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# The Economic Contributions of Water-related Outdoor Recreation in Colorado

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Business for Water Stewardship



## Executive Summary

From its mountains, forests, and high plains to its rivers, plateaus and canyons, Colorado serves up a vivid canvas on which to paint endless kinds of outdoor recreational experiences. Business for Water Stewardship has taken the opportunity to both broaden and update an earlier study from 2012 investigating the economic contributions of recreational activity on the Colorado River and its tributaries across six states. This updated study focuses on recreational days spent on or along the water anywhere within the state of Colorado. No matter the type of water that speaks to you, a babbling brook, raging river, or a flowing stream, and no matter the kind of activity that calls you outside, a peaceful hike, kayaking white waters, or a streamside two-wheeled trail ride, purchases to support those activities provide fuel to the engines of the state's economy.

Statewide, an estimated 6.7 million people, both resident and non-residents, participate in one of the selected outdoor activities along the water in Colorado (Table E1). Trail sports is the most popular activity with 2.7 million participants followed by camping with just under 2 million and picnicking with 1.8 million. In terms of the total number of days spent participating in these activities along the water, wildlife watching was the highest with 15.4 million days followed by trail sports with 15.1 million and water sports with just under 15 million days.

**Table E1. Participation in selected outdoor recreational activity on or along the water.**

	Water Participation Rate *	Participants	Days
Bicycling or skateboarding	53.0%	909,379	6,179,306
Camping	74.7%	1,980,224	8,081,770
Fishing	98.5%	1,141,383	8,884,857
Hunting & shooting	42.0%	363,112	1,388,329
Picnicking or relaxing **	74.5%	1,794,376	13,154,981
Snow sports	30.5%	1,100,961	2,196,191
Trail Sports	74.6%	2,749,408	15,057,167
Water sports	88.6%	1,640,258	14,991,776
Wildlife-watching	78.7%	1,238,084	15,406,101
All Activities	80.2%	6,740,210	85,340,478

\* Percent of all recreationists who engage in the activity who also participated in the activity along or near the water.

\*\* Picnicking is for CO residents only (non-resident estimates are not available).

Note: The sum of participants by activity is greater than the total across all activities because people engage in multiple outdoor activities.

Direct retail spending by residents and non-residents recreating along waterways in Colorado generates an estimated \$9.9 billion in economic output and contributes \$5.4 billion to the state’s GDP (Table E2). It also supports close to 81,000 jobs that provide \$3.3 billion in household income and generate an estimated \$1.7 billion in tax revenues. Collectively, the retail spending by these recreationists and the related multiplier effects generate an estimated \$18.8 billion in economic output and contributes \$10.3 billion to the state’s GDP. Total contributions support over 131,000 jobs that provide \$6.3 billion in household income and generate an estimated \$2.7 billion in tax revenues. Continued stewardship of the state’s rivers, lakes, reservoirs, and headwaters contributes to the health of Coloradans as well as the recreational economy.

**Table E2. Economic contributions of water-based outdoor recreation, by activity type.**

	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
<b>Direct contributions</b>						
Bicycling	\$340.9	\$185.3	2,894	\$113.1	\$26.1	\$32.0
Camping	\$2,159.0	\$1,184.9	17,897	\$725.1	\$167.6	\$200.6
Fishing	\$722.8	\$334.3	5,126	\$219.5	\$49.3	\$51.8
Hunting & shooting	\$154.2	\$80.3	1,709	\$53.3	\$11.4	\$9.5
Picnicking or relaxing	\$666.7	\$360.0	5,037	\$203.2	\$48.2	\$67.7
Snow sports	\$1,170.2	\$700.5	10,278	\$433.4	\$99.7	\$119.8
Trail Sports	\$2,322.3	\$1,304.7	19,565	\$784.2	\$182.4	\$226.9
Water sports	\$1,929.4	\$1,080.8	16,329	\$679.7	\$155.1	\$185.1
Wildlife-watching	\$423.8	\$173.9	2,108	\$111.9	\$24.4	\$21.2
<b>All Activities</b>	<b>\$9,889.2</b>	<b>\$5,404.6</b>	<b>80,943</b>	<b>\$3,323.4</b>	<b>\$764.2</b>	<b>\$914.6</b>
<b>Total contributions</b>						
Bicycling	\$654.1	\$356.1	4,664	\$216.5	\$48.1	\$46.9
Camping	\$4,122.4	\$2,256.1	29,016	\$1,372.5	\$305.0	\$294.0
Fishing	\$1,369.5	\$685.5	8,767	\$431.0	\$94.3	\$81.2
Hunting & shooting	\$293.6	\$156.3	2,508	\$98.9	\$21.1	\$15.9
Picnicking or relaxing	\$1,266.5	\$687.3	8,348	\$403.4	\$90.3	\$97.4
Snow sports	\$2,224.9	\$1,281.8	16,385	\$783.4	\$174.1	\$170.5
Trail Sports	\$4,428.1	\$2,458.5	31,501	\$1,483.1	\$330.6	\$328.8
Water sports	\$3,684.0	\$2,041.4	26,354	\$1,258.7	\$278.2	\$268.5
Wildlife-watching	\$785.6	\$368.8	4,132	\$228.6	\$49.3	\$37.0
<b>All Activities</b>	<b>\$18,828.8</b>	<b>\$10,291.9</b>	<b>131,676</b>	<b>\$6,276.2</b>	<b>\$1,391.0</b>	<b>\$1,340.1</b>

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## Introduction

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Business for Water Stewardship commissioned a study to characterize outdoor recreation on or along waterways within Colorado in 2019. Part of the goal involved characterizing where the water-related outdoor recreation occurs across the state. More specifically, it was important to understand which river basins people travelled to for different activities. A second aim was to quantify the activity; what percentage of Colorado adults engage in this recreation, how many days do they recreate, and how much money does Colorado's outdoor community spend for these activities. Quantifying spending in this way enables estimation of the economic benefits of outdoor recreation on or along the water, which can be characterized by modelling the contributions of the activities on Colorado's economy.

### Scope of Study

The activity of interest for this study is outdoor recreation along waterways across nine activity types taking place within Colorado. The outdoor recreation participants include all adults (18 and over) who engage in the targeted activities within Colorado (i.e., both state residents and those from out-of-state are included). The results reflect one year of participation (2019), and all economic estimates are reported in 2019 dollars.

### Nine Activities under Study

- Trail Sports (running 3+ miles on paved/unpaved trail, day-hiking, backpacking, climbing ice or rock, mountaineering, horseback riding)
- Bicycling or skateboarding (on paved road or off-road)
- Camping (RV at campsite, tent campsite, or at a rustic lodge)
- Picnicking or relaxing
- Water sports (swimming, canoeing, kayaking, rafting, paddle-boarding, sailing, recreating with motorized boat)
- Snow sports (skiing cross-country/downhill/telemark, snowboarding, snowshoeing)
- Hunting & shooting (shotgun, rifle, or bow)
- Fishing (recreational fly and non-fly)
- Wildlife-watching (viewing, feeding, or photographing animals, bird watching)

Within Colorado, we were also interested in examining geographic dynamics of outdoor recreation. To this end, the state was divided into nine regions, corresponding to important river basins within the state (Figure 1).<sup>1</sup>

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<sup>1</sup> The "Metro Area" region was also examined individually because it is such an important population center. Correspondingly, results for the South Platte River Basin excluded the contribution of the Metro Area. The Dolores, San Miguel, & San Juan basin is sometimes referred to as "Southwest" within this report.

