



Economics of Idaho Off-Highway Vehicle Recreation

Technical Report

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF IDAHO

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Executive Summary

Off-highway vehicle (OHV) recreation in Idaho is big business. Idaho OHV enthusiasts took close to 1 million recreation trips in Idaho during 2012 and spent about \$434 million - \$186 million on OHV recreation trips and \$248 million on OHV capital expenditures such as the vehicles themselves.

Of the \$186 million that Idaho households spent for OHV trips, \$84 million was for trips in the home county and just over \$100 million was for out-of-county trips. Close to 76% of expenditures for out-of-county trips were made in the home county; the remaining 24% were made in the destination county.

OHV recreationists in five counties (Ada, Bonneville, Kootenai, Bannock, and Bonner counties) made over half of Idaho's total trip expenditures. Ada, Kootenai, Bonneville, Bannock, Twin Falls, and Canyon counties captured over half of Idaho's total OHV capital expenditures. With the exception of several larger counties (e.g., Ada, Kootenai, and Bonneville) most Idaho counties fail to capture OHV recreation trip and capital expenditures.

The top 10 counties, as ranked by total trips taken in the county, attracted close to half of the total 1 million OHV recreation trips taken in Idaho during 2012. Over half of the OHV recreation trips were taken outside the home county. Valley County topped Idaho's trip count - 49,000 trips from outside the county and 9,000 trips by Valley County residents. Owyhee County, with 51,000 trips by out-of-county households, was Idaho's top OHV recreation destination county. In contrast, 92% of trips in Kootenai County were taken by residents of the county.

On average, each Idaho OHV household took 12 OHV-related trips during the year with a party size of four people. A typical OHV trip took close to 3 days. All-terrain vehicles and dirt bikes accounted for 91% of the vehicles used for OHV outings. Hiking, camping, and picnicking was the principle activity engaged in during OHV trips.

Introduction

During August through November 2012, the University of Idaho in conjunction with the Idaho Department of Parks and Recreation (IDPR) conducted a survey of off-highway vehicle (OHV) users about their recreation trips and recreation expenditures in Idaho. Assessing the economic footprint of Idaho OHV recreation is key in making decisions regarding OHV recreation funding for trail, park, and land management and informs Idaho decision makers regarding local OHV recreation.

Many types of recreation revolve around OHVs. For example, many backcountry hunting trips would not be possible without an OHV. OHVs include a spectrum of vehicles including motorized two-wheel, three-wheel, four-wheel, and even some track vehicles. Snow and water machines were excluded from our analysis.

The survey was administered to a sample taken from an IDPR list of registered OHV owners. Out-of-state OHV recreationists who travel to Idaho to recreate or make capital expenditures were not included in the list and thus were not counted in our survey. Similarly, expenditures by Idaho residents that take out-of-state OHV trips but make trip expenditures in Idaho were not counted. Thus, the total economic footprint of OHV recreation in Idaho is higher than estimated in this report.

The survey collected the following information:

- **OHV recreation trips** taken by Idaho OHV recreationists in each Idaho county.
- **Capital expenditures** made in each Idaho county.
- **Trip expenditures** made by OHV recreationists.
- **People**, adults and children, participating in OHV recreation trips.
- **Vehicle types** used for OHV recreation.
- **OHV recreational activities** enjoyed during OHV recreation trips.

Sample data were expanded to the total population of Idaho OHV recreationists to estimate total OHV recreation trips in each Idaho county and total OHV recreation trip and capital expenditures in each Idaho county. County estimates of trips and expenditures are detailed in Appendix 1.

OHV Recreation Expenditures

OHV enthusiasts spent about \$434 million in Idaho in 2012 - close to \$186 million for OHV recreation trips and about \$248 million for capital purchases.

OHV Recreation Trip Expenditures

Trip expenditures are those made for non-durable goods and services related to a single trip and not used for multiple trips. Trip expenditures are categorized into lodging, restaurant dining, groceries, fuel, retail purchases, and other purchases. Fuel purchases constituted 39% of total trip expenditures (Figure 1). Groceries accounted for 27%. Dining, retail, and lodging make up the remaining one-third of trip expenditures.

The expenditure pattern and amount (\$ per trip per household) varies dramatically between counties and depending on whether the trip is local or to a distant county. Trips taken within the home county are often low-budget day trips that do not include lodging. For a Boise resident, an afternoon trip to the Boise foothills is going to cost far less than a week-long trip to Owyhee County.

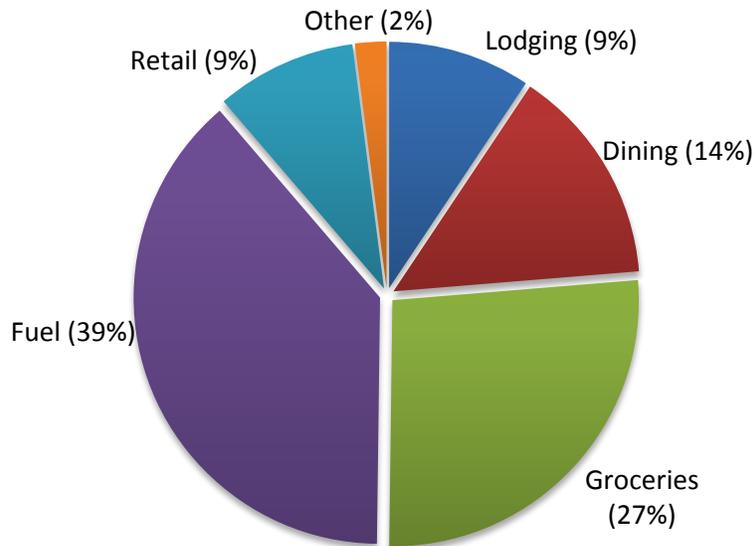


Figure 1. OHV trip expenditures.

