

# Economic Contribution of Off-Highway Vehicle Recreation in Colorado

2014-2015 Season

A joint cooperation report





## **Executive Summary**

Colorado offers unique opportunities for motorized recreation throughout much of the state. As such, the sport and industry of motorized recreation has increased in popularity in Colorado, both for residents and non-residents. Pinyon Environmental Inc. evaluated the economic contribution of motorized recreation throughout Colorado for the 2014–2015 season.

### ***Households that Participate in Motorized Recreation***

Colorado Parks and Wildlife reported that over 170,000 off-highway vehicle (OHV) registrations and use permits were issued in Colorado during the 2014–2015 season. The registration and use permit data was used to estimate the number of Colorado resident and non-resident households participating in motorized recreation in 2014–2015. For the purposes of this study, motorized recreation was categorized into three vehicle types: OHVs; four-wheel drive vehicles (4WDs); and snowmobiles. OHVs include all-terrain vehicles (ATVs), utility task vehicles (UTVs), dirt bikes, side-by-sides, and other multi-wheeled vehicles. The 4WD category consists of trucks, pickups, jeeps, and sport-utility vehicles (SUVs). An estimated 8.6 percent of residential households in Colorado participated in motorized recreation in Colorado for the 2014–2015 season.<sup>1</sup> Roughly 30,000 non-resident households participate in OHV recreation in Colorado.

Between 2000 and 2014, OHV registrations for residents increased by 219 percent while OHV permits for non-residents increased by over 1,607 percent. While most of the growth occurred before the Great Recession, registrations did not decline significantly due to economic conditions. Snowmobile registrations for residents fluctuated between 2000 and 2014, with a high of 34,262 in 2003 and a low of 28,023 in 2013. However, snowmobile permits for non-residents have increased from 2003 to 2014 by 493 percent

### ***Expenditures Associated with Motorized Recreation***

During the 2014–2015 season, motorized recreational enthusiasts<sup>2</sup> spent an estimated \$1.6 billion while taking trips using motorized vehicles for recreational purposes. More than 92 percent of these expenditures occurred during the summer recreational season. In addition to spending money on trips, households that participate in motorized recreation also spend money on maintenance, repairs, accessories, vehicle storage, and miscellaneous items associated with their vehicles. Motorized recreational enthusiasts spent more than an estimated \$724 million annually on various items to support and enhance their experiences in Colorado, including \$163 million in new vehicle purchases. In total, motorized recreational enthusiasts were responsible for \$2.3 billion in direct expenditures related to motorized recreation in Colorado during the 2014–2015 season.

### ***Total Economic Contribution Associated with Motorized Recreation in Colorado***

OHV enthusiasts were estimated to generate \$914 million in direct sales, an additional \$882 million in indirect and induced sales, for a total of \$1.8 billion in total sales. Motorized recreation in Colorado is directly or indirectly responsible for almost 17,000 jobs and \$671 million in labor income. The economic contribution is distributed by OHVs (ATVs, UTVs, and dual sport/dirt bikes), snowmobiles, and 4WDs. OHV

## Table of Contents

1. Introduction.....	1
2. Approach.....	2
2.1 Motorized Recreation Survey.....	2
2.2 Estimating Economic Contribution .....	4
2.3 Trip and Annual Maintenance Expenditures .....	7
2.4 Estimate New Vehicle Sales .....	10
3. Economic Contribution of Off-Highway Vehicle Recreation in Colorado.....	11
3.1 IMPLAN® Pro Approach.....	12
3.2 Direct Expenditures in Colorado.....	12
3.3 Multiplier Effects in Colorado.....	13
3.4 Total Economic Contribution in Colorado.....	14
4. Regional Analysis of Off-Highway Vehicle Recreation in Colorado.....	15
5. Study Limitations .....	21

## Tables

Table 2-1. Estimated Survey Sample Sizes .....	3
Table 2-2. Number of Resident and Non-Resident Households Participating in Motorized Recreation in Colorado in 2014–2015.....	7
Table 2-3. Number of Trips for Resident and Non-Resident Households .....	8
Table 2-4. Total Trip Expenditures 2014–2015 Season.....	9
Table 2-5. Annual Expenditures by Vehicle Type for 2014–2015 Season .....	10
Table 3-1. Expenditures Categories Mapped to IMPLAN® Pro Sectors.....	12
Table 3-2. Total Direct Economic Contributions of Off-Highway Vehicle Recreation in Colorado.....	13