Figure 1. River Basins under Study



## Data & Methods

The analysis is structured around estimating three sets of metrics: participation, spending, and economic contributions. **Participation** estimates for this study relied largely on two data sources to characterize outdoor recreation on or along the water. A 2016 general population survey ('OIA study') of all outdoor recreation in the U.S. provided a baseline for Colorado's state-level participation in the targeted outdoor recreational activities, including activity that took place away from water-bodies (OIA, 2017).<sup>2</sup> The proportion and geographic distribution of these outdoor activities occurring along waterbodies was estimated using a second survey ('Colorado survey'), designed and implemented in the winter of 2019 as part of this study.<sup>3</sup> The 2019 Colorado survey gathered data regarding rates of participation by activity

<sup>2</sup> Note that the 2016 OIA survey in turn relied upon the 2011 National Survey of Fishing, Hunting, and Wildlife Watching to characterize participation and spending for those three activities (U.S. Fish & Wildlife Service, 2011).

<sup>3</sup> The estimates reported here are lower than the corresponding OIA estimates due to the narrower scope of recreation along waterways. All 2016 participation rates were assumed to have remained unchanged since 2016,



and average days on or along the water per participant by river basin. Respondents were asked to exclude outings where the selected activity was not the primary purpose of the trip. This prevents overestimation due to double-counting for outings that serve multiple purposes (see OIA, 2017, p.6 for a more in-depth discussion).

**Spending** estimates are pegged to the OIA study estimates with adjustments for inflation and population changes. This approach enabled the 2019 Colorado survey to focus on participation levels and locations to inform the allocation of spending to the river basin-level.

**Economic Contributions** were estimated by combining spending estimates with data that models economic sector interactions. Expenditure data was collected for different categories (e.g., groceries, fuel, equipment, etc.) as part of the OIA survey, which enabled allocation of spending to specific economic sectors. These data were then run through an IMPLAN™ model (Alward & Palmer, 1983) of the Colorado statewide economy using software produced by MIG, Inc. (see Appendix A for details). The resulting river basin-level estimates reflect the contribution that outdoor recreation in those locales has on the statewide economy. Appendix A also provides additional background information about economic contributions, such as direct and multiplier effects.

## **Estimation Procedure**

The OIA study is used as a baseline for retail spending estimates associated outdoor recreation in Colorado (inflation adjusted to 2019 dollars). This study only includes activity along waterways, and a survey was administered to estimate what percentage of this total activity occurs along waterways (and where within the state this activity occurs based on the 9 river basin regions).

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but participant counts were updated to reflect population changes. The state-level study also includes one activity (picnicking) that was not part of the 2016 OIA study.

**Table 1. Data Sources with Abbreviations Referenced in Procedures**

Abbreviation	Description
CO Svy	Data from the 2019 Colorado participation survey
Census	Most recently available US Census Data of the Colorado resident population
CPI	Annual Inflation using consumer price indices (Federal Reserve Bank of Minneapolis)
OIA	Data from the 2016 OIA survey (OIA, 2017)
USFWS	The USFW National Survey is used in the place of the OIA survey for fishing, hunting, and wildlife watching (U.S. Fish & Wildlife Service, 2011).
AZ Svy	Picnic spending profile per participant from a previous study (Arizona Audubon, 2019)

The estimation procedure is documented below with a set of equations. Many of the variables represent arrays (multiple values), with dimensions denoted by subscripts. For example, the subscript “A” refers to the activity dimension; a variable such as *svyRate<sub>A</sub>* contains one value for each activity. These multi-value profiles are provided in Appendix B.

### Statewide along the Water

Statewide participation estimates were based primarily on the 2019 Colorado survey of Outdoor Recreation. Secondary data sources were used for defining the target population and determining non-resident percentages.

**Participation** (adults): for each activity A:

$$Part_A = Pop \times tgtRate \times svyRate_A \times waterRate_A / resPct_A$$

*Pop*: Population of Colorado residents over 18 in 2019 (Census) = X.XX million

*tgtRate*: % of Survey Target Population engaging in at least one activity (OIA) = 77.1%

*svyRate*: % of Survey Respondents who engaged in the activity (CO Svy)

*waterRate*: % of Participants who recreated along the water (CO Svy)

*resPct*: % of Participants who are Colorado residents (OIA)

$$Days_A = Part_A \times avgDays_A \times waterShare_A / resDayPct_A$$

*avgDays*: Average number of days per participant (CO Svy)

*waterShare*: Share of activity days spent along the water (CO Svy)

*resDayPct*: % of days that were from residents of Colorado (OIA)

Spending estimates from the OIA 2016 survey were incorporated directly for this study. Several adjustments were made to (1) update them to 2019 dollars, (2) adjust them downward to correspond to

the water-specific scale, and (3) add picnic-specific spending. We don't know to what extent spending behavior might change for water-specific activity and we made the simplifying assumption that the spending attributable to waterbodies is proportional to the days that participants spent along the water.

**Spending (adults):** for each activity A:

$$Spend_A = Spend_{2016_A} \times cpiAdjust \times popAdjust \times waterRate_A \times waterShare_A$$

$$Spend_{PICNIC} = Days_{PICNIC} \times avgSpend_{PICNIC}$$

*Spend2016: Colorado outdoor recreation spending in 2016 (OIA, USFWS)<sup>4</sup>*

*cpiAdjust: Inflation adjustment, 2016 to 2019 (CPI) = 1.065*

*popAdjust: Population change adjustment, 2016 to 2019 (Census) = 1.060*

*avgSpend<sub>PICNIC</sub>: Average spending per primary day of picnicking (AZ Svy) = \$59*

### Basin-level along the Water

Within Colorado, we estimated the proportion of activity to each river basin region based on responses in the Colorado 2019 survey. The participation estimates within basins correspond directly to the location in which the activity occurred. However, location-specific expenditures are more difficult to determine; a person who travels to another region may make expenditures within that region, in their home region, or a region in-between. For simplicity, the expenditures presented in this study don't represent spending by region. Rather, they represent the share of dollars attributable to participation within each region.

**Participation & Spending (adults):** for each activity A in each basin (B):

$$Part_{AB} = Part_A \times basinRate_{AB}$$

*basinRate: % of Water participants who visited the basin (CO svy)*

$$Days_{AB} = Days_A \times basinRate_{AB}$$

$$Spend_{AB} = Spend_A \times daysShare_{AB}$$

*daysShare: Percentage of total activity days attributable to the selected basin (CO Svy)*

### Economic Contributions

The spending estimates provided the basis for estimating economic contributions. For each activity, spending was allocated to economic sectors available in the input-output model. By running the IMPLAN™ model, we were able to estimate economic contributions for each activity in Colorado as a whole. These statewide contributions were then allocated to counties relative to the proportion of spending in each county. Importantly, these region-level estimates don't correspond to economic

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<sup>4</sup> Includes spending both by Colorado residents and out-of-state visitors.

output within each region. Rather, they represent the share of Colorado economic contributions attributable to participation within each region.

**Economic Contributions:** for each activity A and basin B:

$$Econ_{AB} = Econ_A \times daysShare_{AB}$$

*Econ: Economic contributions estimated using state-wide Implan model*

## CO Survey of Outdoor Recreation along the Water

As part of this study a survey was administered in late 2019 for the purpose of estimating outdoor recreation participation along waterways in Colorado. The target population for this survey included all residents of Colorado<sup>5</sup> who engage in outdoor recreation (Figure 2 below). To survey this population, a panel provider (IPSOS) supplied a list people (the survey frame), who were then sent questionnaires by Southwick Associates. The sample consists of 1,341 Colorado residents who responded to the survey. Of these respondents, 1,252 were considered sufficiently complete and reliable for inclusion in the analysis (i.e., valid). The final dataset for analysis included all valid respondents with a small amount of cleaning done to recode outlier values for questions regarding days of participation.<sup>6</sup>

### Figure 2. Screener Question for defining Target Population

1) Did you participate in any of the following activities in Colorado between December 1, 2018 and November 30, 2019? Check all that apply:

- Trail Sports (running 3+ miles on paved/unpaved trail, day-hiking, backpacking, climbing ice or rock, mountaineering, horseback riding)
- Bicycling or skateboarding (on paved road or off-road)
- Camping (RV at campsite, tent campsite, or at a rustic lodge)
- Picnicking or relaxing
- Water sports (swimming, canoeing, kayaking, rafting, paddle-boarding, sailing, recreating with motorized boat)
- Snow sports (skiing cross-country/downhill/telemark, snowboarding, snowshoeing)
- Hunting & shooting (shotgun, rifle, or bow)
- Fishing (recreational fly and non-fly)
- Wildlife-watching (viewing, feeding, or photographing animals, bird watching)
- Team competitive sports (softball/baseball, volleyball, soccer, ultimate frisbee)
- Off-roading with ATVs, 4x4 trucks
- Individual competitive sports (golf, tennis)
- Motorcycling (on-road, off-road)
- Playground activities
- I didn't participate in any of these activities

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<sup>5</sup> Although non-residents were not surveyed, the study does capture non-resident spending. The simplifying assumption is that non-residents visit the same places as residents.

