

ECONOMIC CONTRIBUTION OF OFF-HIGHWAY VEHICLE USE IN COLORADO

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Economic Contribution of Off-Highway Vehicle Recreation in Colorado

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1 INTRODUCTION

Colorado offers unique opportunities for motorized recreation¹ because of its vast terrain appropriate for off-highway motorized use. As such, the sport and industry of motorized recreation has increased in popularity in Colorado for both residents and non-residents. The Louis Berger Group, Inc. (Louis Berger) evaluated the economic contribution of motorized recreation in Colorado for the 2012-13 season² and summarizes the results in this report.

Much of the analysis presented here is based on a 2001 study completed by Hazen and Sawyer, titled *Economic Contribution of Off-Highway Vehicle Use in Colorado* (the 2001 study).³ The 2001 study includes a household survey that collected valuable information on where and when motorized-recreation enthusiasts utilized their vehicles for recreation, average expenditures associated with recreational trips, and annual expenditures associated with operating and maintaining vehicles. Louis Berger adjusted the information collected in that study for inflation and used it in combination with current data on the number of households that participate in motorized recreation in the state to estimate the total economic contribution of the sport in Colorado.

This report is organized as follows. Section 2 describes the approach used by Louis Berger to estimate the economic contribution of motorized recreation during the 2012-13 season. Section 3 summarizes the estimated number of resident and non-resident households that participate in motorized recreation. Section 4 provides the estimated expenditures made by off-highway vehicle (OHV) enthusiasts while using and maintaining their recreational vehicles. Section 5 summarizes the overall economic contribution of motorized recreation, and Section 6 provides a regional analysis.

2 APPROACH

The approach used to estimate the economic contribution of motorized recreation in Colorado required the following steps:

- Step 1 Estimate the number of households that participate in motorized recreation.
- Step 2 Estimate the total expenditures for day and overnight trips made while participating in motorized recreation.
- Step 3 Estimate annual expenditures to purchase and maintain vehicles and other expenditures supporting the recreational use of vehicles.
- Step 4 Estimate the economic contribution to the state of Colorado of total expenditures made by motorized recreational enthusiasts.

¹ Motorized recreation is defined for this study as the use of motorized vehicles on roads and trails which are not considered a part of the normal transportation network. The system of trails and roads used for this type of recreation are thus considered “off-highway”.

² Annual registrations are valid from April 1st through March 31st.

³ Hazen and Sawyer, *Economic Contribution of Off-Highway Vehicle Use in Colorado*, July 2001, Hollywood, Florida.

Louis Berger used an approach to estimating the economic contribution of motorized recreation similar to the one used for the 2001 study. However, the approach was adjusted at times to account for the use of different data sources or changes in assumptions. These adjustments are discussed in detail below.

3 HOUSEHOLDS THAT PARTICIPATE IN MOTORIZED RECREATION

The first step in calculating the economic contribution of a recreational activity is to estimate the number of participants. Participants in this case are defined as the number of households⁴ that participated in motorized recreation in Colorado during the 2012-13 season (the most recent year that data are available on the number of recreational users). Participants are counted on a household level to be consistent with the expenditure data that Hazen and Sawyer obtained during the 2001 study. Participants include Colorado households that engaged in motorized recreation and non-resident households that travelled to Colorado to participate in this activity. Where possible, the household estimates were made following the same approach and data sources used in the 2001 study. However, some information is no longer available, and different data sources and/or assumptions were required for some household estimates.

For all-terrain vehicles (ATVs), dirt bikes, and snowmobiles owned and operated by Colorado residents, an approach similar to the one used for the 2001 study was used to estimate total household participants. First, Louis Berger contacted the Colorado Division of Parks and Wildlife (CDPW) to obtain data on annual registrations for ATVs, dirt bikes, and snowmobiles.⁵ CDPW requires an annual registration fee of \$25.25 for OHVs, which it defines as motorcycles, dirt bikes, three-wheelers, ATVs, and dune buggies operated on public land or trails in Colorado. The program covers both residents and out-of-state visitors. Out-of-state visitors who bring OHVs into Colorado must purchase a Colorado Non-Resident OHV permit that is valid from the date of purchase through the following March 31st. Fees collected from the Colorado OHV Registration Program are used to fund construction and maintenance of trails, trailheads, parking areas, and trail signs; development of maps; and land acquisition. Rerouting trails to address environmental concerns is also a priority. The fees also support law enforcement activities and programs to encourage safe and responsible OHV use.⁶

OHV registrations increased by 131 percent between 2000 and 2012. The bulk of growth occurred between 2000 and 2007 and was fairly constant between 2007 and 2012 (Figure 1). Snowmobile registrations have been fairly constant between 2000 and 2009, and decreased slightly between 2008 and 2012 (Figure 2).

⁴ The 2001 OHV Study focused on determining motorized recreational use and expenditures in Colorado on a household basis. Households were defined as those that participate in motorized recreation and range in size from 2.6 to 3.0 persons per household. The average number of vehicles used for motorized recreation ranged from 1.8 to 2.8 per household depending on the vehicle type (Hazen and Sawyer, 2001).

⁵ Tom Metsa, Colorado Division of Parks and Wildlife, Personal Communication, May, 2013.

⁶ Colorado Parks and Wildlife, Off Highway Vehicle Registrations. Accessed at <http://parks.state.co.us/OHVsandSnowmobiles/OHVProgram/OHVRegistrations/Pages/OHVRegistrations.aspx> on July 24, 2013.

Figure 1. Annual Resident OHV Registrations in Colorado

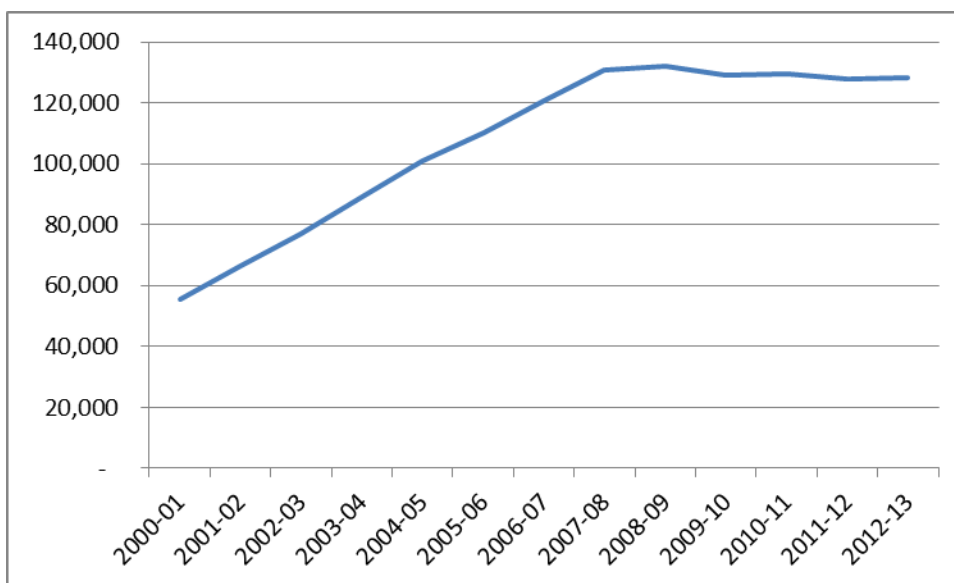
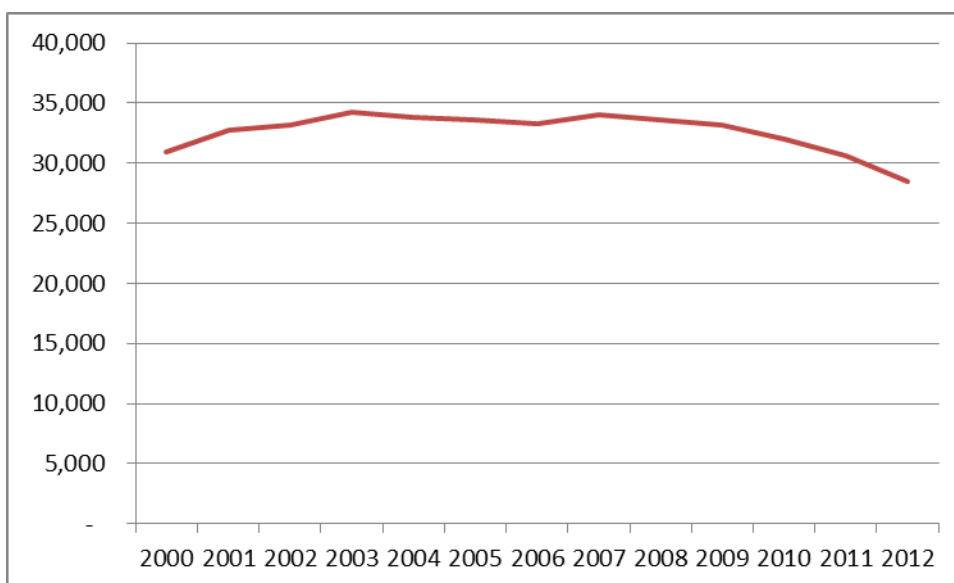