Trip expenditures are classified by the county in which the trip expenditure was incurred. For trips taken within the home county, expenditures will be incurred in the home county. Expenditures for out-of-county trips can be made either in the home county or in the destination county. Of the total \$186 million in trip expenditures in Idaho, \$84 million were made by residents of the respective county for trips within their home counties and \$102 million were made for out-of-county trips (Appendix 1).

- The top 10 trip expenditure counties constitute over two-thirds of Idaho’s total \$186 million in trip expenditures. Ada, Bonneville, and Kootenai constitute over 40% of the total trip expenditures.
- Kootenai, Ada, Idaho, and Jefferson counties are the top counties for within-county trip expenditures. The top 10 within-county trip expenditures constitute close to two-thirds of the state's total \$84 million within-county trip expenditures.
- Ada and Bonneville counties captured over half of the state’s total \$78 million home-county trip expenditures.
- Ada, Bonner, and Bonneville are the only counties that exceed \$3 million for out-of-county trip expenditures made in the destination county.

Of the total of \$102 million expended for out-of-county trips, \$78 million was spent in the home county and \$24 million in the destination county. Thus, for out-of-county trips, over 75% of trip expenditures were made within the home county. For many counties, the

percentage is much higher. For example, a total of \$35.3 million was expended by Ada County residents on OHV recreation trips (Appendix 1), including \$7.1 million for trips within Ada County. Of the \$28.2 million in trip expenses for out-of-county trips, \$22.7 million (80%) was spent in Ada County and only \$5.5 million in the destination county.

Few goods and services are offered Ada County's OHV recreationists when visiting popular counties such as Owyhee and Boise. Valley County, the most-visited county in the state, has services and lodging available but cannot compete with the cheaper gas and groceries of metro Boise. Similarly, Bonneville County OHV recreationists make 86% of their trip purchases in Idaho Falls before traveling out of county to recreate - \$18 million of \$21 million. Only when inexpensive services are offered in the destination county will expenditures be made at the destination. For example, Latah County residents fill up with less expensive gas in Lewiston when taking a trip to Idaho County. Thus, 40% of Latah County out-of-county trip expenditures were made enroute to the destination county.

Table 1. Top 10 counties in total trip expenditures made by county households (\$ millions), 2012.

Rank	County of residence	Home-county trips expenditures	Out-of-county trips Expenditures		Total trip expenditures
			Home	Destination	
1	Ada	7	23	6	35
2	Bonneville	3	18	3	24
3	Kootenai	12	4	1	17
4	Bannock	4	4	2	10
5	Bonner	2	3	5	9
6	Bingham	4	2	1	8
7	Jefferson	5	1	0	6
8	Twin Falls	1	3	2	6
9	Idaho	6	0	0	6
10	Latah	3	1	1	5

OHV recreationists living in five counties—Ada, Bonneville, Kootenai, Bannock, and Bonner—expended over half of Idaho’s \$186 million in total trip expenses (Table 1). Ada, Bonneville, and Kootenai counties had the highest home-county trip expenditures and these counties constituted over 40% of the total trip expenditures in the state.

Many of the top trip-destination counties are not the recipients of OHV expenditures. Owyhee, Valley, and Boise counties top this category. Expenditures for trips to these counties were made primarily in the Treasure Valley. The bottom five counties in trip expenditures (Washington, Camas, Clark, Lincoln, and Teton) record less than one-third million dollars in trip expenditures each. Many households in Idaho’s smaller rural counties take only local trips with minimal trip expenditures. For example, Bear Lake County OHV

recreationists made a total of \$2.2 million in trip expenditures - \$1 million for trips within the county and \$1.1 million for trips outside Bear Lake County (Appendix 1).

The top 10 counties for home-county trip expenditures are the “homebody” counties. These counties have ample OHV recreation opportunities, attracting OHV recreationists close to home. The top two homebody counties, Kootenai and Ada, also have a large percentage of the state’s OHV users (table 7). Residents of Kootenai County expended \$12.4 million on trips within Kootenai County and only \$5.2 million on trips to other counties (Appendix 1). Idaho County with Elk City and Fremont County with the Sand Dunes and Island Park are also able to retain OHV users from within the county. Trip expenditures by the top 10 “homebody” counties constitute close to two-thirds of the state’s total \$84 million home-county trip expenditures (Table 2).

Table 2. Top 10 counties in home-county trip expenditures made by county households (\$ millions), 2012.

Rank	County of residence	Home county trip expenditures
1	Kootenai	12.4
2	Ada	7.1
3	Idaho	5.6
4	Jefferson	5.0
5	Fremont	4.8
6	Clearwater	4.5
7	Bingham	4.5
8	Bannock	4.1
9	Bonneville	3.1
10	Latah	2.9

OHV Recreation Capital Expenditures

OHV capital expenditures are annual or multi-year expenses not tied to a specific or single trip. Capital expenditures are categorized into ATV/OHV purchases, trailer, equipment (helmet, tools, etc.), repairs or modifications, fees (registration, taxes, club dues, etc.), towing vehicles, and other expenses. Capital expenditures averaged \$4,500 per OHV household per year. Purchases of OHVs (44%) and tow vehicles (32%) accounted for over three-fourths of capital expenditures (Figure 2).