<sup>6</sup> Outliers represent less than two percent of the values collected in the survey.

## Survey Weighting

The survey included a set of demographic questions for gauging the degree to which the survey sample represented the target population. The OIA survey respondents represent a population of outdoor recreationists, and we can use their demographic characteristics as a reference point for weighting the Colorado survey sample. Figure 3 below compares demographics between the Colorado survey respondents and the target population. We see that the Colorado respondents tended to be older, whiter, and more likely to be female than the target population. To mitigate this response bias, the final survey dataset was weighted based on the available demographic characteristics. Weights by respondent were estimated using the R package *anesrake* (Pasek, 2018; R Core Team, 2018). The resulting weights ranged from 0.36 to 2.69, with a standard deviation of 0.43.

**Figure 3. Demographic Distributions for Colorado Survey Respondents vs. Target Population**



## Results

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### Participation

Statewide, an estimated 6.7 million people, both resident and non-residents, participate in one of the selected outdoor activities along the water in Colorado (Table 2). Trail sports is the most popular activity with 2.7 million participants followed by camping with just under 2 million and picnicking with 1.8 million. In terms of the total number of days spent participating in these activities along the water, wildlife watching was the highest with 15.4 million days followed by trail sports with 15.1 million and water sports with just under 15 million days.

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\* Percent of all recreationists who engage in the activity who also participated in the activity along or near the water.

\*\* Picnicking is for CO residents only (non-resident estimates are not available).

Note: The sum of participants by activity is greater than the total across all activities because people engage in multiple outdoor activities.

Respondents were asked to report their participation within nine river basins and regions. Forty percent participated in at least one of the target activities within the Colorado River basin followed by 35% within the South Platte River Basin (excluding Metro Area) (Table 3). In terms of number of days, however, the Metro Area saw the most participation with 28% of all days spent recreating along the water.

**Table 3. Participation in outdoor activity by river basin.**

	Participants	Days
Arkansas River Basin	1,583,786	11,828,950
Colorado River Basin	2,722,032	18,240,168
Gunnison River Basin	974,253	4,437,206
Metro Area	1,948,907	21,954,639
North Platte River Basin	905,164	4,625,588
Rio Grande River Basin	623,502	2,317,320
South Platte River Basin (excluding Metro Area)	2,371,634	16,426,893
San Juan, Dolores, & San Miguel River Basins	543,969	3,481,787
Yampa, White, & Green River Basins	508,231	2,027,927

## Expenditures

Outdoor recreators make expenditures on a number of trip-related and equipment items. Trip-related items are similar across all types of activities and can include fuel, food, admission fees, and lodging. The types of equipment purchases are specific to the type of activity. Anglers purchase items such as rods, reels, lines and lures while hikers purchase items such as apparel, boots, and other accessories.

An estimated \$10.8 billion was spent on outdoor recreation within Colorado’s river basins. Just under a quarter of this was spent by trail sports participants, followed closely by campers and water sports participants (Table 4). A quarter of this spending was associated with outdoor recreation that occurred in the Colorado River basin, and 20% with outdoor recreation that occurred in the Metro Area (Table 5).

**Table 4. Statewide spending by activity.**

Activity	Spending (millions)
Bicycling or skateboarding	\$382.4
Camping	\$2,402.9
Fishing	\$734.4
Hunting & shooting	\$160.0
Picnicking or relaxing	\$728.4
Snow sports	\$1,254.4
Trail Sports	\$2,584.9
Water sports	\$2,138.9
Wildlife-watching	\$426.2
All Activities	\$10,812.5

**Table 5. Total spending by river basin/region (all selected activities)**

River Basin/Region	Spending (millions)
Arkansas River Basin	\$1,512.0
Colorado River Basin	\$2,683.4
Gunnison River Basin	\$861.1
Metro Area	\$2,125.4
North Platte River Basin	\$703.4
Rio Grande River Basin	\$366.2
South Platte River Basin (excluding Metro Area)	\$1,778.7
San Juan, Dolores, & San Miguel River Basins	\$475.3
Yampa, White, & Green River Basins	\$306.9
All Regions	\$10,812.5



## Economic Contributions

The direct spending made by outdoor recreators (Table 4) generates economic contributions within the state and local economy. It also continues to cycle through the economy generating additional rounds of spending by businesses who provide supporting services and goods to these outdoor recreators. The total economic contributions reflect the collective effect of the direct retail spending as well as the multiplier effect. The multiplier effect consists of additional rounds of spending which occurs as a result of the direct retail spending and includes two components; indirect and induced. The indirect effect results from spending made by those businesses where consumers spent money (e.g., an outdoor equipment retailer buying additional inventory). The induced effect results from spending made by employees of those businesses (e.g., a person buying groceries, clothing, etc., from income earned as a sales associate in an outdoor retailer).

Table 6 shows the economic contributions associated with retail spending by outdoor recreators. Five types of economic activity are measured:

- Output:** This measure reports the volume of economic activity within the local economy that is related to outdoor recreation. Because it does not discount the value of raw materials as they move through the production of goods or services, this measure double-counts a portion of the output of the industries in the value chain.
- GDP:** 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. Unlike the measure of output, this metric accounts for the flow of materials through the value chain to avoid the potential for double-counting.
- Jobs:** This figure reports the total jobs in all sectors of the economy as a result of the outdoor recreational activity and includes both full-time and part-time jobs. These are not just the employees directly serving recreators or manufacturing their goods but can also include employees of industries impacted by the direct, indirect and induced effects.
- Wages:** This figure reports the total salaries and wages paid in all sectors of the regional economy as a result of outdoor recreational activities. These are not just the paychecks of those employees directly serving recreators or manufacturing their goods, it also includes portions of the paychecks of all employees affected by the direct, indirect and induced effects. For example, it would include a portion of the dollars earned by the truck driver who delivers food to the restaurants serving recreators and the accountants who manage the books for companies down the supply chain, etc.
- Tax Revenue:** Including all forms of personal, business and excise taxes, the IMPLAN model estimates the tax revenues collected by the local, state and federal governments as a result of the initial expenditures by outdoor recreators.

Direct retail spending by residents and non-residents recreating along waterways in Colorado generates an estimated \$9.9 billion in economic output and contributes \$5.4 billion to the state’s GDP (Table 6).<sup>7</sup> It also supports close to 81,000 jobs that provide \$3.3 billion in household income and generate an estimated \$1.7 billion in tax revenues. Collectively, the retail spending by these recreationists and the related multiplier effects generate an estimated \$18.8 billion in economic output and contributes \$10.3 billion to the state’s GDP. Total contributions support over 131,000 jobs that provide \$6.3 billion in household income and generate an estimated \$2.7 billion in tax revenues.