Figure 2. Annual Resident Snowmobile Registrations in Colorado



Annual registrations for each vehicle type were used to estimate the number of households that own and use these vehicles for motorized recreation. Louis Berger adjusted this data to account for households that use their vehicles primarily for motorized recreation. The 2001 study was able to sort the registration database to eliminate those vehicles registered to businesses and to limit the number of registrations to one per household. Because CDPW's current data only includes total number of registrations by vehicle type, this adjustment was not possible for this study. To account for this issue, Louis Berger used the proportions from the 2001 study to adjust total registrations for 2012. In the 2001 study, 48 percent of the total number of snowmobile

registrations in Colorado were registered to a unique residential household that likely used their vehicle for recreation. This percentage was applied to the total number of snowmobiles registered in Colorado during the 2012-13 season, resulting in 12,577 households that potentially participate in snowmobile recreation. Similarly, in the 2001 study, 79 percent of the total number of ATVs, utility vehicles (UTVs), and dirt bike registrations in Colorado were registered to a unique residential household that likely used their vehicle for recreation. This percentage was applied to the 2012 vehicle registrations to identify the number of households participating in motorized recreation.

For 2012, CDPW provided the total number of registered two-wheel vehicles (dirt bikes); however, the total number of residential households who own and use street-legal dual sport bikes for recreational purposes was not known. Therefore, Louis Berger estimated this number by using the ratio of households owning dirt bikes to households owning dual sport bikes established in the 2001 study. In the 2001 study, the number of dual sport bikes is approximately 30 percent of the number of dirt bikes, resulting in an estimate for 2012 of 12,834 households owning dual sport bikes. These two vehicle types are grouped into a single category, “dirt and dual sport bikes,” for a total of 26,513 households. The number of Colorado households who recreationally use ATVs, UTVs, and other multi-wheeled OHVs is estimated to be 70,292.

The number of households using four-wheel-drive vehicles (4-WDs) for motorized recreation was estimated using information provided by the Colorado Department of Revenue (CODR). The CODR publishes an Annual Report summarizing the number of registered vehicles by type.⁷ Louis Berger used the 2012 Annual Report to find the total number of registered 4-WD vehicles in the state for the most recent year, 2011.

The 2001 study established an average of 2.5 vehicles per household. Louis Berger applied this average to the figures in the CODR Annual Report to calculate that 349,408 resident households owned 4-WD vehicles in 2012. Using information provided in 1990 study by Tyler Associates,⁸ Louis Berger further adjusted the total number of households owning a 4-WD to account for the percentage of households that used these vehicles for motorized recreation, resulting in an estimate of 38,701 households for the 2012-13 season.

Permit information is used to estimate the number of non-resident households coming to Colorado for motorized recreation. Between 2008 and 2012, non-resident OHV permits grew by more than 34 percent. CDPW requires individuals coming to Colorado for motorized recreation to purchase a permit for their vehicle. Total non-resident permits for each vehicle type were adjusted to estimate the number of households that participated in motorized recreation, similar to resident households.

The data needed to estimate non-resident households who use their 4-WDs for recreation in Colorado are not available. The total participant estimate provided in Table 1 is based on expert

⁷ Colorado Department of Revenue, *Annual Report Colorado Department of Revenue, 2012* www.revenue.state.co.us/TaxStats.

⁸ Tyler Associates for the California Department of Transportation in Cooperation with the Department of Parks and Recreation, “A Study to Determine Fuel Tax Attributable to Off-Highway and Street Licensed Vehicles used for Recreation Off-Highway”. Corte Madre, California, November 1990. This study estimated that 14.2 percent of households drive at least one of their vehicles off-road for recreational purposes.

opinion provided by Colorado Off-Highway Vehicle Coalition (COHVCO) members, and includes the number of non-resident users who come to popular trail areas in the state to use their 4-WD vehicles. This likely is a conservative estimate of the number of non-resident households who use their 4-WD vehicles for motorized recreation in Colorado.

The analysis shows that almost 150,000 resident households likely participated in some sort of motorized recreation in the 2012-13 season in Colorado, and approximately 36,000 non-resident households traveled to Colorado to participate in motorized recreation. The resident and non-resident household estimates are summarized in Table 1.

Table 1. Estimated Population of Households Who Used OHVs and Snowmobiles for Motorized Recreation in Colorado in 2012-13 Season

User Residence	ATVs, UTVs, and Other Multi-wheeled OHVs	Dual Purpose or Dirt Bikes	Snow-mobiles	4-WD Vehicles	Total
In Colorado	70,292	26,513	12,577	38,701	148,083
Outside Colorado	24,116	2,563	5,929	3,500	36,108

4 EXPENDITURES ASSOCIATED WITH MOTORIZED RECREATION

Motorized recreation contributes to the economy when motorized recreational enthusiasts purchase vehicles or related accessories or they spend money to operate and maintain their vehicles. For this study, expenditures are separated into two types:

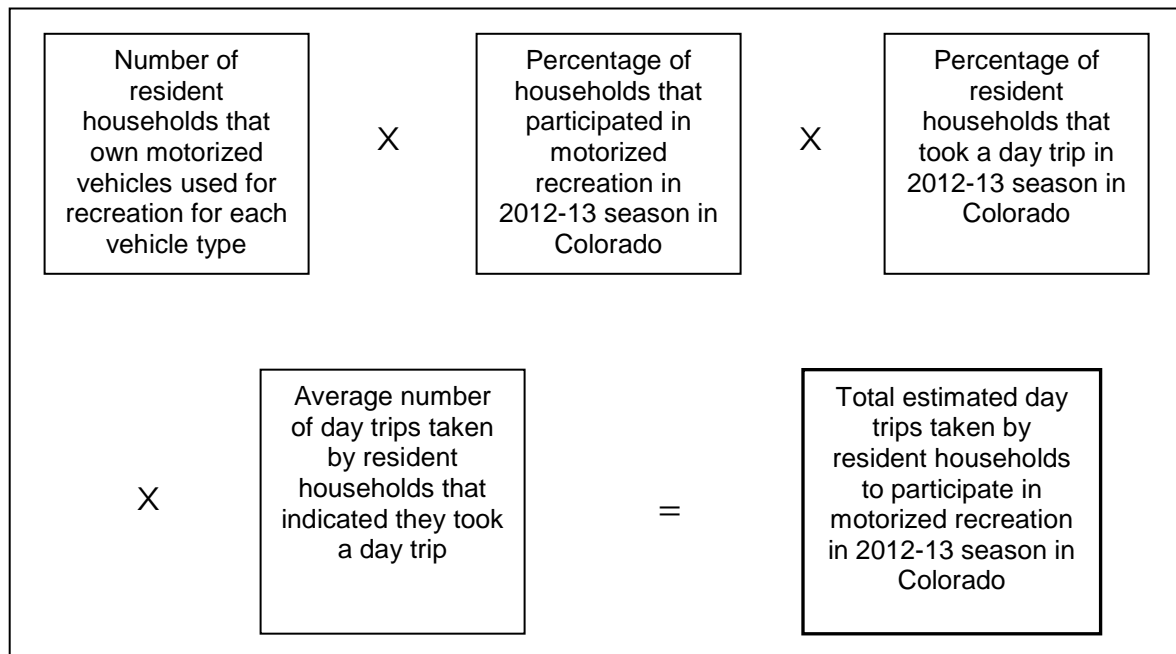
- **Trip expenditures**—expenditures made by motorized recreational enthusiasts while using their vehicles on day or overnight trips.
- **Annual expenditures**—expenditures on vehicles, maintenance, repairs, and other accessories that support motorized recreation.