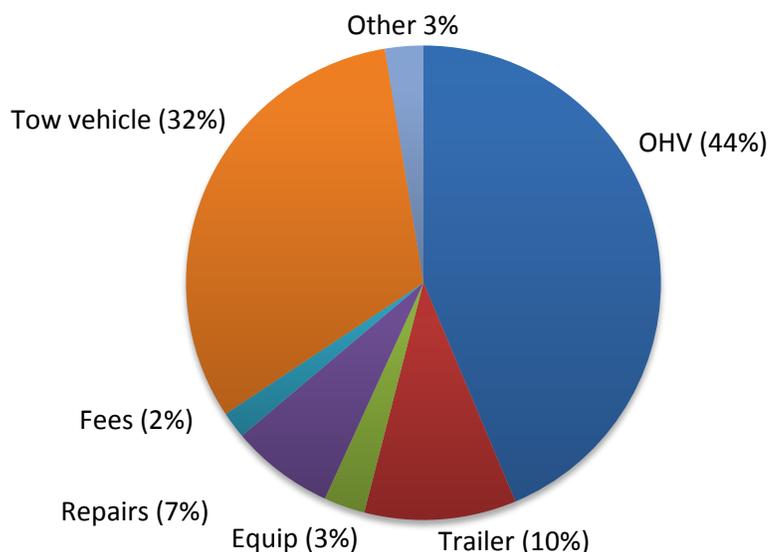


Figure 2. OHV capital expenditures, 2012.

The survey asked respondents to identify the county in which they made the *majority* of their capital expenditures. By this measure, Ada, Kootenai, Bonneville, Bannock, Twin Falls, and Canyon counties captured over half of the total \$248 million of Idaho's OHV capital expenditures. Ada County alone captured over 16% of Idaho's total capital expenditures (Table 3).

Thus, Idaho's major trade centers (Boise, Twin Falls, Pocatello, Idaho Falls, and Coeur d'Alene) attracted most OHV capital expenditures. Residents of those trade-center counties made virtually all their capital expenditures in the home county, and those counties also attracted the capital expenditures of OHV users from surrounding rural counties. Six counties (Boundary, Camas, Clark, Lewis, Lincoln, and Power) attracted virtually no capital expenditures (Appendix 1).

Table 3. Top 10 counties in capital expenditures (\$ millions), 2012.

Rank	Spending location	Capital expenditures
1	Ada	40
2	Kootenai	22
3	Bannock	20
4	Canyon	20
5	Bonneville	16
6	Twin Falls	14
7	Nez Perce	13
8	Bingham	10
9	Cassia	7
10	Shoshone	7

In contrast to trip expenditures, not all capital expenditures are incurred exclusively for OHV recreation. A pickup purchased to tow an OHV will be used for work and for other recreation, and an ATV may be purchased for both farm work and hunting trips. In short, capital expenditures reported here overestimate actual expenditures for OHV recreation.

OHV Recreation Trips

Trips are estimated as total trips taken in each county in Idaho, either by residents of the county or by OHV users from other Idaho counties. For example, of the estimated 19,000 total OHV recreation trips taken in Latah County, 13,000 were by Latah County residents and 6,000 by residents of 43 other Idaho counties (Appendix 1).

Idaho households took close to 1 million OHV recreation trips during the year of study. Over half a million trips (57%) were by out-of-county visitors. The ratio of home-county to out-of-county visitors depends on the population of OHV users in the county, the availability of OHV attractions, and proximity to a metro area.

Top 10 Counties for Total Trips

Three of the top ten counties for OHV trips—Valley, Owyhee, and Boise—are the OHV playground for metro Boise. Abundant OHV recreation opportunities and proximity to metro Boise make Valley County Idaho’s top OHV trip destination. Valley County hosted 58,000 OHV trips—9,000 from Valley County residents and 49,000 from residents of other Idaho counties. Just behind Valley County was Owyhee County with 55,000 trips and Boise County with 54,000 trips.

The top ten total trips counties are near a major Idaho city or contain one. The exception is Idaho County, the sixth-ranked county for trips. The top three counties—Owyhee, Valley, and Boise—are near the cities of Boise, Nampa, and Meridian. Shoshone and Bonner counties draw visitors from the nearby cities of Coeur d’Alene and Post Falls. In particular, the St. Joe River drainage in Shoshone County is a big draw for OHV recreation in northern Idaho. Fremont County ranked ninth in total trips because the St. Anthony Sand Dunes and Island Park area are big draws for out-of-county visitors, most likely from the nearby cities

of Idaho Falls and Rexburg. Fremont County is also a big draw for Utah visitors, who were not counted in this study, however. Bonneville, Kootenai, and Ada counties encompass major metro populations and thus draw substantial numbers of home county OHV users. Lincoln, Oneida, Minidoka, and Jerome counties had the fewest number of OHV trips.

Table 4. Top 10 counties in number of OHV recreation trips (thousands).