**Table 6. Economic contributions of water-based outdoor recreation, by activity type.**

	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
<b>Direct contributions</b>						
Bicycling	\$340.9	\$185.3	2,894	\$113.1	\$26.1	\$32.0
Camping	\$2,159.0	\$1,184.9	17,897	\$725.1	\$167.6	\$200.6
Fishing	\$722.8	\$334.3	5,126	\$219.5	\$49.3	\$51.8
Hunting & shooting	\$154.2	\$80.3	1,709	\$53.3	\$11.4	\$9.5
Picnicking or relaxing	\$666.7	\$360.0	5,037	\$203.2	\$48.2	\$67.7
Snow sports	\$1,170.2	\$700.5	10,278	\$433.4	\$99.7	\$119.8
Trail Sports	\$2,322.3	\$1,304.7	19,565	\$784.2	\$182.4	\$226.9
Water sports	\$1,929.4	\$1,080.8	16,329	\$679.7	\$155.1	\$185.1
Wildlife-watching	\$423.8	\$173.9	2,108	\$111.9	\$24.4	\$21.2
<b>All Activities</b>	<b>\$9,889.2</b>	<b>\$5,404.6</b>	<b>80,943</b>	<b>\$3,323.4</b>	<b>\$764.2</b>	<b>\$914.6</b>
<b>Total contributions</b>						
Bicycling	\$654.1	\$356.1	4,664	\$216.5	\$48.1	\$46.9
Camping	\$4,122.4	\$2,256.1	29,016	\$1,372.5	\$305.0	\$294.0
Fishing	\$1,369.5	\$685.5	8,767	\$431.0	\$94.3	\$81.2
Hunting & shooting	\$293.6	\$156.3	2,508	\$98.9	\$21.1	\$15.9
Picnicking or relaxing	\$1,266.5	\$687.3	8,348	\$403.4	\$90.3	\$97.4
Snow sports	\$2,224.9	\$1,281.8	16,385	\$783.4	\$174.1	\$170.5
Trail Sports	\$4,428.1	\$2,458.5	31,501	\$1,483.1	\$330.6	\$328.8
Water sports	\$3,684.0	\$2,041.4	26,354	\$1,258.7	\$278.2	\$268.5
Wildlife-watching	\$785.6	\$368.8	4,132	\$228.6	\$49.3	\$37.0
<b>All Activities</b>	<b>\$18,828.8</b>	<b>\$10,291.9</b>	<b>131,676</b>	<b>\$6,276.2</b>	<b>\$1,391.0</b>	<b>\$1,340.1</b>

<sup>7</sup> In the strictest sense, the economic output linked to the direct effect does not always equate with spending because some of the dollars spent by recreationalists leak immediately beyond the state’s borders and do not have a direct effect on the economy. The difference between the estimated \$10.8 billion in retail spending associated with water-related outdoor recreation (Table 4) and the \$9.9 billion in total output (Table 6) reflects that leakage of funds.

## Regional (Basin) Results

### Arkansas River Basin

Trail sports were the most participated in activities in the Arkansas River basin with 36% of all outdoor recreationists. This was followed by camping (26%) and picnicking (21%). Camping accounted for the largest share of spending associated with these activities (26%) followed by trail sports (24%) and water sports (16%).

**Table 7. Participation in outdoor recreation on or along the water in the Arkansas River Basin and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	78,374	868,111 *	\$53.7 *
Camping	410,609	1,332,510	\$396.2
Fishing	269,153	1,948,485	\$161.1
Hunting & shooting	36,521	**	**
Picnicking or relaxing	329,645	1,643,954	\$91.0
Snow sports	147,711	**	**
Trail Sports	574,951	2,079,921	\$357.1
Water sports	229,419	1,667,887	\$238.0
Wildlife-watching	243,013	1,801,212	\$49.8
<b>All Activities</b>	<b>1,583,786</b>	<b>11,828,950</b>	<b>\$1,512.0</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 8. Direct economic contributions of outdoor recreations on or along the water in the Arkansas River Basin.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$47.9	\$26.0	407	\$15.9	\$3.7	\$4.5
Camping	\$356.0	\$195.4	2,951	\$119.6	\$27.6	\$33.1
Fishing	\$158.5	\$73.3	1,124	\$48.1	\$10.8	\$11.3
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$83.3	\$45.0	630	\$25.4	\$6.0	\$8.5
Snow sports	**	**	**	**	**	**
Trail Sports	\$320.8	\$180.2	2,703	\$108.3	\$25.2	\$31.3
Water sports	\$214.7	\$120.2	1,817	\$75.6	\$17.3	\$20.6
Wildlife-watching	\$49.5	\$20.3	246	\$13.1	\$2.9	\$2.5
<b>All Activities</b>	<b>\$1,380.7</b>	<b>\$754.6</b>	<b>11,301</b>	<b>\$464.0</b>	<b>\$106.7</b>	<b>\$127.7</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 9. Total economic contributions of outdoor recreations on or along the water in the Arkansas River Basin.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$91.9	\$50.0	655	\$30.4	\$6.8	\$6.6
Camping	\$679.7	\$372.0	4,784	\$226.3	\$50.3	\$48.5
Fishing	\$300.3	\$150.3	1,923	\$94.5	\$20.7	\$17.8
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$158.3	\$85.9	1,043	\$50.4	\$11.3	\$12.2
Snow sports	**	**	**	**	**	**
Trail Sports	\$611.7	\$339.6	4,351	\$204.9	\$45.7	\$45.4
Water sports	\$409.9	\$227.1	2,932	\$140.0	\$30.9	\$29.9
Wildlife-watching	\$91.8	\$43.1	483	\$26.7	\$5.8	\$4.3
<b>All Activities</b>	<b>\$2,628.8</b>	<b>\$1,436.9</b>	<b>18,384</b>	<b>\$876.3</b>	<b>\$194.2</b>	<b>\$187.1</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## Colorado River Basin

Trail sports was the most participated in activity in the Colorado river basin with 39% of all outdoor recreationists. This was followed by camping (25%) and snow sports (22%). Snow sports accounted for the greatest share of spending (23%) followed by water sports (21%) and camping (20%).

**Table 10. Participation in outdoor recreation on or along the water in the Colorado River Basin and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	259,672	1,413,280	\$87.5
Camping	692,749	1,795,671	\$533.9
Fishing	316,660	2,200,010	\$181.8
Hunting & shooting	171,373	510,410 *	\$58.8 *
Picnicking or relaxing	495,908	2,249,351	\$124.5
Snow sports	587,198	1,094,509	\$625.1
Trail Sports	1,057,468	2,531,429	\$434.6
Water sports	509,768	3,989,369	\$569.2
Wildlife-watching	416,941	2,456,140	\$68.0
<b>All Activities</b>	<b>2,722,032</b>	<b>18,240,168</b>	<b>\$2,683.4</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 11. Direct economic contributions of outdoor recreations on or along the water in the Colorado River Basin.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$78.0	\$42.4	662	\$25.9	\$6.0	\$7.3
Camping	\$479.7	\$263.3	3,976	\$161.1	\$37.2	\$44.6
Fishing	\$179.0	\$82.8	1,269	\$54.4	\$12.2	\$12.8
Hunting & shooting *	\$56.7	\$29.5	628	\$19.6	\$4.2	\$3.5
Picnicking or relaxing	\$114.0	\$61.5	861	\$34.7	\$8.2	\$11.6
Snow sports	\$583.2	\$349.1	5,122	\$216.0	\$49.7	\$59.7
Trail Sports	\$390.4	\$219.3	3,289	\$131.8	\$30.7	\$38.1
Water sports	\$513.4	\$287.6	4,345	\$180.9	\$41.3	\$49.3
Wildlife-watching	\$67.6	\$27.7	336	\$17.8	\$3.9	\$3.4
<b>All Activities</b>	<b>\$2,010.3</b>	<b>\$1,098.7</b>	<b>16,455</b>	<b>\$675.6</b>	<b>\$155.4</b>	<b>\$185.9</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 12. Total economic contributions of outdoor recreations on or along the water in the Colorado River Basin.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$149.6	\$81.4	1,067	\$49.5	\$11.0	\$10.7
Camping	\$916.0	\$501.3	6,447	\$305.0	\$67.8	\$65.3
Fishing	\$339.1	\$169.8	2,171	\$106.7	\$23.3	\$20.1
Hunting & shooting *	\$108.0	\$57.5	922	\$36.4	\$7.8	\$5.8
Picnicking or relaxing	\$216.6	\$117.5	1,427	\$69.0	\$15.4	\$16.7
Snow sports	\$1,108.8	\$638.8	8,166	\$390.4	\$86.8	\$85.0
Trail Sports	\$744.4	\$413.3	5,296	\$249.3	\$55.6	\$55.3
Water sports	\$980.3	\$543.2	7,013	\$334.9	\$74.0	\$71.5
Wildlife-watching	\$125.2	\$58.8	659	\$36.5	\$7.9	\$5.9
<b>All Activities</b>	<b>\$3,827.6</b>	<b>\$2,092.2</b>	<b>26,768</b>	<b>\$1,275.9</b>	<b>\$282.8</b>	<b>\$272.4</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## Gunnison River Basin