Methods used to estimate these types of expenditures are discussed below.

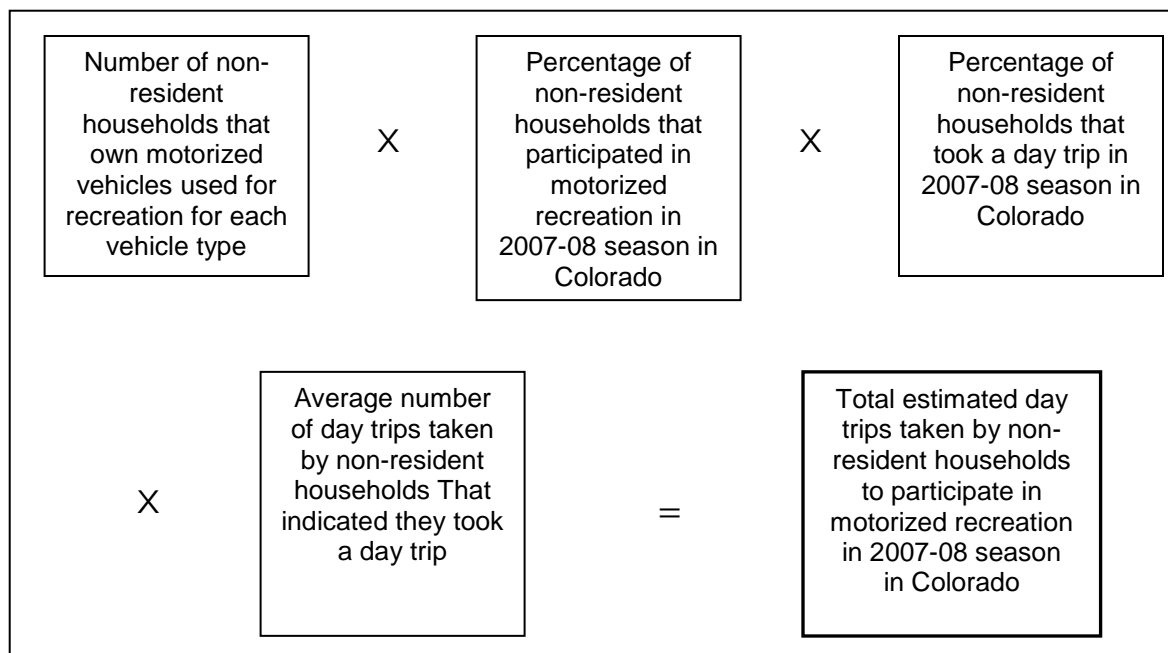
4.1 Trip Expenditures

The first step in estimating total trip expenditures requires an estimate of the number of day and overnight trips taken by resident and non-resident households for motorized recreational activities. Louis Berger estimated the numbers of day and overnight trips for each vehicle type as follows.

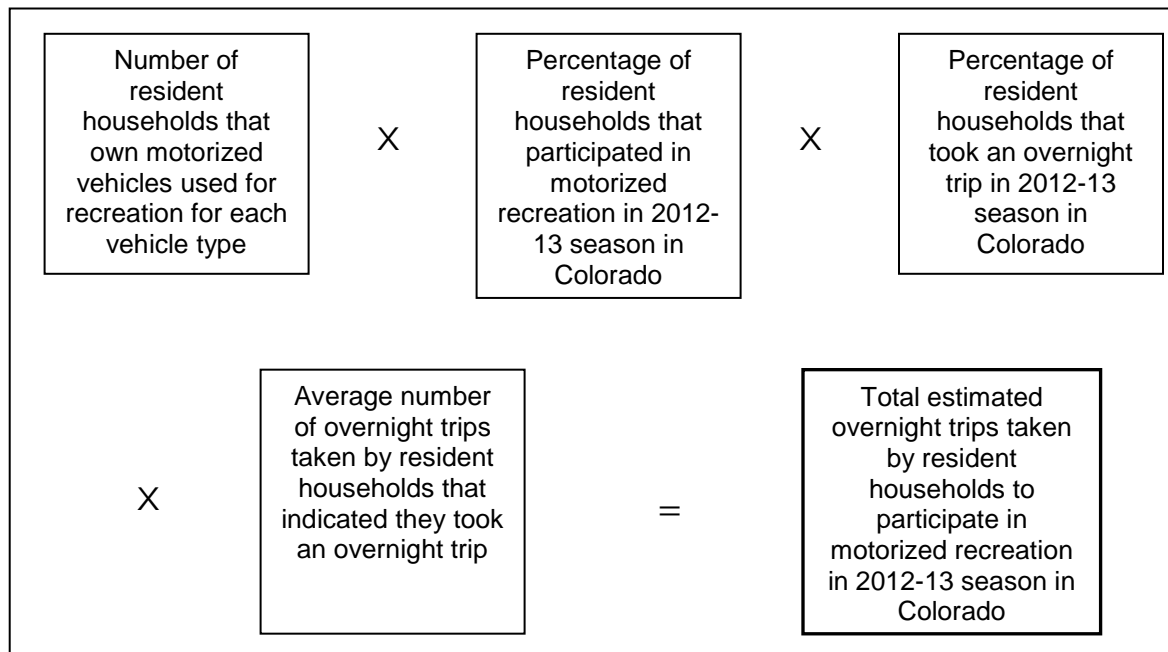
Day trips taken by resident households in Colorado during the 2012-13 season



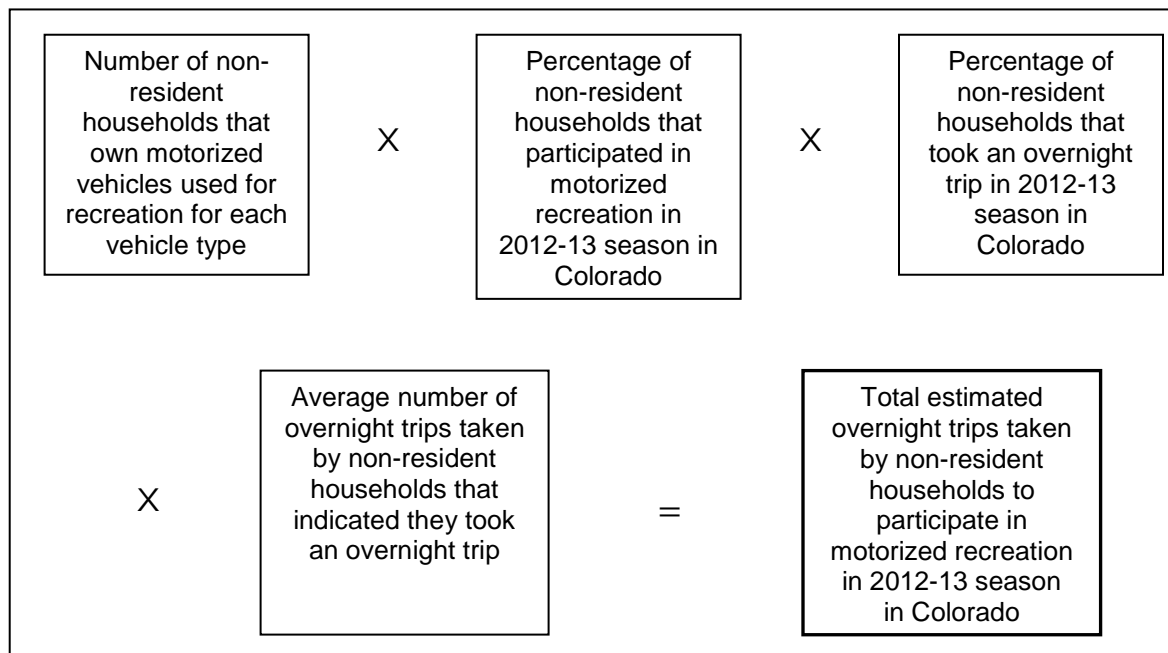
Day trips taken by non-resident households in Colorado during the 2012-13 season



Overnight trips taken by resident households in Colorado in 2012-13 season



Overnight trips taken by non-resident households in Colorado in 2012-13 season



Data needed to estimate day and overnight trips taken from the 2001 study includes the following, which are also shown in Appendix A.