Rank	Trip location	Home-county households	Out-of-county households	Total trips
		(thousand trips)		
1	Valley	9	49	58
2	Owyhee	4	51	55
3	Boise	10	44	54
4	Kootenai	49	4	53
5	Ada	31	18	49
6	Idaho	23	21	45
7	Shoshone	9	35	44
8	Bonneville	19	21	41
9	Fremont	15	24	39
10	Bonner	19	19	38

Homebody Counties

Ranked by percentage of total trips by county households, Kootenai, Minidoka, Nez Perce, and Oneida counties are Idaho’s top homebody counties. Of the total 53,000 trips taken in Kootenai County, 49,000 trips (92%) were taken by Kootenai County residents. With small populations and large numbers of trips by out-of-county households, Clark, Owyhee, and Boise counties had the lowest percentages of trips by home-county households. Ranked by absolute numbers of home-county trips, Kootenai, Ada, Idaho, Bonner, and Bonneville counties are Idaho’s top homebody counties. Ada County ranked second in trips (31,000) by home county households. Following Ada County was Idaho County with 23,000 trips.

Playground Counties

The top 10 trip-destination counties (Owyhee, Valley, Boise, Shoshone, Adams, Fremont, Elmore, Bonneville, Idaho, and Clearwater counties) are Idaho’s OHV playground counties. These 10 counties received close to 60% of the total 543,000 out-of-county trips. Over 90% of the total trips taken in Owyhee County were by out-of-county visitors. Over 80% of the total trips taken in Adams, Valley, and Boise counties were by out-of-county visitors.

These top trip destination counties fail to capture the OHV recreation dollar. For example, Owyhee, Valley, Boise, Adams, and Elmore counties draw OHV recreationists from Canyon and Ada counties. Ada County recreationists, however, made over 80% of trip expenditures for out-of-county trips within Ada County itself. Similarly, over 60% of the trips in Fremont County were taken by out-of-county households, most likely from Madison and Bonneville counties. Like Ada County, Bonneville and Madison county recreationists made over 80% of expenditures for out-of-county trips within the home county.

Out-of-state Visitors

OHV trips taken and expenditures in Idaho by residents of other states were not included in this study. In some counties, however, such as Minidoka and Gooding counties, virtually all OHV users are Idaho residents. These counties lack OHV attractions for their own residents, residents of other Idaho counties, or out-of-state visitors. In contrast, Fremont County, with the Dunes and Island Park, are big draws for Utah OHV users. Similarly, Shoshone County is an OHV playground for Montana and Washington OHV users. Less-obvious attractions for out-of-state visitors may be the border counties such as Bear Lake, Oneida, Cassia, and Franklin, which are convenient trip destinations for many Utah OHV users.

OHV Recreational Activities

Survey respondents were asked which three activities was the greatest amount of time spent. Five activities (driving back roads; sightseeing and visiting historical sites; hiking, camping, and picnicking; trail riding, and hunting or fishing) accounted for over 90% of the activities that OHV recreationists enjoy while on trips. Hiking, camping, and picnicking accounted for over a quarter of OHV activities. The next three most popular OHV recreational activities were driving back roads, fishing or hunting, and sightseeing or visiting historical sites.

Trail riding with ATVs or motorbikes accounted for 12% of the overall OHV activities. These activities were either the sole purpose of an OHV trip or one of several activities enjoyed on an OHV trip. Visiting a cabin or summer home, work-related activities, and other OHV activities accounted for 9% of all OHV activities.

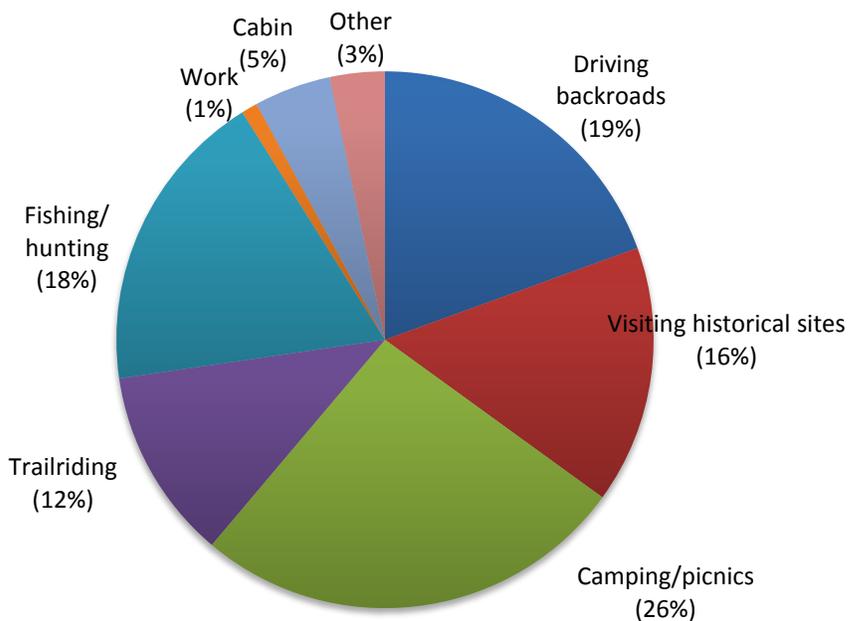


Figure 3. Greatest time spent by OHV recreational activity.

OHV Trip Length and Party Size

Party size averaged 4.4 persons per trip - 3.4 adults and one child. The average days per trip were 2.7 - just short of a 3-day weekend. On average, each household took 12 OHV-related trips annually. The number of trips per household varies widely across counties. Survey respondents in rural counties take larger numbers of short trips within the county (trips to cut firewood) and urban counties take a larger number of longer duration out-of-county trips.

