

A Survey and Economic Assessment of Off-Road Vehicle Use in Wyoming



For

The Wyoming Department of State Parks and Cultural Resources, Division of State Parks
and Historic Sites, State Trails Program

By

Thomas Foulke, Desiree Olson, David T. Taylor, Chris T. Bastian and Roger H. Coupal
University of Wyoming, Department of Agricultural & Applied Economics

July, 2006

Acknowledgements

The authors would like to thank the State of Wyoming Department of State Parks and Cultural Resources, Division of State Parks and Historic Sites, State Trails Program for their generous funding of this project.

The views expressed in this report are those of the authors and not necessarily the funding agency.

Table of Contents

Section	Page
Acknowledgements.....	3
Executive Summary.....	4
I. Introduction and background.....	7
II. Resident survey results.....	12
III. Non-resident survey results.....	25
IV. Selected comparisons of resident and non-resident sub-populations.....	38
V. Telephone survey.....	43
VI. Economic contribution of ORV riders.....	46
VII. Summary and conclusions.....	49
VIII. References.....	51
IX. Appendices.....	52
Appendix A: Map of Wyoming ORV Regions.....	53
Appendix B: Resident/Non-Resident Survey.....	54
Appendix C: Trip diary and cover letter.....	62
Appendix D: Survey cover letter.....	63
Appendix E: Telephone survey.....	65
Appendix F. Respondent comments.....	66
Appendix G. Other activities, Question 5.....	78
Appendix H. Comparison of resident and non-resident responses.....	79
Appendix I. WSTP trails, routes, and roads definitions and licensing requirements.	86

“Facts are stubborn things, statistics are more pliable.”

Mark Twain

Executive Summary

The State of Wyoming instituted a mandatory off-road vehicle (ORV) permit program in 2002. The proceeds from permit sales along with a portion of the state's gasoline tax revenue help fund the Wyoming Department of State Parks and Cultural Resources, Division of State Parks and Historic Sites, State Trails Program (WSTP). The WSTP uses the permit money collected to establish and maintain trail systems, print maps and safety materials, and in working with interest groups and public land managers to coordinate its activities on behalf of trail users. In order to better serve trail users, the WSTP provided funding to the University of Wyoming, Department of Agricultural and Applied Economics to conduct a broad-based economic assessment of ORV use in Wyoming. This report is the product of that study.

A mail survey was sent to 1,000 resident and 1,000 non-resident purchasers of a 2004 Wyoming ORV permit. The project received a 39.8 percent response using a modification of the Dillman method. Of these, 28.3 percent were usable for analysis. Resident and non-resident surveys were analyzed separately. The researchers estimate the error rate to be ± 6 percent.

In addition to the mail survey, the project contracted with the Wyoming Survey and Analysis Center (WYSAC) to do a random-digit-dial survey in the state of Wyoming to estimate the percentage of Wyoming households participating in ORV recreation (not just those who purchased an ORV permit). Six hundred thirty-five Wyoming households were contacted. Questions on snowmobile use were also asked in the same survey to conserve funding resources. WYSAC attaches a ± 5.6 percent error estimate to this survey.

The results of both surveys were analyzed and used to estimate the extent of ORV recreational participation in Wyoming households and the economic impact of ORV use on Wyoming's economy. Although other regional studies have included Wyoming, they have all focused on participation and rider satisfaction. This is the first broad-based study focused solely on ORV use in Wyoming, collecting in-depth socio-economic data.

The project estimates that over 37 percent of Wyoming households rode ORVs during the last twelve months, and within these households, there is an average of 2.4 riders per household. This represents approximately 180,000 residents who are ORV riders in over 75,000 Wyoming households. Approximately 35.5 percent of the state's 506,000 residents used an ORV for recreational purposes in the last 12 months resulting in over 3.6 million household-use days of ORV recreation.

The telephone survey suggests that there are approximately 150,000 ORVs owned by state residents. Residents reported spending about \$1,261 on each ORV they own in the last twelve months, much of this on the purchase of new or used ORVs. Based on the projected number of ORVs in the state, residents spent over \$189 million on ORVs and related expenses in the last twelve months.

Based on the number of ORVs registered by state residents (permits purchased), total resident user-days are estimated to be over one million for the twelve month survey period. If this number is expanded out to cover the estimated number of ORVs in the state found by the telephone survey, the number of user-days would be over 5.5 million by residents alone. Residents reported spending an average of \$27.04 per day, per person on ORV trips. Multiplied by the estimated number of user-days, the result is approximately \$27.9 million spent by registered resident users and an estimated \$149.1 million in total trip spending by both registered and non-registered resident ORV users.

Non-residents reported spending an average of \$31.70 per person per day on trips to Wyoming and \$243.03 annually in the state of Wyoming (in addition to trip expenses). Registered non-residents spent a total estimated \$8.4 million in the state in the twelve month period. Non-residents reported almost 180,000 user-days in Wyoming based on the 11,071 non-resident permits sold in 2004.