- Percentage of households using their vehicles for recreational purposes
- Percentage of households taking either day or overnight trips
- The average number of day and overnight trips taken by households for purposes of motorized recreation

These factors are applied to the estimated number of households per vehicle type for resident and non-resident households for the 2012-13 season (calculated in Section 3). The results are estimates of the total number of day and overnight trips taken by resident and non-resident households to participate in motorized recreation in Colorado during the 2012-13 season for each of the four vehicle types. These results are summarized in Table 2 and Table 3.

Table 2. Estimated Number of Day and Overnight Trips Taken by Residential Households to Participate in Motorized Recreation in Colorado

Trip Type	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow-mobiles	4-WD	Total All Vehicles
Day trips	501,888	378,292	173,792	257,900	1,311,872
Overnight trips	282,224	124,400	27,670	246,290	680,584

Table 3. Estimated Number of Day and Overnight Trips Taken by Non-Resident Households to Participate in Motorized Recreation in Colorado

Trip Type	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow-mobiles	4-WD	Total All Vehicles
Day trips	52,670	4,313	34,839	3,689	95,510
Overnight trips	60,194	3,639	12,326	9,657	85,816

Louis Berger estimated day and overnight trip expenditures (direct sales) by motorized recreational enthusiasts by multiplying the number of day and overnight trips taken by resident and non-resident households during the 2012-13 season, as estimated above, by the average trip expenditures incurred by households for day trips and overnight trips, respectively. Itemized expenditures for both day and overnight trips are grouped into the following categories:

- Gasoline/oil for motorized recreational and tow vehicles
- Restaurant/lounge purchases
- Food and beverages purchased at grocery and/or convenience stores

- User fees and donations
- Guides and tour packages
- Lodging (overnight trips only)
- Repairs
- Souvenirs, gifts, and entertainment
- Other trip-related expenses

The average for itemized expenditures was taken from the 2001 study and adjusted for inflation to 2012 dollars. A summary of the average itemized expenditures used for this analysis is provided in Appendix A.

Total trip expenditures for resident and non-resident households are summarized in Table 4. Trip expenditures are broken down by summer and winter use. Summer use includes all ATVs, UTVs, dirt and dual purposes bikes, and 4-WD vehicles. Winter use includes recreational activities using snowmobiles. During the 2012-13 season, Louis Berger estimates that motorized recreational enthusiasts spent more than \$600 million while taking trips using their motorized vehicle for recreational purposes. More than 90 percent of these expenditures occurred during the summer recreational season.

Table 4. Total Itemized Trip Expenditures (2012\$)

Expenditure Category	Season of Use		Total
	Summer (OHVs)	Winter (Snowmobiles)	
Gasoline/oil for motorized recreational vehicles	\$71,521,648	\$12,277,349	\$83,798,997
Gasoline/oil for tow vehicles	\$130,589,176	\$10,588,635	\$141,177,811
Restaurant/lounge purchases	\$94,127,889	\$13,457,882	\$107,585,771
Food and beverages purchased at grocery and/or convenience stores	\$107,873,949	\$7,402,413	\$115,276,362
Overnight accommodations	\$55,604,228	\$9,660,277	\$65,264,505
Guides and tour packages	\$2,935,044	\$688,192	\$3,623,236
Repairs	\$10,754,425	\$0	\$10,754,425
User fees and donations	\$8,855,223	\$656,173	\$9,511,397
Souvenirs, gifts, and entertainment	\$26,136,573	\$3,665,308	\$29,801,881
Other trip-related expenses	\$34,903,157	\$1,112,939	\$36,016,097
Total	\$543,301,313	\$59,509,169	\$602,810,482

4.2 Annual Expenditures

In addition to spending money on day and overnight trips, households participating in motorized recreation also spend money on maintenance, repairs, accessories, storage, and miscellaneous

items associated with their vehicles. Itemized expenditures made in Colorado were estimated for this study for both resident and non-resident households⁹ and include the following items.

- Repairs and parts
- Vehicle storage
- Motorized recreational accessories (covers, saddle or tank bags, ski skins, studs, carbides, mirrors, etc.)
- Magazine subscriptions
- Registration or permit fees
- Annual insurance payment
- Safety equipment (helmets, tools, first aid, etc.)
- Club memberships
- Clothing (suits, pants, gloves, etc.)
- Other items

Average annual expenditures for each category per household, for both resident and non-resident households were established in the 2001 study. These estimates were adjusted for inflation and expressed in 2012 dollars. The averaged itemized expenditures for resident and non-resident households used for this analysis are discussed in more detail in Appendix B. Motorized recreational enthusiasts are estimated to have spent more than \$387.6 million annually on various items to support and enhance their experiences in Colorado.

New Vehicle Sales

Louis Berger used information from a number of sources to estimate sales of new vehicles used for motorized recreation in Colorado during 2012-13 season. Data were obtained from the Motorcycle Industry Council on the number of dirt bikes and ATVs purchased in 2011 as well as the total retail sales of those vehicles. Louis Berger inflated the sales figures to 2012 dollars. Data on the number of snowmobiles sold in Colorado were obtained from the International Snowmobile Manufacturers' Association for the 2012-13 season, and the numbers of utility vehicles sold was obtained from Power Products Marketing for 2011. The average price of snowmobiles and UTVs was obtained by contacting a number of Colorado dealerships and searching on the internet for prices.

The information on new sales of 4-WD vehicles comes from the original 2001 survey. In that survey, 11 percent of households using 4-WD for motorized recreation purchased new 4-WD on

⁹ Annual expenditures were estimated for non-resident households but were adjusted to include only the amount that was spent in Colorado.

an annual basis. For this analysis, Louis Berger used a more conservative estimate of 1 percent of households would purchase a new vehicle for OHV use. The cost of these vehicles, as reported in the survey, is inflated to 2012 dollars. The value of new sales for all vehicles ranges from \$12.4 million for 4-WDs to \$44 million for ATVs. Total vehicle sales are estimated to be \$133 million.

Annual expenditures by all vehicles types for the 2012-13 season are summarized in Table 5.

Table 5. Total Estimated Itemized Expenditures for Maintenance, Repairs, Storage, and Miscellaneous Items in Colorado by Households that Participate in Motorized Recreation (2012\$)

Expenditure Category	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow-mobiles	4-WD	Total All Vehicles
Repairs and parts	\$21,428,973	\$18,119,430	\$6,072,821	\$91,829,129	\$137,450,353
Vehicle storage	\$132,113	\$93,734	\$96,977	\$26,008	\$348,832
Motorized recreational accessories	\$6,422,615	\$2,669,984	\$1,521,506	\$21,957,204	\$32,571,309
Clothing	\$4,303,888	\$7,200,625	\$2,036,522	\$0	\$13,541,036
Safety equipment	\$3,187,757	\$4,123,377	\$1,080,814	\$1,163,739	\$9,555,687
Insurance	\$2,483,701	\$1,638,062	\$890,505	\$38,102,173	\$43,114,441
Registration or permit fees	\$2,572,732	\$2,392,477	\$277,544	\$4,458,942	\$9,701,695
Club memberships	\$5,920	\$166,451	\$36,365	\$1,054,695	\$1,263,432
Magazine subscriptions	\$144,115	\$202,251	\$25,721	\$268,922	\$641,009
Other items	\$2,667,371	\$933,908	\$428,699	\$2,763,176	\$6,793,154
Vehicle sales	\$77,461,900	\$25,094,700	\$17,641,500	\$12,403,385	\$132,601,485
Total	\$120,811,085	\$62,634,999	\$30,108,974	\$174,027,373	\$387,582,433

5 ECONOMIC CONTRIBUTION TO THE STATE OF COLORADO

Louis Berger estimated total economic contribution of motorized recreation in Colorado by applying the expenditures estimated and discussed in the previous sections to an Input-Output Model relevant to Colorado. Input-Output (I-O) Modeling is a systematic method to describe the flow of money between production and consumption sectors within a particular economy through a series of linkages among industries and households. The economic model, IMPLAN, provides I-O multipliers used to calculate the total direct, indirect, and induced sales, income, employment, and business taxes resulting from the expenditures made by OHV enthusiasts.¹⁰

¹⁰ IMPLAN (IMPact Analysis for PLANning) was originally developed by the U.S. Forest Service in conjunction with Federal Emergency Management Agency (FEMA) and the Bureau of Land Management to assist

Direct, indirect, and induced contributions are defined as follows.