OVH Type

All-terrain vehicles (ATVs) were the most commonly used recreational vehicle, accounting for two-thirds of the total recreational vehicles used. Second were dirt bikes at 24%. ATVs and dirt bikes combine for 91% of the vehicles used during outings. Utility task vehicles (UTVs), also known as “side by side” vehicles, are used for 7% of the recreational outings.

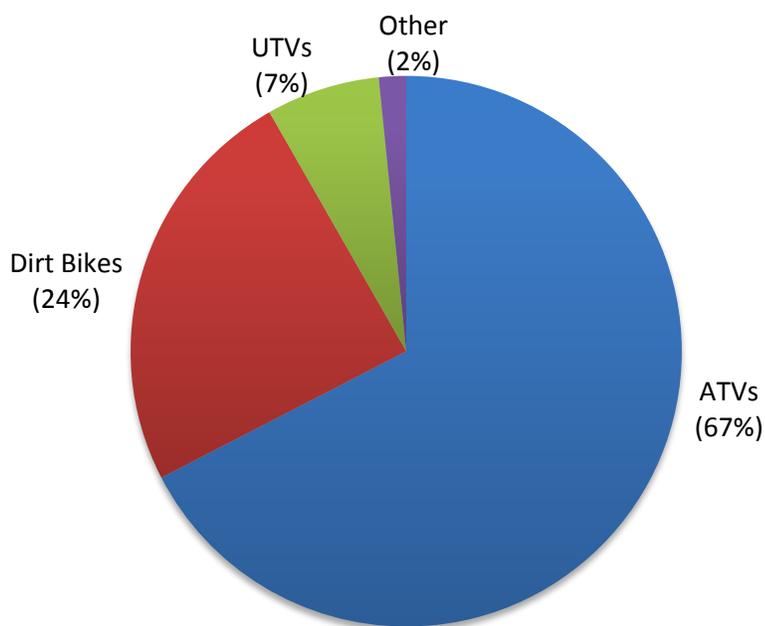


Figure 4. Number of OHV vehicles used by type.

Appendix 1 OHV recreation trips and expenditures by county, 2012.

County	OHV trips (thousands)			Trip expenses (\$ millions)				Capital expenditures (\$million)
	Home-county households	Out-of-county households	Total	Within county	Out-of-county trips		Total	
					Home	Destination		
Ada	31	18	49	7.1	22.7	5.5	35.3	40
Adams	3	28	31	0.2	0.4	0.3	0.8	1
Bannock	17	9	26	4.1	4.2	1.9	10.2	20
Bear Lake	10	9	19	1.0	1.1	0.0	2.2	2
Benewah	14	10	24	1.5	1.7	1.4	4.5	4
Bingham	9	4	13	4.5	2.5	1.4	8.4	10
Blaine	10	8	17	1.8	0.9	0.0	2.8	2
Boise	10	44	54	0.5	0.5	0.4	1.4	2
Bonner	19	19	38	1.7	2.7	5.1	9.5	5
Bonneville	19	21	41	3.1	18.0	3.0	24.1	16
Boundary	9	6	16	0.4	0.1	0.0	0.5	0
Butte	3	5	8	1.2	0.0	0.0	1.2	1
Camas	1	7	9	0.1	0.1	0.1	0.3	0
Canyon	11	4	14	2.1	0.8	0.2	3.0	20
Caribou	8	13	22	1.2	0.0	0.0	1.2	2
Cassia	7	8	15	0.7	2.3	0.3	3.3	7
Clark	0	11	11	0.0	0.0	0.0	0.0	0
Clearwater	11	20	32	4.5	0.1	0.0	4.7	3
Custer	5	16	21	0.6	0.1	0.0	0.7	2
Elmore	11	23	33	2.3	0.6	0.0	2.9	2
Franklin	8	2	10	1.2	0.2	0.1	1.5	3
Fremont	15	24	39	4.8	0.0	0.0	4.8	3
Gem	3	11	13	1.0	0.2	0.0	1.2	3
Gooding	3	4	6	0.4	0.4	0.1	0.8	4
Idaho	23	21	45	5.6	0.0	0.0	5.6	6
Jefferson	8	5	13	5.0	1.1	0.2	6.2	6
Jerome	3	1	4	1.1	0.2	0.1	1.4	6
Kootenai	49	4	53	12.4	4.3	0.9	17.5	22
Latah	13	6	19	2.9	1.2	0.8	4.9	3
Lemhi	7	14	22	1.6	0.0	0.1	1.7	3
Lewis	2	4	6	0.4	0.1	0.0	0.5	0
Lincoln	1	1	2	0.0	0.0	0.0	0.0	0
Madison	5	8	13	1.0	0.8	0.3	2.0	6
Minidoka	8	1	9	1.7	0.3	0.1	2.0	3
Nez Perce	10	2	11	1.9	0.3	0.1	2.2	13
Oneida	3	1	4	0.1	0.0	0.0	0.2	2
Owyhee	4	51	55	0.3	0.8	0.1	1.1	1
Payette	3	2	5	0.4	0.3	0.0	0.6	2
Power	2	3	6	0.3	0.4	0.0	0.7	0
Shoshone	9	35	44	1.7	3.0	0.0	4.7	7
Teton	3	2	5	0.3	0.0	0.0	0.3	1
Twin Falls	14	5	19	1.4	3.1	1.6	6.1	14
Valley	9	49	58	0.1	2.5	0.1	2.7	2
Washington	2	2	4	0.0	0.1	0.0	0.1	1
Idaho Total	416	543	959	84	78	24	186	248

Appendix 2 Survey methodology.