Table 4-2. Trip Percentages by Region for Residents.....	16
Table 4-3. Trip Percentages by Region for Non-Residents.....	17
Table 4-4. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2014–2015: Summer and Winter.....	18
Table 4-5. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2014–2015: Winter.....	19
Table 4-6. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2014–2015: Summer.....	20

## Figures

Figure 2-1. Recreational Off-Highway Vehicle Registrations and Permits in Colorado.....	5
Figure 2-2. Recreational Snowmobile Registrations and Permits in Colorado.....	5
Figure 2-3. Trips Taken by Resident and Non-Resident Households in Colorado during the 2014– 2015 Season.....	8
Figure 4-1. Regional Study Areas.....	15

## Appendices

Appendix A: Summary Data.....	22
Appendix B: Literature Review.....	28

# News Release

EMBARGOED UNTIL RELEASE AT 8:30 A.M. EST, WEDNESDAY, FEBRUARY 14, 2018

BEA 18-07

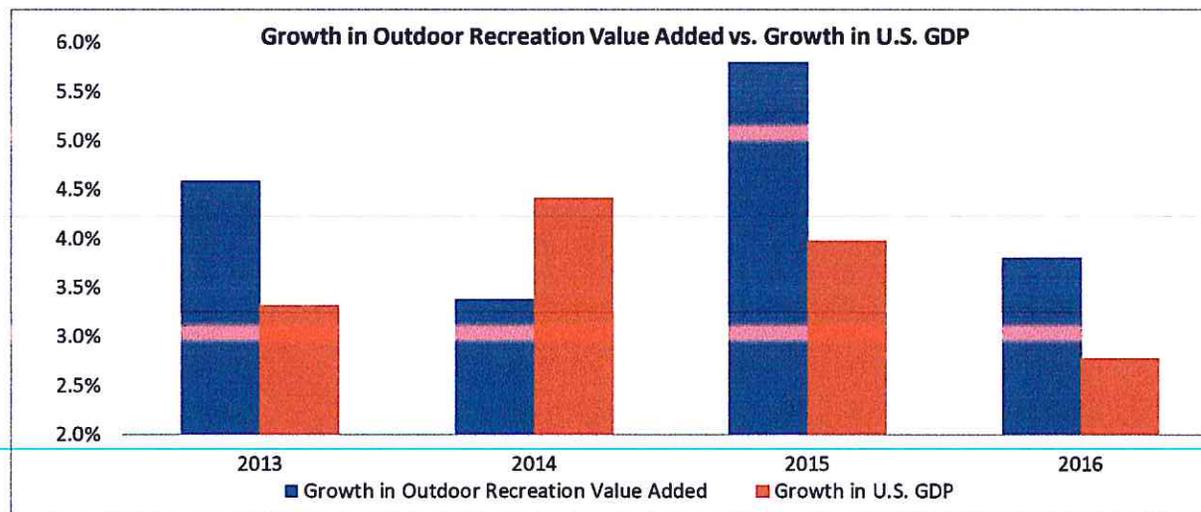
Technical: Tina Highfill (301) 278-9266 [OutdoorRecreation@bea.gov](mailto:OutdoorRecreation@bea.gov)  
Tom Howells (301) 278-9586  
Media: Jeannine Aversa (301) 278-9003 [Jeannine.Aversa@bea.gov](mailto:Jeannine.Aversa@bea.gov)

## Outdoor Recreation Satellite Account: Prototype Statistics for 2012-2016

*Outdoor recreation accounts for 2.0 percent of GDP in 2016*

Prototype statistics from the Outdoor Recreation Satellite Account (ORSA) released today by the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) show that the outdoor recreation economy accounted for 2.0 percent (\$373.7 billion) of current-dollar GDP in 2016 (table 1). In addition, the outdoor recreation economy grew 3.8 percent in 2016, compared to growth of 2.8 percent in the overall economy.