- Direct—represents the response (e.g. employment) in the economy to the purchase of a good or service.
- Indirect—represents responses of industries supporting direct industries that purchase inputs for final goods and services.
- Induced—represents the response of increased household income (spending) resulting from direct and indirect effects.

Income and taxes generated from motorized recreation include labor income, employee compensation, proprietor income, value added or gross regional product (GRP), and business taxes. Definitions for each income type estimated during this study are included below.¹¹

- Labor Income—employee compensation and proprietor’s income, as defined below.
- Employee Compensation—the total wages and salaries of workers who are paid by employers, as well as the value of benefits such as health care and life insurance, retirement payments, and non-cash compensation.
- Proprietor’s Income—payments received by self-employed individuals as income.
- Gross Regional Product (Value Added)—is the value of final goods and services produced within a specified geographical area. For purposes of this study, the geographical area is defined as the state of Colorado.
- Business Taxes—excise taxes, property taxes, fees, licensing, and sales taxes paid by businesses.

Employment estimated in this study includes the number of part- and full-time jobs generated by activities associated with motorized recreation.

5.1 Expenditures Made by Motorized Recreational Enthusiasts

OHV enthusiasts contribute to the state’s economy by purchasing vehicles, making expenditures while on recreational activity trips (day and overnight), spending money to operate and maintain vehicles, purchasing other accessories needed while riding (clothes, safety equipment), and making other expenditures for items that support their activities (food and fuel). Methods used to

in land and resource management planning and has been in use since 1979. Since 1993, IMPLAN has been developed under the exclusive license of the Minnesota IMPLAN Group, Inc. and is widely used for economic analyses by clients in federal, state and local governments, universities, as well as the private sector. The IMPLAN software package allows the estimation of the multiplier effects of changes in final demand for one industry’s output and the corresponding effect on all other industries within a local economic area. Multipliers capture all three effects (direct, indirect and induced) and further account for commuting, social security and income taxes, and savings by households. Data output consists of estimations of output, income and employment, and value added.

¹¹ Minnesota IMPLAN Group, Inc., “IMPLAN Pro Professional, Version 2.0, User’s Guide”, 2nd Edition, Stillwater, Minnesota, June, 2000.

estimate total expenditures made by motorized recreational enthusiasts are discussed in earlier sections. According to this analysis, motorized recreational enthusiasts were responsible for \$990 million in direct expenditures related to motorized recreation in Colorado during the 2012-13 season (see Tables 4 and 5).

5.2 IMPLAN Approach

The trip and annual expenditures were allocated to the relevant sectors within the IMPLAN. The state IMPLAN model for 2011 was used as the study area to estimate the economic contribution to the state of Colorado. Trip and annual expenditures were mapped to the following sectors in IMPLAN, as summarized in Table 6.

Table 6. Expenditures Categories Mapped to IMPLAN Sectors

Expenditure Category	IMPLAN Sector Number	IMPLAN Sector Name
Repairs and parts, motorized recreational accessories, clothing, safety equipment, and other items	320	Retail -- Motor Vehicles
Vehicle storage	360	Real Estate
Insurance	357	Insurance Carriers
Registration or permit fees	432	Other state and local government enterprises
Club memberships	425	Social, civic, professional, and other similar organizations
Magazine subscriptions	113	Printing
Vehicle sales	320	Retail -- Motor Vehicles
Gasoline for OHVs and tow vehicles	326	Retail -- Gasoline Stations
Restaurant/lounge purchases	413	Food Services and Drinking Places
Food and Beverage Purchases at Grocery or Convenience stores	324	Retail Food and Beverage Stores
Guides and tour packages	410	Other amusement and recreation industries
User Fees and Donations	432	Other state and local government enterprises
Souvenirs, gifts, and entertainment	327	Retail -- Clothing and clothing accessories
Overnight Accommodations	411	Hotels and motels

All retail purchases are margined within IMPLAN. Margins represents the difference between producer and purchaser prices in a retail or wholesale environment, and IMPLAN provides an allocation of retail spending to the appropriate manufacturing, retail and wholesale trade sectors, and transportation industries. For example, for the new vehicle purchases, IMPLAN only applies the margined amount or the mark-up that the retail establishment receives when selling the vehicle and reduces portion of sales allocated to the manufacturing component. As a result, there is a considerable difference between the direct expenditures and the direct sales effect on Colorado. Although motorized enthusiasts spend \$990 on various expenditures within the state, their direct contribution to sales is \$481 million (see the following section).

The IMPLAN model estimates jobs, labor income, value added, and sales associated with the motorized expenditures using industry ratios, commuting information, a trade flows model, and multipliers derived from the input-output modeling methods.

5.3 Direct Labor, Income, and Tax Contributions

The expenditures made by motorized-recreation enthusiasts have an economic contribution that supports businesses throughout the state, as estimated and summarized in Table 7. Total direct gross sales of \$481 million¹² associated with motorized recreation supported almost 5,500 direct jobs, \$212 million in labor income (employee compensation and proprietor income), \$284 million in GRP, and \$35 million in federal, state, and local business taxes during the 2012-13 season.

Table 7 Direct Economic Impact of Motorized Recreation in Colorado during the 2012-13 Season

Total Direct Gross Sales	\$480,555,173
Jobs	5,495
Labor income	\$212,400,327
Value added or GRP	\$283,703,474
State and local business taxes	\$30,406,743
Federal business taxes	\$4,366,114

Note: Figures for labor income, value added, and business taxes are components of gross sales and thus cannot be added together. Adding all dollar figures in this table would constitute double counting of economic contribution.

5.4 Additional Economic Activity

Direct expenditures made by motorized recreational enthusiasts have an additional effect by generating indirect and induced (downstream) economic activity often known as multiplier effects. The downstream economic effects of motorized recreation resulted in \$465 million in downstream gross sales, 3,372 additional jobs, \$160 million in additional labor income, \$278 million in GRP, and \$24 million in federal, state, and local business taxes (Table 8).

Table 8. Additional Economic Activity Resulting from Motorized Recreation in Colorado During the 2012-2013 Season

Indirect and Induced (Downstream) Gross Sales	\$464,841,621
Jobs	3,372
Labor income	\$160,310,634
Value added	\$277,591,824
State and local business taxes	\$19,734,924
Federal business taxes	\$2,833,744

Note: Figures for labor income, value added, and business taxes are components of gross sales and thus cannot be added together. Adding all dollar figures in this table would constitute double counting of economic contribution.

¹² The difference between direct expenditures and direct sales is due to the margined amount. Retail sales are margined to reflect the producer prices. IMPLAN records expenditures in terms of producer prices, allocating all expenditures to industries that produce the goods or services. As a result, any data received in purchaser prices (prices paid by final consumers such as retail sales) needs to be converted or allocated to the producing industries. Margins enable the move from producer to purchaser prices or vice-versa.

5.5 Total State Economic Contribution

The total economic contribution of motorized recreation for the 2012-13 season is summarized in Table 9. Motorized recreational enthusiasts are estimated to have supported more than \$481 million in total direct gross sales for motorized recreation throughout the year. This direct spending supported an additional \$465 million in downstream gross sales due to additional economic activity, **or \$945 million in total gross sales.**

The economic contribution can be further described by evaluating the components of total gross sales. For instance, motorized recreation in Colorado is directly or indirectly responsible for almost 9,000 jobs and \$373 million in labor income.

The economic contribution is broken down by OHVs (ATVs, UTVs, dual sport/dirt bikes, 4-WDs) and snowmobiles, as shown in Table 9. According to gross sales, OHVs contribute 91 percent of economic contribution while snowmobiles contribute 9 percent.