In 2012 and 2013, the University of Idaho in conjunction with the Idaho Department of Parks and Recreation conducted a survey of the economic footprint study of OHV use in Idaho. The survey instrument consisted of two sections (see Appendix 5). The first section asked respondents about their OHV recreation trips and capital expenditures in Idaho during the previous 12 months. Respondents were queried as to the Idaho counties in which they had recreated and the frequency of outings in each county. The final question of the first section asked the zip code of the user's primary place of residence. Zip code determined the home county of the user, while preserving anonymity of the respondent.

The second part of the survey asked respondents for information about their OHV recreation trips and trip expenditures during specific months, including counties visited, frequency of trips, and names of recreational sites. This part also asked for the types of recreational vehicles used during outings and the amount of money spent for items related to OHV recreation in the home and destination county.

Surveys were mailed on a monthly basis, with follow-up surveys mailed later to non-respondents. To maximize survey response, the survey followed this format:

- Mail out the survey with a cover letter.
- Mail a reminder postcard 10 to 14 days later.
- A reminder survey was mailed 10 to 14 days later to the same sample with a reminder to complete the survey or a thank you note.

First mailing

- 1st mailing of 2,000 surveys was sent August 22, 2012
- Reminder postcards sent August 28, 2012
- 2nd letter and survey sent September 12, 2012
- Includes sections covering OHV trips and expenditures during April, May, June, and July.

Second mailing

- 1st mailing of 1,000 letters was sent September 4, 2012
- Reminder postcards sent September 12, 2012
- 2nd letter and survey sent September 26, 2012
- Includes sections covering OHV trips and expenditures during July and August.

Third mailing

- 1st mailing of 1,000 letters was sent October 3, 2012
- Reminder postcards sent October 10, 2012
- 2nd letter and survey sent October 24, 2012
- Includes sections covering OHV trips and expenditures during August and September.

Fourth mailing

- 1st mailing of 1,000 letters was sent November 7, 2012

- Reminder postcards sent November 14, 2012
- 2nd letter and survey sent November 28, 2012, after hunting season
- Includes sections covering OHV trips and expenditures during October and November.

The survey final results:

- 24 refusals to complete survey
- 36 responses of “deceased, no OHV owned, etc.”
- 176 non-deliverables
- A total 1,630 usable surveys.

Appendix 3 Sample frame, universe, and expansion factor

The sample frame was the Idaho Department of Parks and Recreation list of registered OHV owners. The list includes out-of-state individuals, OHV-related businesses, people who use their OHV for work (e.g., farmers), and individuals who use their OHV for recreation and work. According to the IDPR 2012 registration list, there were 72,000 registered OHV owners in Idaho. From this sample frame, the universe was defined to be Idaho OHV households that registered at least one OHV that was used for recreation purposes. The IDPR list was modified to represent that universe:

1. Duplicates in the IDPR list were eliminated. A review of the list showed that about 10% of the list was mailing address or name (Bob versus Robert) duplicates.
2. Non-recreation registered OHV owners were eliminated from the universe. Respondents were also asked whether they had used their OHV for recreational purposes during the previous 12 months. Of the 1,630 respondents, 305 (18.9%) had not used their OHV for recreation during the past year
3. The universe was expanded to include non-registered OHV households. Approximately 25% of the OHV owners in Idaho fail to register their OHVs.

In summary, the universe is defined as the number of Idaho **households** that are OHV owners and used their OHV for recreation during the calendar year 2012. A household may have multiple registered OHVs.

An expansion factor was calculated for each county by taking the proportion of the households from each county (Appendix 4) as listed on the IDPR list frame and expanding that to the number of households in the universe. Number of trips was then estimated by expanding the sample number of trips taken in the home county and the number of trips taken outside the home county by this expansion factor. The sample was thus weighted by the counties that have the greatest proportion of the list frame. Approximately 16% of the original OHV list was registered in Ada County, followed by approximately 10% in Canyon County (Appendix 4).

Trip expenditures were estimated by taking the number of trips to each county (home and destination) multiplied by sample mean of expenditures for within and out-of-county trips for that respective county. Separate estimates for home county and out-of-county trips expenditures was necessary because trips taken within the county of residence are often low-budget day trips, while expenditures for multi-day, out-of-county trips can necessitate large budgets. Total trip expenditures for trips taken out of county are further divided into expenditures made within the home county and those made in the destination county.

Estimation of capital expenses by county was more straightforward. The survey asked for a breakdown of total capital expenditures during the previous 12 months and the name of the county where the respondent made the majority of the expenditures. Average capital expenditures were then multiplied by the expansion factor to estimate capital expenditures by county.