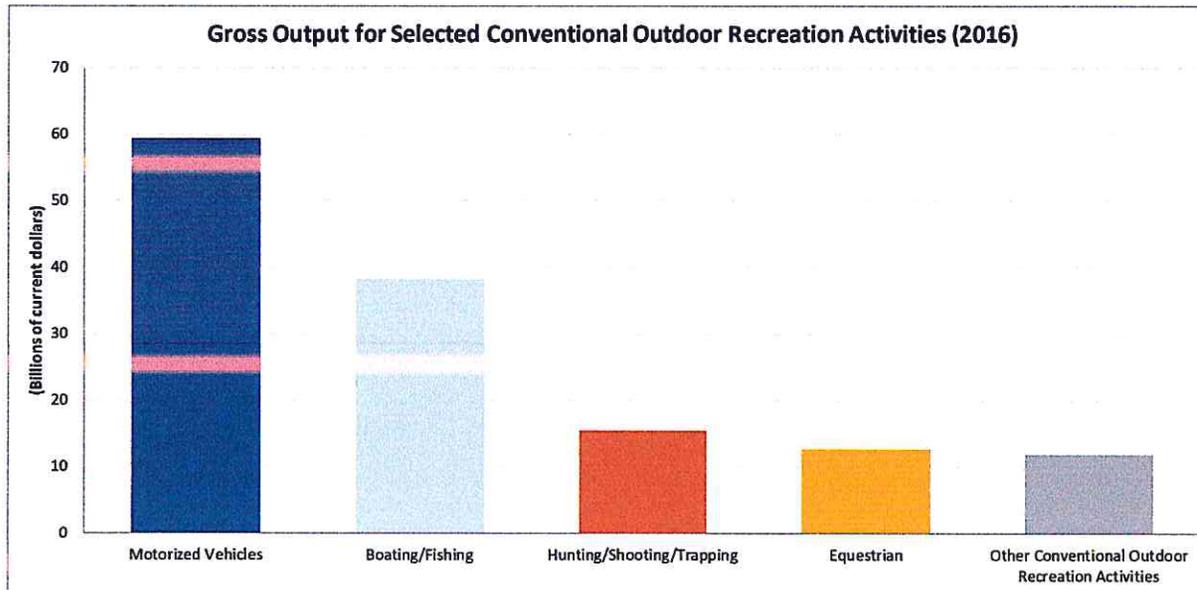
"Businesses need the right data to help them hire, invest and grow. The historical lack of detailed federal data regarding outdoor recreational activities has handicapped both the private and public sectors. The public will no doubt be surprised at the economic importance of this industry as we release prototype statistics measuring the impact of activities like boating, fishing, RVing, hunting, camping, hiking, and more. This release is a milestone for business executives, small-business owners, entrepreneurs, and government officials, who will rely on these detailed data to plan, grow, and gain new insights into this dynamic part of the U.S. economy," said U.S. Commerce Secretary Wilbur Ross.



The new account is the latest addition in a series of satellite accounts complementing BEA's statistics, including accounts on travel and tourism and arts and cultural production. These accounts do not change BEA's official statistics, including GDP. They provide greater detail and allow closer analysis of a specific area of the economy by extracting information embedded in the official economic statistics.

### Outdoor Recreation by Activity

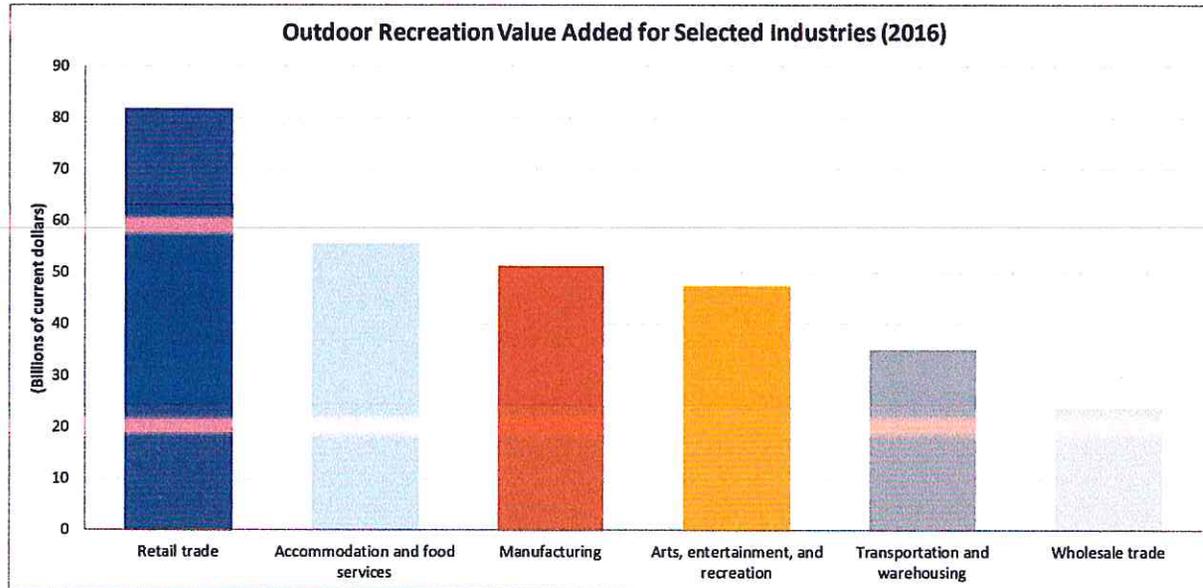
In the Outdoor Recreation Satellite Account, gross output—principally a measure of sales or receipts associated with the outdoor recreation economy—is presented both by industry and by outdoor recreation activity. Outdoor recreation activities fall into three general categories: conventional core activities (including activities such as bicycling, boating, hiking, and hunting), other core activities (including activities such as agritourism and outdoor festivals), and supporting activities (including construction, trips and travel, and government). In 2016, conventional recreation accounted for 36.7 percent of total outdoor recreation gross output, other recreation accounted for 22.1 percent, and supporting activities accounted for the remaining 41.2 percent (table 2).



