southwest	State
<u>Non-Motorized</u>								
Walking	69.3%	69.0%	63.0%	48.0%	54.5%	68.9%	74.5%	66.3%
Jogging/Running	26.7%	32.8%	36.5%	13.1%	17.1%	26.8%	17.7%	30.8%
Hiking/Backpacking	64.4%	57.0%	48.5%	17.5%	23.6%	54.0%	52.3%	51.9%
Horseback riding	9.9%	7.4%	8.4%	5.6%	4.5%	4.1%	12.8%	7.4%
Mountain biking	30.0%	26.2%	18.5%	4.7%	12.6%	19.9%	27.3%	22.1%
Snowshoe/X-Country Ski	30.6%	23.9%	12.9%	1.3%	4.4%	10.3%	26.6%	17.7%
Any Non-motorized Trail	89.1%	81.9%	80.4%	54.0%	60.5%	84.2%	84.2%	80.8%
<u>Motorized</u>								
Off-road motorcycling	11.5%	3.8%	6.2%	5.7%	5.9%	5.5%	7.3%	5.6%
ATV/4-wheel driving	30.5%	11.6%	14.9%	11.2%	21.2%	24.1%	28.6%	16.9%
Any Motorized Trail	33.4%	13.0%	15.4%	12.4%	22.9%	27.6%	32.2%	18.6%
<u>Combined</u>								
Any Trail	93.7%	82.7%	81.0%	57.5%	66.7%	86.3%	90.4%	82.6%

Appendix H Retail Trade Sales by County

Table H1. Retail Trade Sales by County (CDOR, 2012)

County	Trade Sales	% of State Total
<u>Northwest Region</u>		
Eagle	\$895,221	1.35%
Garfield	\$1,011,264	1.52%
Grand	\$160,955	0.24%
Jackson	\$10,543	0.02%
Mesa	\$2,183,408	3.29%
Moffat	\$189,238	0.29%
Pitkin	\$348,020	0.52%
Rio Blanco	\$55,190	0.08%
Routt	\$348,346	0.53%
Summit	\$608,117	0.92%
<u>North Central Region</u>		
Adams	\$5,697,508	8.59%
Arapahoe	\$8,889,189	13.40%
Boulder	\$3,855,848	5.81%
Clear Creek	\$81,823	0.12%
Gilpin	\$11,236	0.02%
Larimer	\$4,038,476	6.09%
Weld	\$3,106,335	4.68%
<u>Metro Region</u>		
Broomfield	\$1,008,975	1.52%
Denver	\$7,613,904	11.48%
Douglas	\$3,982,905	6.00%
Jefferson	\$7,069,549	10.66%
<u>Northeast Region</u>		
Cheyenne	\$14,220	0.02%
Elbert	\$146,396	0.22%
Kit Carson	\$88,029	0.13%
Lincoln	\$139,613	0.21%
Logan	\$284,896	0.43%
Morgan	\$306,094	0.46%
Phillips	\$17,258	0.03%
Sedgwick	\$24,757	0.04%
Washington	\$13,663	0.02%
Yuma	\$106,949	0.16%

Table H1 (Continued). Retail Trade Sales by County (CDOR, 2012)

County	Trade Sales	% of State Total
<u>Southeast Region</u>		
Baca	\$41,540	0.06%
Bent	\$23,059	0.03%
Crowley	\$16,568	0.02%
Huerfano	\$65,846	0.10%
Kiowa	\$11,709	0.02%
Las Animas	\$170,706	0.26%
Otero	\$191,333	0.29%
Prowers	\$160,785	0.24%
Pueblo	\$2,000,847	3.02%
<u>South Central Region</u>		
Alamosa	\$342,012	0.52%
Chaffee	\$263,645	0.40%
Conejos	\$34,653	0.05%
Costilla	\$12,090	0.02%
Custer	\$23,201	0.03%
El Paso	\$7,525,106	11.34%
Fremont	\$340,110	0.51%
Lake	\$47,375	0.07%
Mineral	\$9,286	0.01%
Park	\$65,577	0.10%
Rio Grande	\$75,314	0.11%
Saguache	\$25,219	0.04%
Teller	\$211,815	0.32%
<u>Southwest Region</u>		
Archuleta	\$115,808	0.17%
Delta	\$290,862	0.44%
Dolores	\$18,303	0.03%
Gunnison	\$189,076	0.28%
Hinsdale	\$8,848	0.01%
La Plata	\$741,886	1.12%
Montezuma	\$361,865	0.55%
Montrose	\$527,781	0.80%
Ouray	\$26,853	0.04%
San Juan	\$5,950	0.01%
San Miguel	\$90,829	0.14%

Appendix I Estimates of Spending and Days by Activity Group¹⁰

Table I1. Estimated Annual Activity Days in Colorado

Activity Group	Residents	Nonresidents	Total
<u>Motorized Activities</u>			
Motorized Boating	11,252,974	6,998,784	18,251,757
Off-Road Motorcycles	2,420,919	1,385,487	3,806,406
ATVs	13,190,020	8,251,407	21,441,427
Recreational Vehicles	6,474,549	11,316,801	17,791,351
Snowmobiles	1,955,665	4,134,048	6,089,713
<u>Non-Motorized Activities</u>			
Biking	48,170,190	21,637,784	69,807,974
Camping	14,158,319	12,426,131	26,584,450
Snow Sports	23,983,623	37,480,193	61,463,816
Trail Activities	51,512,396	41,176,069	92,688,465
Water Sports	8,412,174	14,910,582	23,322,756
<u>Selected Activities</u>			
Fishing	9,352,587	1,177,307	10,529,894
Hunting	1,452,438	589,503	2,041,940
Wildlife Watching	6,123,666	2,820,877	8,944,543
Horseback Riding	2,874,784	N/A	2,874,784
Target Shooting	4,488,592	N/A	4,488,592

¹⁰ Golfing is excluded from these tables because estimates in terms of days of golfing were not incorporated in this study.

Table 12. Estimated Spending per Day of Activity in Colorado

Activity Group	Average Spending per Day
<u>Motorized Activities</u>	
Motorized Boating	\$36.05
Off-Road Motorcycles	\$37.99
ATVs	\$49.66
Recreational Vehicles	\$18.73
Snowmobiles	\$23.17
<u>Non-Motorized Activities</u>	
Biking	\$19.59
Camping	\$73.75
Snow Sports	\$118.32
Trail Activities	\$24.43
Water Sports	\$56.04
<u>Selected Activities</u>	
Fishing	\$103.16
Hunting	\$253.67
Wildlife Watching	\$147.91
Horseback Riding	\$253.81
Target Shooting	\$55.45