Appendix 4: IDPR list of registered OHV households by county

County	Registered users	Percent
Ada	11,152	16.0%
Adams	336	0.5%
Bannock	3,407	4.9%
Bear Lake	775	1.1%
Benewah	905	1.3%
Bingham	2,287	3.3%
Blaine	616	0.9%
Boise	570	0.8%
Bonner	1,956	2.8%
Bonneville	4,214	6.1%
Boundary	465	0.7%
Butte	227	0.3%
Camas	83	0.1%
Canyon	6,851	9.8%
Caribou	555	0.8%
Cassia	1,027	1.5%
Clark	45	0.1%
Clearwater	931	1.3%
Custer	504	0.7%
Elmore	1,200	1.7%
Franklin	868	1.2%
Fremont	764	1.1%
Gem	1,111	1.6%
Gooding	793	1.1%
Idaho	1,540	2.2%
Jefferson	1,626	2.3%
Jerome	1,032	1.5%
Kootenai	5,879	8.5%
Latah	1,674	2.4%
Lemhi	580	0.8%
Lewis	494	0.7%
Lincoln	229	0.3%
Madison	996	1.4%
Minidoka	1,164	1.7%
Nez Perce	2,372	3.4%
Oneida	310	0.4%
Owyhee	501	0.7%
Payette	1,045	1.5%
Power	297	0.4%
Shoshone	1,469	2.1%
Teton	297	0.4%
Twin Falls	3,154	4.5%
Valley	730	1.0%
Washington	547	0.8%
Out-of-State	1,988	2.9%

Appendix 5 Cover letter, survey, and post card



Idaho Department of Parks and Recreation

PO Box 83720
5657 Warm Springs Avenue
Boise, Idaho 83720-0065

Date

«First_Name» «Middle_Initial» «Last_Name»
«Address»
«City» «State» «Zipcode»

Dear OHV Registration Holder:

The Idaho Department of Parks and Recreation in conjunction with the Social Science Research Unit at the University of Idaho is conducting a survey of Off-Highway Vehicle (OHV) users. This survey will estimate the economic value of OHV recreation in Idaho. OHV recreation is a unique outdoor recreational activity that contributes to the economies of virtually every county in Idaho. As a 2012 registered Idaho OHV owner, you were randomly selected to participate in this survey. This survey has been approved by the Institutional Review Board at the University of Idaho.

Please take a few minutes to answer the questions in the attached survey questionnaire. After completing the questionnaire, return it by mail in the prepaid envelope. **If you have not yet used your OHV for recreation in Idaho in 2012, please complete the applicable questions and return the survey.** The questionnaire has an identification number for mailing purposes only. All your responses will remain strictly confidential and will only be used by the Idaho Department of Parks and Recreation for statistical purposes. Neither your name nor identifying information will be used with the data.

This survey will be repeated monthly over the summer and fall of 2012. You may be surveyed more than once. Your participation in this survey will give us a better picture of people's monthly OHV recreation activity and economic impact of OHV recreation during the year. Subsequent surveys will help us complete the picture for the other months of the year. We hope you will participate again if asked.

Thank you for agreeing to participate in this important survey of OHV recreation. If any questions should arise regarding this survey, please contact the Social Survey Unit at the University of Idaho toll free at 1- 877-542-3019.

Sincerely,

Nancy Merrill
Director

Enclosures: Survey, Return Envelope

2012 Off-Highway Vehicle Recreation Economic Survey

Section 1: Annual Use and Expenses in Idaho

1. Did you use your OHV for recreation in Idaho between November 2011 and October 2012?
 Yes No ***If NO please skip to question 4.***

2. What is the total number of OHV outings you have taken in Idaho during the **last twelve months**? _____ (An individual OHV outing is defined as leaving your primary place of residence and spending some time riding an OHV before returning home.)

3. Please list the Idaho counties in which you participated in OHV recreation during the **last twelve months** and the total number of outings in each county.

<i>County</i>	<i>Number of Outings</i>

4. How much did your household spend on the following items related to OHV recreation during the **last twelve months**?

Item	Total Expenditures Nov 2011-Oct 2012
New/used ATV or OHV	\$
Trailer	\$
Equipment and clothing (helmet, tools, jersey, etc.)	\$
Annual repairs/parts (tires, spark plugs, etc.)	\$
Modifications and upgrades	\$
Registration/licenses/taxes	\$
Club dues/expenses	\$
Vehicle for towing ATV or OHV trailer	\$
Other purchases: (please list _____)	\$

5. In which Idaho county did you make **MOST** of these annual expenses? _____.

6. Do you own a cabin or summer home where you recreate? Yes No (check one box)
 If yes, what county is the home located? _____(county name)

7. What is the zip code of your PRIMARY place of residence? _____.

Section 2: October 2012 OHV Recreational Outings

Please tell us about the OHV outings made during **October 2012**.

1. Did you use your off-highway vehicle (OHV) for recreation in Idaho during **October 2012**? Yes No *If NO please skip to Section 3.*

2. Please list the Idaho counties in which you participated in OHV recreation during **October 2012** and the total number of outings taken in each county.

County name	Number of outings

From your list above of October 2012 outings, please select a **single** location that you visited most frequently or spent the greatest amount of time away from your primary place of residence during October 2012.

3. What is the **specific OHV recreation site name and county** for the October 2012 location that you spend the greatest amount of time at (e.g. Idaho City, Fairfield, Hemmingway Butte, St. Anthony Sand Dunes, Black's Creek).

Site name: _____ County: _____

4. How many days did you spend on a **single** October 2012 OHV outing to this location? _____ (days per single outing)

5. How many adults and children, including yourself, participated on your **single** October 2012 OHV outing?
 _____ Adults _____ Children (17 and under)

6. How many recreational vehicles did you use on your **single** October 2012 OHV outing?
 ___ ATVs ___ Dirt Bikes ___ UTVs ___ other OHV

7. Please estimate the total amount you spent for your **single** October 2012 OHV outing of 2012 in the following categories.