Table 9. Total Economic Contribution of Motorized Recreation in Colorado during the 2012-13 Season (Direct, Indirect, and Induced)

Economic Contribution Category	OHVs	Snowmobiles	Total Economic Contribution
Total Gross Sales	\$859,252,838	\$86,143,955	\$945,396,793
Jobs	8,020	847	8,867
Labor income	\$339,472,139	\$33,238,821	\$372,710,960
Value added or GRP	\$510,305,439	\$50,989,859	\$561,295,298
State and local business taxes	\$45,164,056	\$5,977,611	\$51,141,667
Federal business taxes	\$6,485,122	\$714,737	\$7,199,859

Note: Figures for labor income, value added or GRP, and indirect business taxes are components of gross sales and thus cannot be added together. Adding all dollar figures in this table would constitute double counting of economic contribution.

6 REGIONAL ECONOMIC CONTRIBUTION ANALYSIS

The economic contribution of motorized recreation in different regions of the state was also evaluated. This section describes the approach and the results of this analysis.

6.1 Approach

The regional economic contribution approach uses the information from the 2001 study, which asked participants what regions they typically visited when recreating. Six regions were identified, as summarized in Table 10. These regions were the study areas used for the analysis in IMPLAN.

Table 10. Regions in Colorado Used to Estimate Motorized Recreational Use

Region	Counties
Northwest	Garfield, Moffat, Rio Blanco, and Routt
Southwest	Mesa, Montezuma, Montrose, La Plata, Ouray, San Juan, and San Miguel
South-Central	Hinsdale, Saguache, Custer, Fremont, Huerfano, Costilla, Mineral, Alamosa, Conejos, and Archuleta
Central	Eagle, Summit, Park, Gunnison, Lake, Pitkin, Chafee, and Teller
North-Central	Gilpin, Clear, Grand, and Jackson
Eastern Colorado	Adams, Arapahoe, Bent, Boulder, Crowley, Denver, Douglas, El Paso, Elbert, Jefferson, Kiowa, Kit Carson, Larimer, Las Animas, Lincoln, Logan, Morgan, Otero, Prowers, Pueblo, Sedgwick, Washington, Weld, and Yuma

Based on the information collected from the 2001 study, the following trip percentages (Table 11) were applied to the estimated number of day and overnight trips (and expenditures) taken in the regions throughout the state. The resulting expenditures were allocated to the appropriate sector in IMPLAN, as described in section 5.2, to estimate the direct and downstream economic contribution of these expenditures on the regions within Colorado.

Table 11. Regions in Colorado Used to Estimate Motorized Recreational Use

Region	Snowmobiles	Dirt Bike and Dual Purpose Bikes	4WDs	ATVs, UTVs, and Other Multi-wheeled OHVs
Northwest	12.3%	7.2%	6.9%	7.7%
Southwest	16.7%	16.0%	27.2%	21.9%
South-Central	19.1%	18.6%	19.2%	29.0%
Central	29.0%	36.6%	27.2%	26.5%
North-Central	21.0%	14.4%	14.6%	11.6%
Eastern Colorado	1.9%	7.2%	5.0%	3.2%

6.2 Regional Economic Contribution Results

The economic contribution of motorized recreation for each region is summarized in Table 12. The region receiving the largest economic contribution from motorized recreation was central Colorado. This region was followed in importance by south-central and southwest regions.

The estimated economic contribution of winter use during the 2012-2013 season is summarized in Table 13, while Table 14 shows the economic contribution of OHV summer use.

Table 12. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2012-2013 Season

Contribution	Region						Total
	NW CO	SW CO	SC CO	CTRL CO	NC CO	EAST CO	
Direct Impact							
Direct sales	\$28,290,700	\$77,828,161	\$84,989,582	\$101,974,816	\$49,225,045	\$14,458,423	\$356,766,727
Number of jobs	332	1,100	1,261	1,297	639	184	4,813
Labor income	\$13,579,699	\$30,274,949	\$30,560,590	\$45,595,139	\$21,241,172	\$6,445,483	\$147,697,032
Value added or GRP	\$17,062,037	\$40,246,751	\$42,076,237	\$57,673,570	\$27,495,641	\$8,264,186	\$192,818,422
State and local taxes	\$1,422,904	\$4,515,047	\$5,355,405	\$5,417,621	\$2,679,690	\$803,708	\$20,194,375
Federal taxes	\$274,985	\$781,945	\$654,365	\$837,600	\$528,728	\$112,494	\$3,190,117
Other Economic Activity							
Indirect and induced sales	\$15,029,394	\$51,820,687	\$33,272,390	\$55,614,367	\$18,889,621	\$13,935,630	\$188,562,089
Number of jobs	128	463	295	463	181	100	1,630
Labor income	\$4,623,048	\$15,453,087	\$8,667,839	\$17,559,193	\$4,725,241	\$4,865,225	\$55,893,633
Other property type income	\$9,190,579	\$30,021,789	\$18,167,232	\$33,618,200	\$10,555,900	\$8,337,045	\$109,890,745
State and local taxes	\$757,059	\$2,523,671	\$1,688,578	\$2,539,796	\$873,167	\$592,312	\$8,974,583
Federal taxes	\$146,306	\$401,852	\$206,324	\$392,669	\$172,284	\$82,905	\$1,402,340
Total Economic Activity							
Total sales	\$43,320,094	\$129,648,848	\$118,261,972	\$157,589,184	\$68,114,666	\$28,394,053	\$545,328,817
Number of jobs	460	1,564	1,556	1,760	819	284	6,443
Labor income	\$18,202,747	\$45,728,036	\$39,228,429	\$63,154,332	\$25,966,413	\$11,310,708	\$203,590,665
Other property type income	\$26,252,616	\$70,268,540	\$60,243,469	\$91,291,770	\$38,051,541	\$16,601,231	\$302,709,167
State and local taxes	\$2,179,964	\$7,038,718	\$7,043,982	\$7,957,417	\$3,552,857	\$1,396,020	\$29,168,958
Federal taxes	\$421,291	\$1,120,798	\$860,689	\$1,230,269	\$701,012	\$195,400	\$4,529,459

Note: Figures for labor income, other property type income, and indirect business taxes are components of gross sales and thus cannot be added. Adding all dollar figures in this table would constitute double counting of economic contribution.

Table 13. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2012-13 Season – Winter Use (Snowmobiles)

Contribution	Region						Total
	NW CO	SW CO	SC CO	CTRL CO	NC CO	EAST CO	
Direct Impact							
Direct sales	\$4,576,210	\$6,177,745	\$7,092,971	\$10,753,858	\$7,779,387	\$241,981	\$36,622,152
Number of jobs	56	87	105	135	100	3	486
Labor income	\$1,991,269	\$2,238,195	\$2,303,205	\$4,578,008	\$3,188,877	\$96,394	\$14,395,948
Value added or GRP	\$2,695,021	\$3,252,762	\$3,546,768	\$6,191,349	\$4,408,446	\$140,135	\$20,234,481
State and local taxes	\$265,012	\$406,455	\$512,255	\$644,678	\$79,247	\$17,296	\$1,924,943
Federal taxes	\$51,215	\$64,721	\$62,591	\$99,671	\$93,090	\$2,421	\$373,709
Other Economic Activity							
Indirect and induced sales	\$2,344,035	\$3,853,867	\$2,593,525	\$5,508,508	\$2,782,410	\$218,703	\$17,301,048
Number of jobs	20	34	23	46	26	2	151
Labor income	\$721,115	\$1,155,719	\$686,999	\$1,742,980	\$708,494	\$76,813	\$5,092,120
Other property type income	\$1,431,140	\$2,237,028	\$1,425,199	\$3,344,548	\$1,578,243	\$131,612	\$10,147,770
State and local taxes	\$119,091	\$192,224	\$134,514	\$257,770	\$132,291	\$9,379	\$845,269
Federal taxes	\$23,015	\$30,608	\$16,436	\$39,853	\$26,102	\$1,313	\$137,327
Total Economic Activity							
Total sales	\$6,920,244	\$10,031,612	\$9,686,496	\$16,262,366	\$10,561,796	\$460,684	\$53,923,198
Number of jobs	76	121	128	180	126	5	636
Labor income	\$2,712,383	\$3,393,914	\$2,990,203	\$6,320,988	\$3,897,371	\$173,207	\$19,488,066
Other property type income	\$4,126,161	\$5,489,790	\$4,971,967	\$9,535,897	\$5,986,689	\$271,747	\$30,382,251
State and local taxes	\$384,103	\$598,679	\$604,087	\$902,448	\$604,087	\$26,675	\$3,120,079
Federal taxes	\$74,230	\$95,330	\$79,027	\$139,524	\$119,192	\$3,734	\$511,037

Note: Figures for labor income, other property type income, and indirect business taxes are components of gross sales and thus cannot be added together. Adding all dollar figures in this table would constitute double counting of economic contribution.