Trail sports was the most participated in activity in the Gunnison river basin with 34% of all outdoor recreationists. This was followed by camping (29%) and snow sports (22%). The sample size was too small to reliably estimate spending associated with snow sports, but camping accounted for 37% of spending and trail sports accounted for 14%.

**Table 13. Participation in outdoor recreation on or along the water in the Gunnison River Basin and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	25,217	**	**
Camping	283,836	1,081,470	\$321.5
Fishing	161,433	733,176	\$60.6
Hunting & shooting	40,520	**	**
Picnicking or relaxing	133,459	341,155	\$18.9
Snow sports	210,809	**	**
Trail Sports	331,928	677,750	\$116.4
Water sports	89,131	391,790 *	\$55.9 *
Wildlife-watching	164,161	665,967	\$18.4
<b>All Activities</b>	<b>974,253</b>	<b>4,437,206</b>	<b>\$861.1</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 14. Direct economic contributions of outdoor recreations on or along the water in the Gunnison River Basin.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping	\$288.9	\$158.6	2,395	\$97.0	\$22.4	\$26.8
Fishing	\$59.6	\$27.6	423	\$18.1	\$4.1	\$4.3
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$17.3	\$9.3	131	\$5.3	\$1.2	\$1.8
Snow sports	**	**	**	**	**	**
Trail Sports	\$104.5	\$58.7	881	\$35.3	\$8.2	\$10.2
Water sports *	\$50.4	\$28.2	427	\$17.8	\$4.1	\$4.8
Wildlife-watching	\$18.3	\$7.5	91	\$4.8	\$1.1	\$0.9
<b>All Activities</b>	<b>\$461.9</b>	<b>\$252.4</b>	<b>3,780</b>	<b>\$155.2</b>	<b>\$35.7</b>	<b>\$42.7</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 15. Total economic contributions of outdoor recreations on or along the water in the Gunnison River Basin.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping	\$551.6	\$301.9	3,883	\$183.7	\$40.8	\$39.3
Fishing	\$113.0	\$56.6	723	\$35.6	\$7.8	\$6.7
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$32.8	\$17.8	216	\$10.5	\$2.3	\$2.5
Snow sports	**	**	**	**	**	**
Trail Sports	\$199.3	\$110.7	1,418	\$66.8	\$14.9	\$14.8
Water sports *	\$96.3	\$53.3	689	\$32.9	\$7.3	\$7.0
Wildlife-watching	\$34.0	\$15.9	179	\$9.9	\$2.1	\$1.6
<b>All Activities</b>	<b>\$879.4</b>	<b>\$480.7</b>	<b>6,150</b>	<b>\$293.1</b>	<b>\$65.0</b>	<b>\$62.6</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## Metro Area

Trail sports was the most participated in activity in the Metro Area with 41% of all outdoor recreationists. This was followed by picnicking (20%) and wildlife watching (17%). Trail sports accounted for the greatest share of spending (41%) followed by water sports (25%) and picnicking (14%).

**Table 16. Participation in outdoor recreation on or along waterways in the Metro Area and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	291,706	1,631,756	\$101.0
Camping	174,575	333,404	\$99.1
Fishing	151,102	894,129	\$73.9
Hunting & shooting	6,438	**	**
Picnicking or relaxing	394,076	5,235,552	\$289.9
Snow sports	34,667	**	**
Trail Sports	790,235	5,069,166	\$870.2
Water sports	311,166	3,652,012	\$521.0
Wildlife-watching	331,056	5,087,028	\$140.7
<b>All Activities</b>	<b>1,948,907</b>	<b>21,954,639</b>	<b>\$2,125.4</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).



**Table 17. Direct economic contributions of outdoor recreations on or along waterways in the Metro Area.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$90.0	\$48.9	764	\$29.9	\$6.9	\$8.4
Camping	\$89.1	\$48.9	738	\$29.9	\$6.9	\$8.3
Fishing	\$72.7	\$33.6	516	\$22.1	\$5.0	\$5.2
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$265.3	\$143.3	2,005	\$80.9	\$19.2	\$26.9
Snow sports	**	**	**	**	**	**
Trail Sports	\$781.8	\$439.2	6,587	\$264.0	\$61.4	\$76.4
Water sports	\$470.0	\$263.3	3,978	\$165.6	\$37.8	\$45.1
Wildlife-watching	\$139.9	\$57.4	696	\$36.9	\$8.1	\$7.0
<b>All Activities</b>	<b>\$2,726.3</b>	<b>\$1,489.9</b>	<b>22,315</b>	<b>\$916.2</b>	<b>\$210.7</b>	<b>\$252.1</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 18. Total economic contributions of outdoor recreations on or along waterways in the Metro Area.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$172.7	\$94.0	1,231	\$57.2	\$12.7	\$12.4
Camping	\$170.1	\$93.1	1,197	\$56.6	\$12.6	\$12.1
Fishing	\$137.8	\$69.0	882	\$43.4	\$9.5	\$8.2
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$504.1	\$273.5	3,322	\$160.6	\$35.9	\$38.8
Snow sports	**	**	**	**	**	**
Trail Sports	\$1,490.8	\$827.7	10,605	\$499.3	\$111.3	\$110.7
Water sports	\$897.4	\$497.3	6,420	\$306.6	\$67.8	\$65.4
Wildlife-watching	\$259.4	\$121.8	1,364	\$75.5	\$16.3	\$12.2
<b>All Activities</b>	<b>\$5,190.7</b>	<b>\$2,837.3</b>	<b>36,300</b>	<b>\$1,730.2</b>	<b>\$383.5</b>	<b>\$369.4</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## North Platte River Basin

Trail sports was the most participated in activity in the North Platte river basin with 42% of all outdoor recreationists. This was followed by camping (18%) and picnicking (17%). Camping accounted for the greatest share of spending (33%) followed by trail sports (21%) and water sports (18%).