The economic impact of ORV use was calculated using IMPLAN 2003 software. Only non-resident data was used in the analysis since only non-resident expenditures add new dollars to the local economy (resident dollars are already present in the local economy and would flow to some other use or leak out of the region). The results show that an estimated 127 new jobs and an additional \$3.3 million in earnings are contributed to the Wyoming economy by registered non-resident ORV users. If the same ratio of resident registered users to total users as found in the telephone survey is applied to non-residents, then the jobs and earnings estimate would increase to 679 jobs and over \$17.6 million in earnings.

State and local government also benefit from ORV expenditures. Resident permit holders contribute over \$2.6 million per year in sales tax, \$335,000 in gasoline tax, \$24,000 in lodging tax, and \$422,000 in permit fees for a total of over \$3.4 million. If ORV numbers are expanded to the level estimated by the telephone survey, the total contribution increases to over \$16.4 million.

Non-resident's contribution to state and local government is less than for residents because there are less out-of-state ORV users than in-state users, but they spend more per person per day and represent new dollars to the states economy, so they are important from an economic development perspective. Non-resident permit holders are estimated to contribute about \$532,000 to the states economy. This total includes \$302,000 in sales tax, \$49,000 in gasoline tax, \$14,600 in lodging tax, and \$166,000 in permit fees. Using the ratio estimate obtained from the telephone survey the total contribution of non-resident ORV users to state and local government increases to about \$2.1 million.

ORV use in Wyoming is wide spread. The multi-purpose nature of ORVs means that they are ridden virtually throughout the year. Non-residents tend to come to Wyoming to recreate on ORVs just one or two months out of the year, concentrated in late summer and fall. Residents have an earlier peak in August, which is really part of a broad plateau of summer and fall use.

The multi-use nature of ORVs also lends them to participation in other activities. Recreationists' primary activity is not necessarily riding ORVs, but involves the use of an ORV for hunting, fishing, and other recreation activities. Should there be some kind of restriction on ORV use in Wyoming residents indicated that they would shift activities, yet still pursue outdoor recreation in the state. Non-residents, however, indicated that they would go to another state to pursue ORV recreation opportunities. This represents a potential loss of tourists and tourism related dollars to the state's economy.

Residents tend to be more spread out in their geographic use of the state. This is primarily the result of place of residence. Residents tend not to travel more than two hours and about 150 miles from home to recreate. Non-residents tend to travel 250 miles or more and showed a distinct preference for the Snowy Range, followed by the Big Horn Mountains and to some extent, Southwestern Wyoming. However, both residents and non-residents showed a preference for U.S. Forest Service lands. Only about 64 percent of residents spent at least one night away from home, compared to almost 92 percent of non-residents who spent at least one night away from home.

I. Introduction and background

The State of Wyoming instituted a mandatory off-road vehicle (ORV) permit program in 2002. The proceeds from permit sales along with a portion of the state's gasoline tax revenue help fund the Wyoming Department of State Parks and Cultural Resources, Division of State Parks and Historic Sites, State Trails Program (WSTP). The WSTP uses the permit money collected to establish and maintain trail systems, print maps and safety materials, and in working with interest groups and public land managers to coordinate its activities on behalf of trail users. In order to better serve trail users, the WSTP provided funding to the University of Wyoming, Department of Agricultural and Applied Economics to conduct a broad-based economic assessment of ORV use in Wyoming. This report is the product of that study.

The report is organized into sections, including: Executive summary, background and introduction, resident survey results, non-resident survey results, selected comparison of resident and non-resident results, telephone survey, economic impacts, and summary and conclusions. In addition, appendices contain the letters, survey instrument, comments from individual respondents and the complete comparison of resident and non-resident survey results. As part of this project, the researchers commissioned a telephone survey that was conducted by the University of Wyoming Survey and Analysis Center. This statistically valid (+ or - 5.6% error rate) survey was used to estimate statewide ORV ownership and use. The economic analysis section estimates the economic impact of ORV use on Wyoming's economy.

The off-road vehicle boom started in the late 1970s with the introduction of three-wheeled all terrain vehicles (ATVs). Off-road motorcycles or dirt bikes had been around for considerably longer, but the new large tired three-wheelers appeared to be easier to ride and were an instant success. By the mid-1980s, the number of law suits (and deaths and injuries) forced the industry to modify the design to four-wheels. These machines, also known as four-wheelers, ATVs and "quads" are the predominant off-road vehicles in use today (see text box 1 for Wyoming's definition of an off-road vehicle). The growth in the number of ATVs has been astounding. A U.S. Forest Service (USFS) report on off-highway vehicle (OHV) use indicates that sales of off-highway vehicles "more than tripled between 1995 and 2003, with 1.1 million vehicles sold in 2003¹. ATVs continue to account for more than 70 percent of the market" (USFS, 2005).