Table 14. Estimated Economic Contribution of Motorized Recreation by Region in Colorado for the 2012-13 Season – Summer Use (OHVs)

Contribution	Region						Total
	NW CO	SW CO	SC CO	CTRL CO	NC CO	EAST CO	
Direct Impact							
Direct sales	\$23,714,491	\$71,650,416	\$77,896,611	\$91,220,958	\$41,445,658	\$14,216,442	\$320,144,576
Number of jobs	276	1,014	1,156	1,162	539	181	4,328
Labor income	\$11,588,431	\$28,036,754	\$28,257,385	\$41,017,131	\$18,052,295	\$6,349,089	\$133,301,085
Value added or GRP	\$14,367,016	\$36,993,989	\$38,529,469	\$51,482,220	\$23,087,195	\$8,124,051	\$172,583,940
State and local taxes	\$1,157,893	\$4,108,592	\$4,843,150	\$4,772,943	\$20,207,894	\$786,412	\$35,876,884
Federal taxes	\$223,770	\$654,224	\$591,774	\$737,928	\$435,638	\$110,073	\$2,753,407
Other Economic Activity							
Indirect and induced sales	\$12,685,359	\$47,966,819	\$30,678,865	\$50,105,860	\$16,107,211	\$13,716,926	\$171,261,040
Number of jobs	108	429	272	417	154	99	1,479
Labor income	\$3,901,933	\$14,297,368	\$7,980,840	\$15,816,212	\$4,016,747	\$4,788,412	\$50,801,512
Other property type income	\$7,759,439	\$27,784,761	\$16,742,033	\$30,273,652	\$8,977,657	\$8,205,433	\$99,742,975
State and local taxes	\$637,968	\$2,331,447	\$1,554,064	\$2,282,025	\$740,876	\$582,933	\$8,129,313
Federal taxes	\$123,291	\$371,244	\$189,887	\$352,816	\$146,182	\$81,592	\$1,265,012
Total Economic Activity							
Total sales	\$36,399,850	\$119,617,235	\$108,575,476	\$141,326,818	\$57,552,869	\$27,933,368	\$491,405,616
Number of jobs	384	1,443	1,428	1,580	693	280	5,808
Labor income	\$15,490,364	\$42,334,122	\$36,238,226	\$56,833,344	\$22,069,042	\$11,137,501	\$184,102,599
Other property type income	\$22,126,455	\$64,778,750	\$55,271,503	\$81,755,872	\$32,064,852	\$16,329,483	\$272,326,915
State and local taxes	\$1,795,861	\$6,440,039	\$6,397,214	\$7,054,968	\$2,948,770	\$1,369,345	\$26,006,197
Federal taxes	\$347,061	\$1,025,468	\$781,662	\$1,090,744	\$581,770	\$191,666	\$4,018,371

Note: Figures for labor income, other property type income, and indirect business taxes are components of gross sales and thus cannot be added together. Adding all dollar figures in this table would constitute double counting of economic contribution.

APPENDIX A

NUMBER OF HOUSEHOLDS USING MOTORIZED VEHICLES AND NUMBER AND PERCENTAGE OF DAY AND OVERNIGHT TRIPS

The following tables show the estimated percentage of households participating in motorized recreation in 2012-2013 season, as well as the percentage and average number of overnight and day trips taken by motorized enthusiasts. Table A-1 summarizes the percentages of respondents participating in motorized recreation in the 2012-2013 season, based on data collected from the 2001 study.

Table A-1. Percentage of Respondents that Participated in Motorized Recreation during 2012-2013 Season

ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
93%	80%	82%	78%

Table A-2 provides the total number of households participating in motorized recreation during the 2012-2013 season. These figures have been adjusted to remove businesses, and households with more than one vehicle. Additionally, the number of 4-WD vehicles was also further adjusted to only account for vehicles that were used for OHV recreation.

Table A-2. The Number of Households Participating in Motorized Recreation during 2012-2013 Season

	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives	Total
Colorado Households	70,292	26,513	12,577	38,701	148,083
Non-Residents Households	24,116	2,563	5,929	3,500	36,108

Tables A-3 and A-4 provide the average number of day and overnight trips taken by Colorado (resident) and non-resident households. This information was obtained from the 2001 study.

Table A-3. Average Number of Day and Overnight Trips Taken by Residential Households

	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Day Trips	8.4	16.4	14.7	6.8
Overnight Trips	5.5	6.8	5.0	7.4

Table A-4. Average Number of Day and Overnight Trips Taken by Non-Residential Households

	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Day Trips	10.4	15.3	11.3	3.4
Overnight Trips	3.2	2.0	3.3	3.1

Tables A-5 and A-6 provide the percent of residential and non-residential households who take day and overnight trips. This information is from the 2001 study.

Table A-5. Percent of Residential Households who Take Day and Overnight Trips

	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Day Trips	85%	87%	94%	98%
Overnight Trips	73%	69%	44%	86%

Table A-6. Percent of Non-Residential Households who Take Day and Overnight Trips

	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Day Trips	21%	11%	52%	31%
Overnight Trips	78%	71%	63%	89%

**ITEMIZED TRIP EXPENDITURES FOR DAY AND OVERNIGHT TRIPS
ASSOCIATED WITH MOTORIZED RECREATION IN COLORADO DURING
THE 2012-13 SEASON**

The following tables show the estimated itemized expenditures used by Louis Berger to calculate total trip expenditures made by motorized recreational enthusiasts during the 2012-13 season. Itemized expenditures are estimated separately for day and overnight trips for both resident and non-resident households. Louis Berger derived the itemized expenditures from the 2001 study completed by Hazen and Sawyer and adjusted these values for inflation (2012 dollars).

Table A-7. Average Itemized Expenditures for Latest Day Trip for Resident Households (2012\$)

Expenditure Type	ATVs, UTVs, and Other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Gasoline/oil for motorized recreational vehicles	\$19.92	\$19.53	\$40.12	\$35.54
Gasoline/oil for tow vehicles	\$43.77	\$32.02	\$29.37	\$9.98
Restaurant/lounge purchases	\$34.20	\$29.16	\$32.88	\$21.99
Food and beverage purchased at grocery, convenience stores	\$25.55	\$21.87	\$20.06	\$19.67
Guides and tour packages	\$0.66	\$1.30	\$1.30	\$1.22
Repairs	NA	NA	NA	\$9.88
User fees and donations	\$2.63	\$4.69	\$2.02	\$2.55
Souvenirs, gifts and entertainment	\$3.62	\$2.60	\$8.92	\$4.39
Other trip-related expenses	\$2.86	\$10.02	\$3.16	\$4.05
Total	\$133.21	\$121.20	\$137.83	\$109.27

Table A-8. Average Itemized Expenditures for Latest Overnight Trip for Resident Households (2012\$)

Expenditure Type	ATVs, UTVs, and other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Gasoline/oil for recreational vehicle	\$44.91	\$37.88	\$84.32	\$87.39
Gasoline/oil for tow vehicles	\$108.31	\$64.18	\$80.01	\$33.56
Restaurant/lounge purchases	\$61.31	\$59.36	\$156.80	\$78.82
Food and beverage purchased at grocery, convenience stores	\$122.76	\$91.78	\$59.30	\$83.68
Overnight accommodations	\$59.10	\$41.66	\$235.31	\$70.90
Guides and tour packages	\$0.52	\$1.82	\$8.72	\$1.94
Repairs while 4-wheeling	NA	NA	NA	\$28.03
User fees and donations	\$4.17	\$8.98	\$2.21	\$5.90
Souvenirs, gifts and entertainment	\$16.92	\$12.11	\$42.06	\$27.70
Other trip-related expenses	\$31.89	\$26.04	\$10.45	\$23.71
Total	\$449.90	\$343.80	\$679.18	\$441.62

Table A-9. Average Itemized Expenditures for Latest Day Trip for Non-Resident Households (2012\$)