**Table 19. Participation in outdoor recreation on or along the water in the North Platte River Basin and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	71,302	152,009 *	\$9.4 *
Camping	164,803	787,689 *	\$234.2 *
Fishing	116,021	348,805 *	\$28.8 *
Hunting & shooting	26,277	**	**
Picnicking or relaxing	154,299	569,981	\$31.6
Snow sports	73,314	**	**
Trail Sports	381,732	877,360	\$150.6
Water sports	123,519	864,101 *	\$123.3 *
Wildlife-watching	132,872	826,123	\$22.9
<b>All Activities</b>	<b>905,164</b>	<b>4,625,588</b>	<b>\$703.4</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 20. Direct economic contributions of outdoor recreations on or along the water in the North Platte River Basin.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling *	\$8.4	\$4.6	71	\$2.8	\$0.6	\$0.8
Camping *	\$210.4	\$115.5	1,744	\$70.7	\$16.3	\$19.6
Fishing *	\$28.4	\$13.1	201	\$8.6	\$1.9	\$2.0
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$28.9	\$15.6	218	\$8.8	\$2.1	\$2.9
Snow sports	**	**	**	**	**	**
Trail Sports	\$135.3	\$76.0	1,140	\$45.7	\$10.6	\$13.2
Water sports *	\$111.2	\$62.3	941	\$39.2	\$8.9	\$10.7
Wildlife-watching	\$22.7	\$9.3	113	\$6.0	\$1.3	\$1.1
<b>All Activities</b>	<b>\$508.6</b>	<b>\$277.9</b>	<b>4,163</b>	<b>\$170.9</b>	<b>\$39.3</b>	<b>\$47.0</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 21. Total economic contributions of outdoor recreations on or along the water in the North Platte River Basin.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling *	\$16.1	\$8.8	115	\$5.3	\$1.2	\$1.2
Camping *	\$401.8	\$219.9	2,828	\$133.8	\$29.7	\$28.7
Fishing *	\$53.8	\$26.9	344	\$16.9	\$3.7	\$3.2
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$54.9	\$29.8	362	\$17.5	\$3.9	\$4.2
Snow sports	**	**	**	**	**	**
Trail Sports	\$258.0	\$143.3	1,836	\$86.4	\$19.3	\$19.2
Water sports *	\$212.3	\$117.7	1,519	\$72.5	\$16.0	\$15.5
Wildlife-watching	\$42.1	\$19.8	222	\$12.3	\$2.6	\$2.0
<b>All Activities</b>	<b>\$968.3</b>	<b>\$529.3</b>	<b>6,772</b>	<b>\$322.8</b>	<b>\$71.5</b>	<b>\$68.9</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

### Rio Grande River Basin

Trail sports was the most participated in activity in the Rio Grande river basin with 39% of all outdoor recreationists. This was followed by camping (33%) and water sports (21%). Camping accounted for the greatest share of spending (45%) followed by water sports (23%) and trail sports (16%). Sample sizes were too small to reliably estimates spending for bicycling, fishing, hunting, or snow sports.

**Table 22. Participation in outdoor recreation on or along the water in the Rio Grande Basin and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	28,883	**	**
Camping	208,806	555,241 *	\$165.1 *
Fishing	63,686	**	**
Hunting & shooting	29,163	**	**
Picnicking or relaxing	100,691	266,942 *	\$14.8 *
Snow sports	35,868	**	**
Trail Sports	246,154	332,308 *	\$57.0 *
Water sports	133,492	587,884 *	\$83.9 *
Wildlife-watching	84,493	397,358 *	\$11.0 *
<b>All Activities</b>	<b>623,502</b>	<b>2,317,320</b>	<b>\$366.2</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 23. Total economic contributions of outdoor recreations on or along the water in the Rio Grande River Basin.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$148.3	\$81.4	1,230	\$49.8	\$11.5	\$13.8
Fishing	**	**	**	**	**	**
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$13.5	\$7.3	102	\$4.1	\$1.0	\$1.4
Snow sports	**	**	**	**	**	**
Trail Sports *	\$51.3	\$28.8	432	\$17.3	\$4.0	\$5.0
Water sports *	\$75.7	\$42.4	640	\$26.7	\$6.1	\$7.3
Wildlife-watching *	\$10.9	\$4.5	54	\$2.9	\$0.6	\$0.5
<b>All Activities</b>	<b>\$250.3</b>	<b>\$136.8</b>	<b>2,048</b>	<b>\$84.1</b>	<b>\$19.3</b>	<b>\$23.1</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 24. Total economic contributions of outdoor recreations on or along the water in the Rio Grande River Basin.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$283.2	\$155.0	1,993	\$94.3	\$21.0	\$20.2
Fishing	**	**	**	**	**	**
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$25.7	\$13.9	169	\$8.2	\$1.8	\$2.0
Snow sports	**	**	**	**	**	**
Trail Sports *	\$97.7	\$54.3	695	\$32.7	\$7.3	\$7.3
Water sports *	\$144.5	\$80.1	1,033	\$49.4	\$10.9	\$10.5
Wildlife-watching *	\$20.3	\$9.5	107	\$5.9	\$1.3	\$1.0
<b>All Activities</b>	<b>\$476.5</b>	<b>\$260.4</b>	<b>3,332</b>	<b>\$158.8</b>	<b>\$35.2</b>	<b>\$33.9</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## South Platte River Basin (excluding Metro Area)

Trail sports was the most participated in activity in the South Platte River Basin (excluding Metro Area) with 37% of all outdoor recreationists. This was followed by picnicking (22%) and camping (19%). Trail sports accounted for the greatest share of spending (28%) followed by camping (24%) and water sports (19%).

**Table 25. Participation in outdoor recreation on or along the water in the South Platte River Basin (excluding Metro Area) and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	279,793	1,845,126	\$114.2
Camping	459,148	1,431,941	\$425.7
Fishing	300,235	1,925,313	\$159.1
Hunting & shooting	58,217	**	**
Picnicking or relaxing	520,785	2,276,896	\$126.1
Snow sports	117,136	**	**
Trail Sports	880,447	2,913,627	\$500.2
Water sports	243,164	2,352,799	\$335.7
Wildlife-watching	413,609	3,499,655	\$96.8
<b>All Activities</b>	<b>2,371,634</b>	<b>16,426,893</b>	<b>\$1,778.7</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 26. Direct economic contributions of outdoor recreations on or along the water in the South Platte River Basin (excluding Metro Area).**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$101.8	\$55.3	864	\$33.8	\$7.8	\$9.5
Camping	\$382.5	\$209.9	3,171	\$128.5	\$29.7	\$35.5
Fishing	\$156.6	\$72.4	1,111	\$47.6	\$10.7	\$11.2
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$115.4	\$62.3	872	\$35.2	\$8.3	\$11.7
Snow sports	**	**	**	**	**	**
Trail Sports	\$449.4	\$252.5	3,786	\$151.8	\$35.3	\$43.9
Water sports	\$302.8	\$169.6	2,563	\$106.7	\$24.3	\$29.1
Wildlife-watching	\$96.3	\$39.5	479	\$25.4	\$5.5	\$4.8
<b>All Activities</b>	<b>\$1,954.7</b>	<b>\$1,068.3</b>	<b>15,999</b>	<b>\$656.9</b>	<b>\$151.1</b>	<b>\$180.8</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 27. Total economic contributions of outdoor recreations on or along the water in the South Platte River Basin (excluding Metro Area).**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	\$195.3	\$106.3	1,393	\$64.7	\$14.4	\$14.0
Camping	\$730.4	\$399.7	5,141	\$243.2	\$54.0	\$52.1
Fishing	\$296.8	\$148.6	1,900	\$93.4	\$20.4	\$17.6
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing	\$219.2	\$119.0	1,445	\$69.8	\$15.6	\$16.9
Snow sports	**	**	**	**	**	**
Trail Sports	\$856.8	\$475.7	6,096	\$287.0	\$64.0	\$63.6
Water sports	\$578.2	\$320.4	4,136	\$197.5	\$43.7	\$42.1
Wildlife-watching	\$178.5	\$83.8	939	\$51.9	\$11.2	\$8.4
<b>All Activities</b>	<b>\$3,721.6</b>	<b>\$2,034.3</b>	<b>26,026</b>	<b>\$1,240.5</b>	<b>\$274.9</b>	<b>\$264.9</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

### San Juan, Dolores, & San Miguel River Basins

Trail sports was the most participated in activity in the San Juan, Dolores, & San Miguel river basins with 39% of all outdoor recreationists. This was followed by camping (27%) and picnicking (17%). Water sports accounted for the greatest share of spending (34%) followed by camping (21%) and trail sports (18%).