- Motorized Vehicles was the largest activity within conventional outdoor recreation in 2016, accounting for \$59.4 billion of gross output. Recreational vehicles accounted for more than half of this value at \$30.0 billion.
- Boating/Fishing activities were \$38.2 billion in 2016, an increase of 4.0 percent from the previous year.
- Hunting/Shooting/Trapping activities were \$15.4 billion in 2016, with hunting accounting for over 60 percent of this value.
- Multi-use apparel and accessories, which include backpacks, bug spray, and other general-purpose gear and accessories that could not be allocated to specific activities, grew 7.2 percent

## Outdoor Recreation by Industry

Outdoor recreation value added is presented by industry in the ORSA and shows how an industry's participation in the outdoor recreation economy contributes to GDP. For example, the data show that the retail trade, accommodation and food services, and manufacturing industries were the largest contributors to the outdoor recreation economy in 2016, accounting for half of all outdoor recreation activity (table 1).



- For the retail trade industry, outdoor recreation value added was \$81.7 billion and accounted for 21.9 percent of all activity in the outdoor recreation economy.
- Outdoor recreation value added was \$55.7 billion in accommodation and food services, with about 63 percent of this value coming from accommodations and 37 percent from food services and drinking places.
- Outdoor recreation value added for manufacturing was \$51.3 billion, primarily reflecting activity in the subcategories of petroleum and coal products and other transportation equipment.
- Outdoor recreation value added was \$47.4 billion in arts, entertainment, and recreation and accounted for 24.7 percent of that industry's total value added.

### Public comment and feedback

The public is invited to submit comments and feedback on these preliminary statistics by emailing [OutdoorRecreation@bea.gov](mailto:OutdoorRecreation@bea.gov). Final statistics are scheduled for release in the fall of 2018, and feedback will be used to help finalize the definitions, data sources, and methodology that underpin the new account and the format in which final results are displayed. To ensure consideration, comments should be submitted no later than April 27, 2018.