Expenditure Type	ATVs, UTVs, and other Multi- wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Gasoline/oil for motorized recreational vehicles	\$17.13	\$15.75	\$45.37	\$46.99
Gasoline/oil for tow vehicles	\$36.22	\$53.37	\$32.40	\$25.85
Restaurant/lounge purchases	\$30.19	\$36.97	\$28.93	\$43.86
Food and beverage purchased at grocery, convenience stores	\$27.68	\$20.96	\$31.88	\$23.11
Guides and tour packages	\$0.89	\$0.65	\$2.11	\$0.90
Repairs	\$0.00	\$0.00	\$0.00	\$28.39
User fees and donations	\$2.82	\$0.65	\$2.00	\$7.85
Souvenirs, gifts and entertainment	\$13.02	\$14.84	\$10.10	\$18.51
Other trip-related expenses	\$3.19	\$12.37	\$0.36	\$1.71
Total	\$131.13	\$155.56	\$153.16	\$197.17

Table A-10. Average Itemized Expenditures for Latest Overnight Trip for Non-Resident Households (2012\$)

Expenditure Type	ATVs, UTVs, and other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snowmobiles	4-Wheel Drives
Gasoline/oil for recreational vehicle	\$53.26	\$64.58	\$112.85	\$153.06
Gasoline/oil for tow vehicles	\$703.59	\$249.68	\$173.78	\$168.19
Restaurant/lounge purchases	\$191.47	\$200.29	\$194.43	\$206.63
Food and beverage purchased at grocery, convenience stores	\$190.95	\$192.40	\$94.48	\$124.65
Overnight accommodations	\$218.21	\$193.91	\$255.49	\$252.81
Guides and tour packages	\$9.84	\$5.48	\$11.94	\$28.72
Repairs while 4-wheeling	\$0.00	\$0.00	\$0.00	\$124.14
User fees and donations	\$16.44	\$30.70	\$14.15	\$7.99
Souvenirs, gifts and entertainment	\$114.83	\$109.55	\$48.66	\$100.48
Other trip-related expenses	\$162.03	\$65.75	\$21.19	\$34.28
Total	\$1,660.61	\$1,112.35	\$926.98	\$1,200.95

APPENDIX B

ANNUAL EXPENDITURES ON MAINTENANCE, STORAGE, AND MISCELLANEOUS ITEMS RELATED TO OFF-HIGHWAY VEHICLE RECREATION IN COLORADO

The estimated annual expenditures by resident and non-resident households for vehicle maintenance, repairs, storage, and miscellaneous items made during the 2012-13 season are estimated with information from the 2001 study and adjusted for inflation to 2012 dollars. Tables B-1 and B-2 summarize the average itemized expenditures for various items by resident and non-resident households and the percentage of each expenditure made in Colorado. This information is reported in the 2001 study. This calculation consists of multiplying the average expenditure per household per expenditure category by the estimated average percent of the expenditure spent in Colorado.

The total itemized expenditures on maintenance, repairs, storage, and miscellaneous items are estimated by multiplying the number of households that own motorized vehicles used for recreation in Colorado by the average itemized expenditures per category per household. For resident households, the total population of households that own motorize vehicles is used in the calculation. Louis Berger assumed that these expenditures would occur whether or not households participated in OHV recreation in any given year (e.g. maintenance). For non-resident households, the total expenditure calculation only considers those households that participated in OHV recreation in Colorado in 2012.

For non-residential households owning 4-WD vehicles, the number of resident households used in the calculation is a lower-end estimate of 3,500 households. This is because the survey was administered to households considered to be “enthusiasts” and who would likely have higher annual expenditures on these items. Expenditures for these items may or may not be relevant to the general population in Colorado who own and use their 4-WD vehicles for recreation. This may underestimate the total expenditures of households that use 4-WDs for recreation.

Table B-1. Average Itemized Expenditures Made by Resident Households Associated With Maintenance, Repairs, Storage, and Miscellaneous Items for Vehicles Used for Motorized Recreation in Colorado (2012\$)

Expenditure Category	ATVs, UTVs, and other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow- mobiles	4-Wheel Drives
Repairs and parts	\$289.26	\$676.26	\$345.01	\$2,329.98
Vehicle storage	\$1.82	\$3.53	\$3.46	\$0.63
Motorized recreational accessories (covers, saddle or tank bags, ski skins, studs, carbides, mirrors, etc.)	\$87.93	\$99.55	\$108.75	\$557.11
Clothing (suits, pants, gloves, etc.)	\$46.97	\$269.13	\$117.23	\$0.00
Safety equipment (helmets, tools, first aid, etc.)	\$44.21	\$154.23	\$68.39	\$29.90
Annual insurance payment	\$33.55	\$61.60	\$61.03	\$981.46
Registration or permit fees	\$31.06	\$90.09	\$10.39	\$114.68
Club memberships	\$0.08	\$6.22	\$2.00	\$26.93
Magazine subscriptions	\$1.98	\$7.55	\$1.48	\$6.91
Other items	\$37.21	\$34.98	\$13.49	\$68.51
Total	\$574.07	\$1,403.13	\$731.23	\$4,116.11

Table B-2. Average Itemized Expenditures Made by Non-Resident Households Associated With Maintenance, Repairs, Storage, and Miscellaneous Items for Vehicles Used for Motorized Recreation in Colorado (2012\$)

Expenditure Category	ATVs, UTVs, and other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow- mobiles	4-Wheel Drives
Repairs and parts	\$45.45	\$73.99	\$292.38	\$473.58
Vehicle storage	\$0.16	\$0.04	\$9.01	\$0.46
Motorized recreational accessories (covers, saddle or tank bags, ski skins, studs, carbides, mirrors, etc.)	\$10.03	\$11.91	\$25.93	\$113.39
Clothing (suits, pants, gloves, etc.)	\$41.56	\$25.42	\$94.80	\$0.00
Safety equipment (helmets, tools, first aid, etc.)	\$3.31	\$13.35	\$37.21	\$1.87
Annual insurance payment	\$5.19	\$1.90	\$20.74	\$34.05
Registration or permit fees	\$16.15	\$1.47	\$24.76	\$5.96

Expenditure Category	ATVs, UTVs, and other Multi-wheeled OHVs	Dirt or Dual Purpose Bikes	Snow- mobiles	4-Wheel Drives
Club memberships	\$0.03	\$0.64	\$1.89	\$3.53
Magazine subscriptions	\$0.19	\$0.82	\$1.20	\$0.46
Other items	\$2.16	\$2.57	\$43.70	\$31.94
Total	\$124.24	\$132.13	\$551.63	\$665.23

New Vehicle Sales

Louis Berger used information from a number of sources to estimate sales of vehicles used for motorized recreation in Colorado during 2012-13 season. Data were obtained from the Motorcycle Industry Council on the number of dirt bikes and ATVs purchased in 2011 as well as the total retail sales of those vehicles. Louis Berger inflated the sales figures to 2012 dollars. Data on the number of snowmobiles sold in Colorado were obtained from the International Snowmobile Manufacturers' Association for the 2012-13 season, and the numbers of utility vehicles sold was obtained from Power Products Marketing for 2011. The average price of snowmobiles and UTVs was obtained by contacting a number of Colorado dealerships and searching on the internet for prices.

The information on new sales of 4-WD vehicles comes from the original 2001 survey. In that survey, 11 percent of households using 4-WD for motorized recreation indicated they purchased new 4-WD. For this analysis, Louis Berger used a more conservative estimate of 1 percent of households would purchase a new vehicle for OHV use. The cost of these vehicles, as reported in the survey, is inflated to 2012 dollars.

The estimated new vehicle sales are summarized in Table B-3. The value of new sales for all vehicles ranges from \$12.4 million for 4-WDs to \$44 million for ATVs. Total vehicle sales are estimated to be \$133 million.

Table B-3. Estimated Annual Motorized Vehicle Sales by Residential Household (2012\$)

	ATVs	Dirt or Dual Purpose Bikes	UTVs	Snowmobile s	4-Wheel Drives	Total All Vehicles
Number of new vehicles sold	5,791	4,029	3,300	1,857	385	15,362
Average price of new vehicles purchased	\$7,820	\$6,344	\$10,000	\$9,500	\$32,217	NA
Estimated Value of New Vehicles Sales in Colorado	\$44,461,900	\$25,094,700	\$33,000,000	\$17,641,500	\$12,403,385	\$132,601,485