**Table 28. Participation in outdoor recreation on or along the water in the Dolores, San Miguel, & San Juan River Basins and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	44,738	**	**
Camping	145,781	351,107 *	\$104.4 *
Fishing	51,158	382,511 *	\$31.6 *
Hunting & shooting	17,151	**	**
Picnicking or relaxing	92,552	409,606 *	\$22.7 *
Snow sports	92,163	**	**
Trail Sports	211,848	494,735 *	\$84.9 *
Water sports	91,130	1,125,077 *	\$160.5 *
Wildlife-watching	73,945	467,175 *	\$12.9 *
<b>All Activities</b>	<b>543,969</b>	<b>3,481,787</b>	<b>\$475.3</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 29. Direct economic contributions of outdoor recreations on or along the water in the Dolores, San Miguel, & San Juan River Basins.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$93.8	\$51.5	778	\$31.5	\$7.3	\$8.7
Fishing *	\$31.1	\$14.4	221	\$9.5	\$2.1	\$2.2
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$20.8	\$11.2	157	\$6.3	\$1.5	\$2.1
Snow sports	**	**	**	**	**	**
Trail Sports *	\$76.3	\$42.9	643	\$25.8	\$6.0	\$7.5
Water sports *	\$144.8	\$81.1	1,225	\$51.0	\$11.6	\$13.9
Wildlife-watching *	\$12.9	\$5.3	64	\$3.4	\$0.7	\$0.6
<b>All Activities</b>	<b>\$373.5</b>	<b>\$204.1</b>	<b>3,057</b>	<b>\$125.5</b>	<b>\$28.9</b>	<b>\$34.5</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 30. Total economic contributions of outdoor recreations on or along the water in the Dolores, San Miguel, & San Juan River Basins.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$179.1	\$98.0	1,261	\$59.6	\$13.3	\$12.8
Fishing *	\$59.0	\$29.5	377	\$18.6	\$4.1	\$3.5
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$39.4	\$21.4	260	\$12.6	\$2.8	\$3.0
Snow sports	**	**	**	**	**	**
Trail Sports *	\$145.5	\$80.8	1,035	\$48.7	\$10.9	\$10.8
Water sports *	\$276.5	\$153.2	1,978	\$94.5	\$20.9	\$20.2
Wildlife-watching *	\$23.8	\$11.2	125	\$6.9	\$1.5	\$1.1
<b>All Activities</b>	<b>\$711.2</b>	<b>\$388.7</b>	<b>4,973</b>	<b>\$237.1</b>	<b>\$52.5</b>	<b>\$50.6</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## Yampa, White, and Green River Basins

Camping was the most participated in activity in the Yampa-White river basin with 29% of all outdoor recreationists. This was followed by water sports (21%) and trail sports (20%). Camping accounted for the greatest share of spending (40%) followed by water sports (17%) and fishing (12%).

**Table 31. Participation in outdoor recreation on or along the water in the Yampa, White, and Green River Basins and associated spending.**

	Participants	Days	Spending (millions)
Bicycling	19,802	**	**
Camping	146,681	412,738 *	\$122.7 *
Fishing	72,844	452,429 *	\$37.4 *
Hunting & shooting	32,966	**	**
Picnicking or relaxing	82,179	161,544 *	\$8.9 *
Snow sports	30,231	**	**
Trail Sports	104,119	80,872 *	\$13.9 *
Water sports	107,880	360,857 *	\$51.5 *
Wildlife-watching	72,738	205,441 *	\$5.7 *
<b>All Activities</b>	<b>508,231</b>	<b>2,027,927</b>	<b>\$306.9</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

**Table 32. Direct economic contributions of outdoor recreations on or along the water in the Yampa, White, and Green River Basins.**

Direct contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$110.3	\$60.5	914	\$37.0	\$8.6	\$10.2
Fishing *	\$36.8	\$17.0	261	\$11.2	\$2.5	\$2.6
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$8.2	\$4.4	62	\$2.5	\$0.6	\$0.8
Snow sports	**	**	**	**	**	**
Trail Sports *	\$12.5	\$7.0	105	\$4.2	\$1.0	\$1.2
Water sports *	\$46.4	\$26.0	393	\$16.4	\$3.7	\$4.5
Wildlife-watching *	\$5.7	\$2.3	28	\$1.5	\$0.3	\$0.3
<b>All Activities</b>	<b>\$223.0</b>	<b>\$121.9</b>	<b>1,826</b>	<b>\$75.0</b>	<b>\$17.2</b>	<b>\$20.6</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).



**Table 33. Total economic contributions of outdoor recreations on or along the water in the Yampa, White, and Green River Basins.**

Total contributions	Output (millions)	GDP (millions)	Jobs	Wages (millions)	Tax Revenues (millions)	
					Federal	State/Local
Bicycling	**	**	**	**	**	**
Camping *	\$210.5	\$115.2	1,482	\$70.1	\$15.6	\$15.0
Fishing *	\$69.7	\$34.9	446	\$21.9	\$4.8	\$4.1
Hunting & shooting	**	**	**	**	**	**
Picnicking or relaxing *	\$15.6	\$8.4	103	\$5.0	\$1.1	\$1.2
Snow sports	**	**	**	**	**	**
Trail Sports *	\$23.8	\$13.2	169	\$8.0	\$1.8	\$1.8
Water sports *	\$88.7	\$49.1	634	\$30.3	\$6.7	\$6.5
Wildlife-watching *	\$10.5	\$4.9	55	\$3.0	\$0.7	\$0.5
<b>All Activities</b>	<b>\$424.7</b>	<b>\$232.1</b>	<b>2,970</b>	<b>\$141.6</b>	<b>\$31.4</b>	<b>\$30.2</b>

\* Small sample size (N<30). Use with caution.

\*\* Sample size too small to report reliable estimates (N<10).

## Discussion

Recreating on or along the water in Colorado is an integral part of the outdoor opportunities enjoyed by the state’s residents and visitors. This study presents economic contributions based on estimated retail spending in Colorado attributable to time on or along the water spent engaging in a set of nine target activities. The total economic contributions associated with that spending supports 131,000 jobs that provide \$6.3 billion in household income and generate \$2.7 billion in tax revenues.

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## Appendix A – Definitions for Economic Contributions

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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 affected 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.

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 outdoor-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.

### **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 B – Estimation Profiles

**Table B1. Estimation Profiles for Participation**

	svyRate	avgDays	waterRate	waterShare	resPct	resDayPct
Bicycling	30.4%	30.4	53.0%	32.6%	61.5%	89.8%
Camping	37.5%	8.3	74.7%	67.1%	49.1%	66.8%
Fishing	25.8%	9.0	98.5%	100.0%	77.2%	88.8%
Hunting & shooting	13.8%	7.7	42.0%	63.7%	55.4%	71.1%
Picnicking or relaxing	69.5%	13.6	74.5%	53.9%	N/A	N/A
Snow sports	24.7%	9.0	30.5%	48.6%	23.7%	52.2%
Trail Sports	36.1%	24.6	74.6%	43.3%	34.0%	66.2%
Water sports	30.1%	10.2	88.6%	100.0%	56.5%	62.7%
Wildlife-watching	38.6%	20.7	78.7%	55.5%	85.2%	78.6%
All Activities	100.0%	N/A	80.2%	N/A	N/A	N/A