# News Release

EMBARGOED UNTIL RELEASE AT 8:30 A.M. EDT, THURSDAY, SEPTEMBER 20, 2018

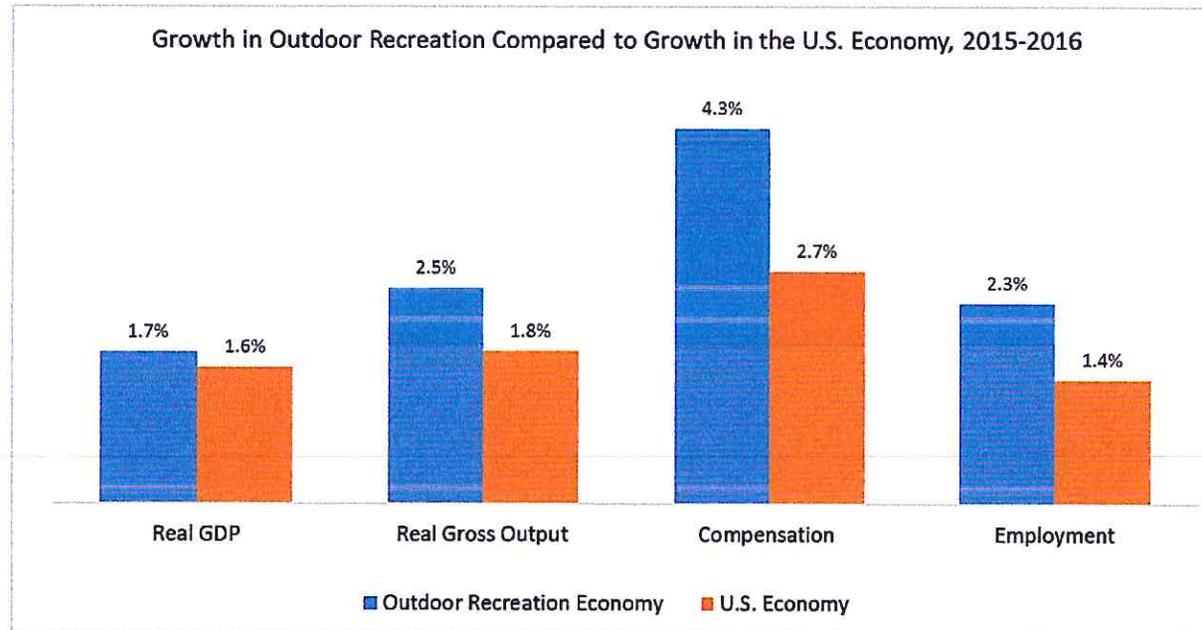
BEA 18-48

Technical: Tina Highfill (301) 278-9266 [OutdoorRecreation@bea.gov](mailto:OutdoorRecreation@bea.gov)  
Tom Howells (301) 278-9586  
Media: Jeannine Aversa (301) 278-9003 [Jeannine.Aversa@bea.gov](mailto:Jeannine.Aversa@bea.gov)

## Outdoor Recreation Satellite Account: Updated Statistics for 2012-2016

*Outdoor recreation accounts for 2.2 percent of GDP in 2016*

Updated statistics from the Outdoor Recreation Satellite Account (ORSA) released today by the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) show that the outdoor recreation economy accounted for 2.2 percent (\$412 billion) of current-dollar GDP in 2016 (table 2). In data produced for the first time, using inflation-adjusted (real) GDP, the outdoor recreation economy grew 1.7 percent in 2016, faster than the 1.6 percent growth for the overall U.S. economy (table 6). In addition, real gross output, compensation, and employment all grew faster in outdoor recreation than in the overall economy in 2016.