Item	Amount Spent in Home County	Amount Spent in Destination County	Total Trip Expenses
Lodging/campgrounds	\$	\$	\$
Food and beverage in restaurants	\$	\$	\$
Food and beverage in stores	\$	\$	\$
Round trip fuel/gas	\$	\$	\$
Other retail purchases of equipment & supplies	\$	\$	\$
Other purchases: specify _____	\$	\$	\$

8. What activities did you do on this **single** October 2012 outing (mark up to three that you spent the greatest amount of time doing).

- | | |
|--------------------------------------|----------------------------------|
| _____ Driving back-roads | _____ Fishing |
| _____ Sightseeing | _____ Hunting |
| _____ Hiking | _____ Visiting historical sites |
| _____ Camping | _____ Activities related to work |
| _____ Picnicking | _____ Visiting cabin/summer home |
| _____ Trail riding ATV or motorbikes | _____ Other |

Off-Highway Vehicle (OHV) User

Last week a questionnaire seeking information about Off-Highway Vehicle (OHV) users was mailed to you. This survey will estimate the economic value of OHV recreation in Idaho. OHV recreation is a unique outdoor recreational activity that contributes to the economies of virtually every county in Idaho. If you have already completed the questionnaire and returned it to us, please accept our sincere thanks. If not, please do so today. It is extremely important that your responses be included in this study.

If by chance you did not receive the questionnaire, please call the Social Science Research Unit, toll-free, at (1-877-542-3019) and another survey will be sent to you.

Sincerely,

A handwritten signature in cursive script that reads "Nancy Merrill".

Nancy Merrill
Director, ID Department of Parks & Recreation

Appendix 6 OHV recreation studies

Arizona (2002)

The Arizona OHV recreation study, "The Economic Importance of Off-Highway Vehicle Recreation" (Silberman, 2002), collected data by a random telephone survey in each county to estimate the number of OHV households in each county. Response targets were not being met necessitating a revision to the original script, and the return rate for the second telephone survey was 39%. If telephone respondents were OHV users then a mail questionnaire was sent to the residence. There were 3,118 households that received the mail questionnaire, and the return rate for the mail questionnaires was 41%. The mail surveys were used to estimate OHV activity days, trip and equipment expenditures, and the location of OHV expenditures. The results of the survey are:

- \$3 billion in retail sales during 2002
- \$4.25 billion statewide economic impact
- OHV recreation supports 36,951 jobs
- \$1.1 billion in salaries and wages for Arizona residents

Colorado (2009)

Colorado Off-Highway Vehicle Coalition sponsored a study published as "Economic Contribution of Off-Highway Vehicle Recreation in Colorado" (Louis Berger Group, 2009). Data on location of OHV recreation, average expenditures during OHV trips, and capital expenditures were collected via a household survey. The results of the analysis are:

- 184,049 Colorado residents used OHVs and snowmobiles for recreation in 2007–08
- 2,163,065 OHV recreational trips were taken by Colorado residents
- \$542 million total trip expenditures
- \$242 million total capital expenditures by resident and non-resident households.

Florida (2007)

In 2007, Florida studied the economic impact of OHV of the Croom Motorcycle Area in the Withlacoochee State Forest (Parent, 2007). On-site interviews were conducted to introduce and familiarize OHV users with the take-home survey. A total of 342 OHV users were approached at the Croom Motorcycle Area between January and April of 2006. The return rate for the mail-back surveys was 36%. The results of the study are:

- 71.5 thousand user days in 2006
- \$6.9 million in total household trip expenditures
- \$4.4 million in total household trip expenditures in the region
- \$14.6 million in total equipment expenditures

- \$9.2 million in total equipment expenditures in the region

Michigan (1998-99)

The Michigan Department of Park, Recreation and Tourism and Michigan State University conducted a survey of the estimated annual expenditures of Michigan OHV recreationists (Nelson, et. al 2000). A survey was mailed to 5,008 randomly selected licenses of the 125,000 licenses for off-road vehicles (ORV). The return rate for the mail-out surveys was 51%. The results of the study are:

- Average licensee spent \$1,944 on capital expenditures
- \$134 million annual purchases of non-trip related equipment
- \$40 million spent in enroute and local area trip spending
- \$368 average expenditures per party per trip

Michigan (2010)

The Michigan Department of Community, Agriculture, Recreation, and Resource Studies updated the 1998–99 study with “Michigan Licensed ORV Use and Users—2010” (Nelson, 2010). During the spring, summer, and fall of 2009, a six-page survey was mailed to three randomly selected samples of 1,000 ORV licensees. The samples were selected from 138,000 licensees. To account for the 43,000 ORV licenses sold not online, 300 surveys were given to license purchases at Silver Lake State Park, the largest retail source for pre-paid license purchases. The return rate for the surveys was 30%. The results of the study are:

- 67% of the vehicles used for recreation are ATVs
- \$1,850 average capital expenditures during 2008-09
- \$212 million was spent on ORV equipment, repairs, insurance and storage
- \$109 million for trip expenditures outside of the users home region

References

Louis Berger Group, Inc. “Economic Contribution of Off-Highway Vehicle Recreation in Colorado.” Colorado Off-Highway Vehicle Coalition July 2009.

Nelson, Charles M., Joel A. Lynch, and Daniel J. Stynes. “Michigan Licensed Off-Road Vehicle Use and Users: 1998-99.” Department of Park, Recreation and Tourism Resources, Michigan State University, East Lansing, MI October 2000.

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