**Table B2. Basin Rate by Activity**

	arkansas	colorado	gunnison	metro	n platte	rio	s platte	southwes	yampa
Bicycling	8.6%	28.6%	2.8%	32.1%	7.8%	3.2%	30.8%	4.9%	2.2%
Camping	20.7%	35.0%	14.3%	8.8%	8.3%	10.5%	23.2%	7.4%	7.4%
Fishing	23.6%	27.7%	14.1%	13.2%	10.2%	5.6%	26.3%	4.5%	6.4%
Hunting & shooting	10.1%	47.2%	11.2%	1.8%	7.2%	8.0%	16.0%	4.7%	9.1%
Picnicking or relaxing	18.4%	27.6%	7.4%	22.0%	8.6%	5.6%	29.0%	5.2%	4.6%
Snow sports	13.4%	53.3%	19.1%	3.1%	6.7%	3.3%	10.6%	8.4%	2.7%
Trail Sports	20.9%	38.5%	12.1%	28.7%	13.9%	9.0%	32.0%	7.7%	3.8%
Water sports	14.0%	31.1%	5.4%	19.0%	7.5%	8.1%	14.8%	5.6%	6.6%
Wildlife-watching	19.6%	33.7%	13.3%	26.7%	10.7%	6.8%	33.4%	6.0%	5.9%
All Activities	23.5%	40.4%	14.5%	28.9%	13.4%	9.3%	35.2%	8.1%	7.5%

**Table B3. Day Share: Activity by Basin**

	arkansas	colorado	gunnison	metro	n platte	rio	s platte	southwes	yampa
Bicycling	14.0%	22.9%	0.0%	26.4%	2.5%	0.5%	29.9%	2.5%	1.4%
Camping	16.5%	22.2%	13.4%	4.1%	9.7%	6.9%	17.7%	4.3%	5.1%
Fishing	21.9%	24.8%	8.3%	10.1%	3.9%	0.0%	21.7%	4.3%	5.1%
Hunting & shooting	17.8%	36.8%	6.7%	0.0%	1.8%	8.1%	13.1%	1.2%	14.5%
Picnicking or relaxing	12.5%	17.1%	2.6%	39.8%	4.3%	2.0%	17.3%	3.1%	1.2%
Snow sports	10.9%	49.8%	20.6%	2.3%	8.0%	1.6%	0.0%	3.7%	3.1%
Trail Sports	13.8%	16.8%	4.5%	33.7%	5.8%	2.2%	19.4%	3.3%	0.5%
Water sports	11.1%	26.6%	2.6%	24.4%	5.8%	3.9%	15.7%	7.5%	2.4%
Wildlife-watching	11.7%	15.9%	4.3%	33.0%	5.4%	2.6%	22.7%	3.0%	1.3%
All Activities	14.0%	20.3%	4.7%	27.6%	5.1%	2.5%	19.8%	3.8%	2.3%

## Appendix C – Survey Questionnaire

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### Participation

1) Did you participate in any of the following activities in Colorado between December 1, 2018 and November 30, 2019? Check all that apply:

- Trail Sports (running 3+ miles on paved/unpaved trail, day-hiking, backpacking, climbing ice or rock, mountaineering, horseback riding)
- Bicycling or skateboarding (on paved road or off-road)
- Camping (RV at campsite, tent campsite, or at a rustic lodge)
- Picnicking or relaxing
- Water sports (swimming, canoeing, kayaking, rafting, paddle-boarding, sailing, recreating with motorized boat)
- Snow sports (skiing cross-country/downhill/telemark, snowboarding, snowshoeing)
- Hunting & shooting (shotgun, rifle, or bow)
- Fishing (recreational fly and non-fly)
- Wildlife-watching (viewing, feeding, or photographing animals, bird watching)
- Team competitive sports (softball/baseball, volleyball, soccer, ultimate frisbee)
- Off-roading with ATVs, 4x4 trucks
- Individual competitive sports (golf, tennis)
- Motorcycling (on-road, off-road)
- Playground activities
- I didn't participate in any of these activities

### Days of Participation

Approximately how many total days did you participate in each of these activities in Colorado from December 1, 2018 and November 30, 2019? Please count only those days when the selected activity was the primary reason of your outing. If none of your outings were primarily for the selected activity, please enter 0.

Trail Sports (running 3+ miles on paved/unpaved trail, day-hiking, backpacking, climbing ice or rock, mountaineering, horseback riding)

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Bicycling or skateboarding (on paved road or off-road)

---

Camping (RV at campsite, tent campsite, or at a rustic lodge)

---

Picnicking or relaxing

---

Water sports (swimming, canoeing, kayaking, rafting, paddle-boarding, sailing, recreating with motorized boat)

---

Snow sports (skiing cross-country/downhill/telemark, snowboarding, snowshoeing)

---

Hunting & shooting (shotgun, rifle, or bow)

---

Fishing (recreational fly and non-fly)

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Wildlife-watching (viewing, feeding, or photographing animals, bird watching)

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### Participation on or along Bodies of Water

2) Did you participate in any of these activities on or along a body of water (e.g. river, lake, reservoir, or stream) in Colorado over the twelve months from December 1, 2018 and November 30, 2019? Please only count those days where the selected activity was your primary reason for being on the water. Note: By “on or along a body of water” we mean any place where water was in view or nearby at some point during your recreational activity .

	Yes	No	Not Sure
Trail Sports (running 3+ miles on paved/unpaved trail, day-hiking, backpacking, climbing ice or rock, mountaineering, horseback riding)	( )	( )	( )
Bicycling or skateboarding (on paved road or off-road)	( )	( )	( )
Camping (RV at campsite, tent campsite, or at a rustic lodge)	( )	( )	( )
Picnicking or relaxing	( )	( )	( )
Snow sports (skiing cross-country/downhill/telemark, snowboarding, snowshoeing)	( )	( )	( )
Hunting & shooting (shotgun, rifle, or bow)	( )	( )	( )
Wildlife-watching (viewing, feeding, or photographing animals, bird watching)	( )	( )	( )



## Days of Participation on or along Bodies of Water

Approximately how many total days did you participate on or along the water in each of these activities in Colorado over the twelve months from December 1, 2018 and November 30, 2019? Please count only those days when the selected activity was the primary reason of your outing. If none of your outings were primarily for the selected activity, please enter 0.

You participated in [ACTIVITY] for [REPORTED TOTAL] days. How many were on or along the water?

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## River Basins for Activities on or along Bodies of Water

The next few questions help us learn more about the river you visited. You can open more detailed regional maps (referencing major cities, roadways, and water bodies) by checking the box beside a region list below to refresh your memory. To hide the detailed regional maps, uncheck the box.

- Northeast (South Platte River Basin and Metro Region)
- Northwest (Yampa, White, & Green River Basin; North Platte River Basin; Colorado River Basin)
- Southeast (Arkansas River Basin)
- Southwest (Dolores, San Miguel, & San Juan River Basin; Gunnison River Basin; Rio Grande River Basin)

Using the map(s) above, please indicate the River Basin regions in which you participated in the following activities on or along a body of water from December 1, 2018 to November 30, 2019. Check all that apply:

[ACTIVITY]

- Arkansas River Basin
- Colorado River Basin
- Gunnison River Basin
- Metro Area
- North Platte River Basin
- Rio Grande River Basin
- South Platte River Basin (excluding Metro Area)
- Southwest River Basin
- Yampa-White River Basin
- I did not engage in trail sports on or along the water during this time period

## Days by Basin for Activities on or along Bodies of Water

Of the [REPORTED WATER-SPECIFIC] days you participated in [ACTIVITY] activities on or along the water, how many were spent in each basin? Please count only those days when [ACTIVITY] were the primary reason of your outing. If none of your outings were primarily for [ACTIVITY], please enter 0.

## Demographics

This information is for statistical purposes only and will NEVER be shown or shared with anyone for any reason.

4) What is your age?\*

- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 or older

5) What is your gender?\*

- Male
- Female

6) What is your household income?\*

- Less than \$25,000
- \$25,000 to \$34,999
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$124,999
- \$125,000 to \$149,999
- \$150,000 or more

7) Please select the choice that best describes your race?\*

- Asian
- Native Hawaiian or Other Pacific Islander
- Black/African-American
- White
- American Indian/Alaska Native
- Other: \_\_\_\_\_\*

8) Are you of Hispanic, Latino, or Spanish origin?\*

- Yes
- No

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Thank You!

Thank you for taking our survey. Your response is very important to us.