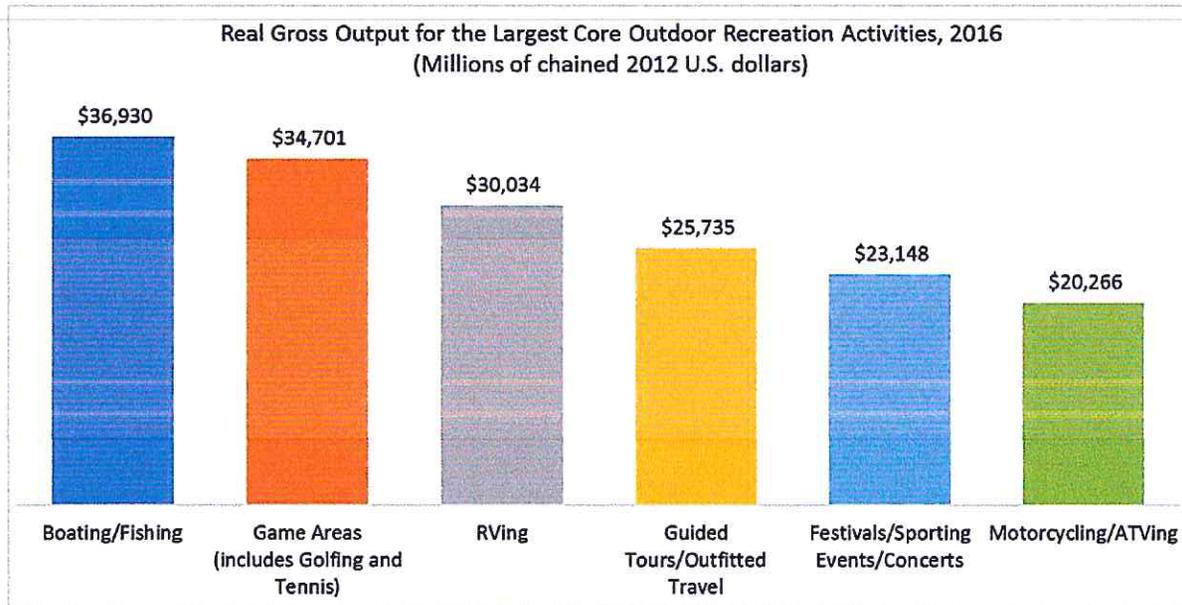


The statistics released today are updated to include refinements in methodology and presentation incorporated by BEA after receiving public feedback to the prototype statistics released February 14, 2018. The outdoor recreation account is the latest addition in a series of satellite accounts complementing BEA's statistics. These satellite accounts do not change BEA's official statistics, including GDP. They provide

greater detail and allow closer analysis of a specific area of the economy by extracting information embedded in the official economic statistics.

### Outdoor Recreation by Activity

In the Outdoor Recreation Satellite Account, gross output—principally a measure of sales or receipts associated with the outdoor recreation economy—is presented both by industry and by outdoor recreation activity. Outdoor recreation activities fall into three general categories: conventional core activities (including activities such as bicycling, boating, hiking, and hunting); other core activities (including activities such as gardening and outdoor concerts); and supporting activities (including construction, travel and tourism, local trips, and government expenditures). In 2016, conventional outdoor recreation accounted for 32.7 percent of real outdoor recreation gross output, other recreation accounted for 19.3 percent, and supporting activities accounted for the remaining 47.9 percent (table 9).



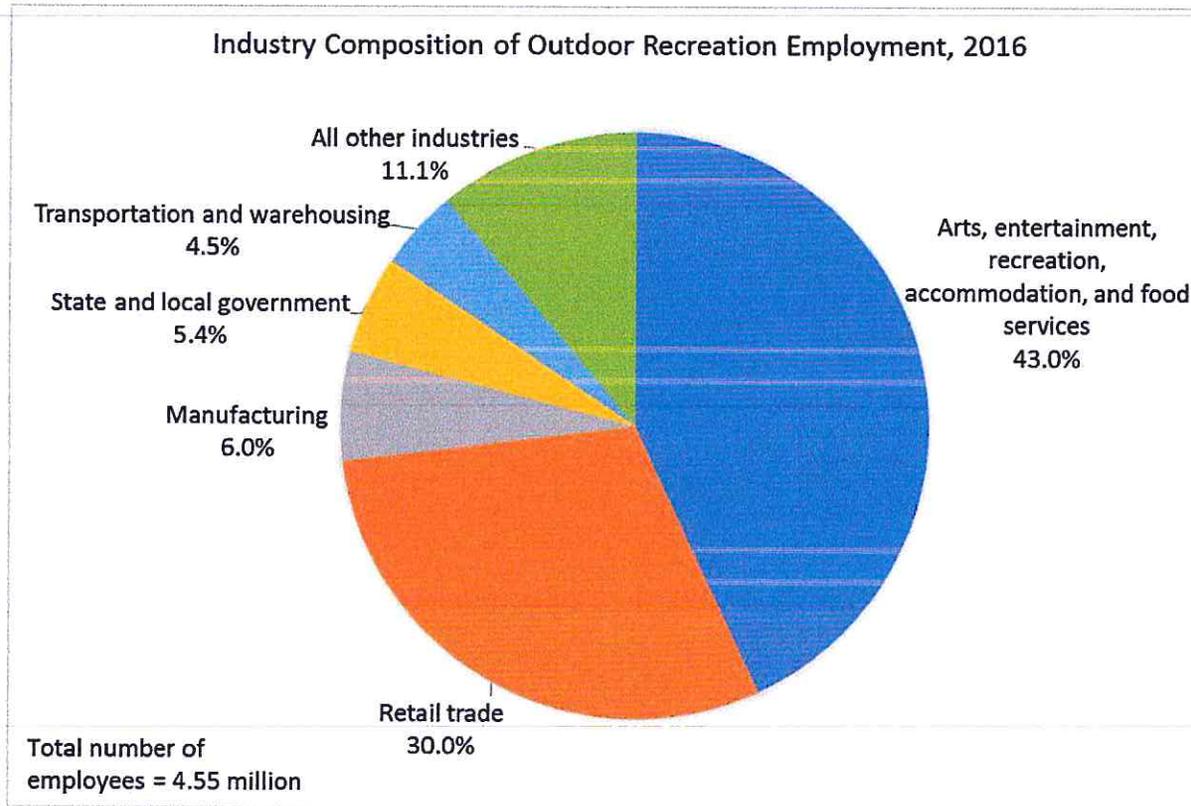
- Boating/Fishing was the largest core outdoor recreation activity in 2016, accounting for \$36.9 billion of real gross output.
- Motorcycling/ATVing activities accounted for \$20.3 billion of real gross output in 2016, representing one of the fastest-growing activities at 8.0 percent growth from the previous year.
- Multi-use Apparel and Accessories, such as backpacks and bug spray, that cannot be linked to a specific activity accounted for 12.2 percent, or \$89.3 billion, of real gross output in 2016.

### Outdoor Recreation by Industry

Outdoor recreation value added is presented by industry in the ORSA and shows how an industry's participation in the outdoor recreation economy contributes to GDP. For example, the data show that

contributor to the outdoor recreation economy in 2016, accounting for 25 percent (\$94 billion) of all outdoor recreation activity (table 1). Gross output, employment, and compensation are also presented by industry in the ORSA.

- Outdoor recreation real gross output for manufacturing was \$177.5 billion in 2016, the largest of all industries (table 15). About 44 percent of this value came from petroleum and coal products.
- Arts, entertainment, recreation, accommodation, and food services was the largest industry for both compensation (\$68.8 billion) and employment (1.96 million) in 2016 (tables 21 and 22).
- Retail trade was the second-largest industry for both compensation (\$45.7 billion) and employment (1.37 million) in 2016.



## Preparing the Outdoor Recreation Satellite Account

The Outdoor Recreation Satellite Account (ORSA) measures the size of the outdoor recreation economy and the link between outdoor recreation and the broader U.S. economy. Like other satellite accounts, the ORSA was built on BEA's comprehensive supply-use framework. The supply-use tables provide a detailed look at the relationships among industries and how each industry contributes to Gross Domestic Product (GDP). In practice, the ORSA is a rearrangement of the published supply-use tables that isolates outdoor recreation spending and production. For example, the supply-use tables show the production of all apparel, whereas the ORSA shows the production of apparel used specifically for outdoor recreation activities, such as wet suits and hiking boots. A variety of private and public data sources were used to identify outdoor recreation spending and production in order to develop the ORSA estimates.

The term "outdoor recreation" can be defined in many different ways. BEA staff worked closely with outdoor recreation experts from academia, government, and industry to develop the definition of outdoor recreation used in the ORSA. To meet the needs of diverse data users, the definition and presentation of statistics used in the account are designed to capture both the conventional and broad views of outdoor recreation reflected in existing literature. The conventional definition reflects more traditional outdoor recreation activities such as hunting, hiking, camping, and fishing. More formally, the conventional definition includes *all recreational activities undertaken for pleasure that generally involve some level of intentional physical exertion and occur in nature-based environments outdoors*. The broad definition includes all conventional outdoor recreation activities and a range of additional activities. More formally, the broad definition includes *all recreational activities undertaken for pleasure that occur outdoors*.

The ORSA follows other BEA satellite accounts by dividing outdoor recreation activity into two general categories: core and supporting. Core activities include the production and purchase of goods and services used directly for outdoor recreation, while supporting activities are defined as goods and services that support access to outdoor recreation activities. Core activities for the ORSA include the production and purchase of gear, equipment, fuel, concessions, maintenance, repair, and fees. Supporting activities include travel and tourism expenses, construction, and government expenditures related to outdoor recreation activities.

An important feature of the ORSA is the presentation of gross output estimates by type of outdoor recreation activity, in addition to the standard presentation of estimates by industry. Due to overlap among many outdoor activities (for example, hiking while camping or fishing while boating), activities were either split into mutually exclusive categories when source data allowed or combined into a single category containing multiple related activities. For example, tent camping and hiking were combined into a single category to avoid double counting the many items that can be used for both activities.

The ORSA statistics fulfill requirements of the Outdoor Recreation Jobs and Economic Impact Act of 2016, which directed the Secretary of Commerce to "enter into a joint memorandum with the Secretary of Agriculture and the Secretary of the Interior to conduct, acting through the Director of the Bureau of Economic Analysis, an assessment and analysis of the outdoor recreation economy of the United States and the effects attributable to such economy on the overall economy of the United States."

Additional information on the outdoor recreation statistics and the data sources and methodology that underlie their preparation are available in the September 2018 issue of the *Survey of Current Business*.