The USFS OHV study is the most recent regionally important study on motorized recreation. Other relevant studies include a 2002 report titled, *Off Highway Vehicle Uses and Owner Preferences in Utah (Revised)*, written by the Institute for Outdoor Recreation and Tourism at Utah State University for the Utah Department of Natural Resources, Division of Parks and Recreation. Prior to that is a 2001 report written by the consultant firm of Hazen and Sawyer for the Colorado Off-highway Vehicle Coalition titled:

¹ The USFS uses the OHV definition which includes off-highway pickup trucks and jeeps. The State of Wyoming ORV definition excludes these vehicles. Our analysis focuses solely on ORVs defined in this way.

Economic Contribution of Off-Highway Vehicle Use in Colorado. Relative to these reports, this study appears to fill a geographic niche in understanding patterns of ownership and use that until now has been vacant.

The growth in OHV use is a nationwide phenomenon. The Forest Service’s report (2005) includes a section on where OHV use is occurring in the United States. The Western states with their extensive public lands are particularly well represented. Wyoming has the second highest participation rate after Alaska with an estimated 33.8 percent of the 16 and over population participating in OHV activities. This figure does not include non-residents traveling to the state to recreate (USFS, 2005).

Burgeoning use of public lands by off-road (and off-highway) vehicles has set the stage for conflict between off-road vehicle users and other non-motorized users on public lands, with public land managers often in the middle. ORV users feel they have a “right” to use “their” public lands for motorized recreation activities. They also point out that much of this use includes families enjoying the outdoors and may be the only way that some disabled or older individuals can experience outdoor recreation. On the other hand, at least some non-motorized public land users feel that public land and their experience on public lands are being diminished by ORVs. Public land managers, meanwhile, have the delicate job of balancing recreation use with conservation of the public land resource. Regardless of one’s feelings about ORVs, they are a part of the recreation landscape on public lands today.

Text box 1. What is an ORV?

What is an ORV?
Wyoming State law differentiates Off-Road Vehicles (ORVs) into three types:

Type 1: “A recreation vehicle primarily designed for off-road use which is fifty (50) inches or less in width, has an unladen weight of nine hundred (900) pounds or less and is designed to be ridden astride upon a seat or saddle and travel on at least three (3) low pressure tires.”

Type 2: “Any unlicensed motorcycle which has an unladen weight of six hundred (600) pounds or less and is designed to be ridden off road with the operator astride upon a seat or saddle and travels on two (2) tires.”

Type 3: “Any multi-wheeled motorized vehicle not required to be licensed and is designed for cross-country travel on or over land, sand, snow, ice or other natural terrain and which has an unladen weight of less than nine hundred (900) pounds.”

Wyoming Statute 311-101 (k)

Growth in off-road vehicle use has been accentuated by several factors. Other literature has shown that during the same period of time, snowmobile and watercraft use has grown at similar levels. The last 20 years can be characterized as a period of increased disposable income for many people. This added wealth has enabled households to afford more recreation amenities. The Forest Service report shows that all age groups increased their participation in OHV use from 1999 to 2004 (USFS, 2005).

The WSTP instituted Wyoming’s ORV permit program in 2002. Figure 1 shows permit sales for the years currently available. The increasing numbers in these first years are probably more a reflection of increased compliance rather than actual growth in the numbers of ORVs. As compliance continues to increase, the growth rate will probably level off somewhat. It should be noted that these figures represent only the number of registered ORVs in the state, not the total number of ORVs (registered and unregistered) in Wyoming.

Figure 1. Total number of Wyoming ORV permits sold, 2002 to 2005.

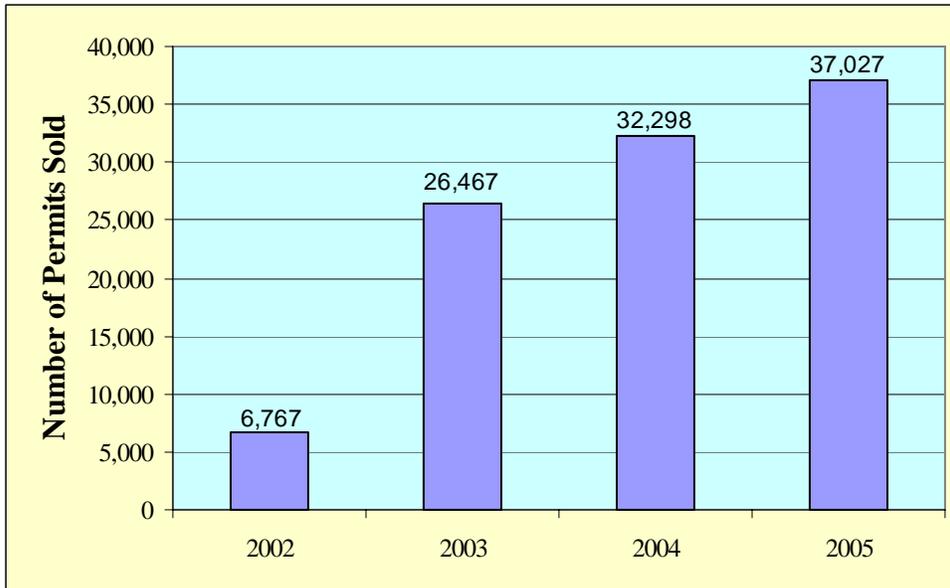
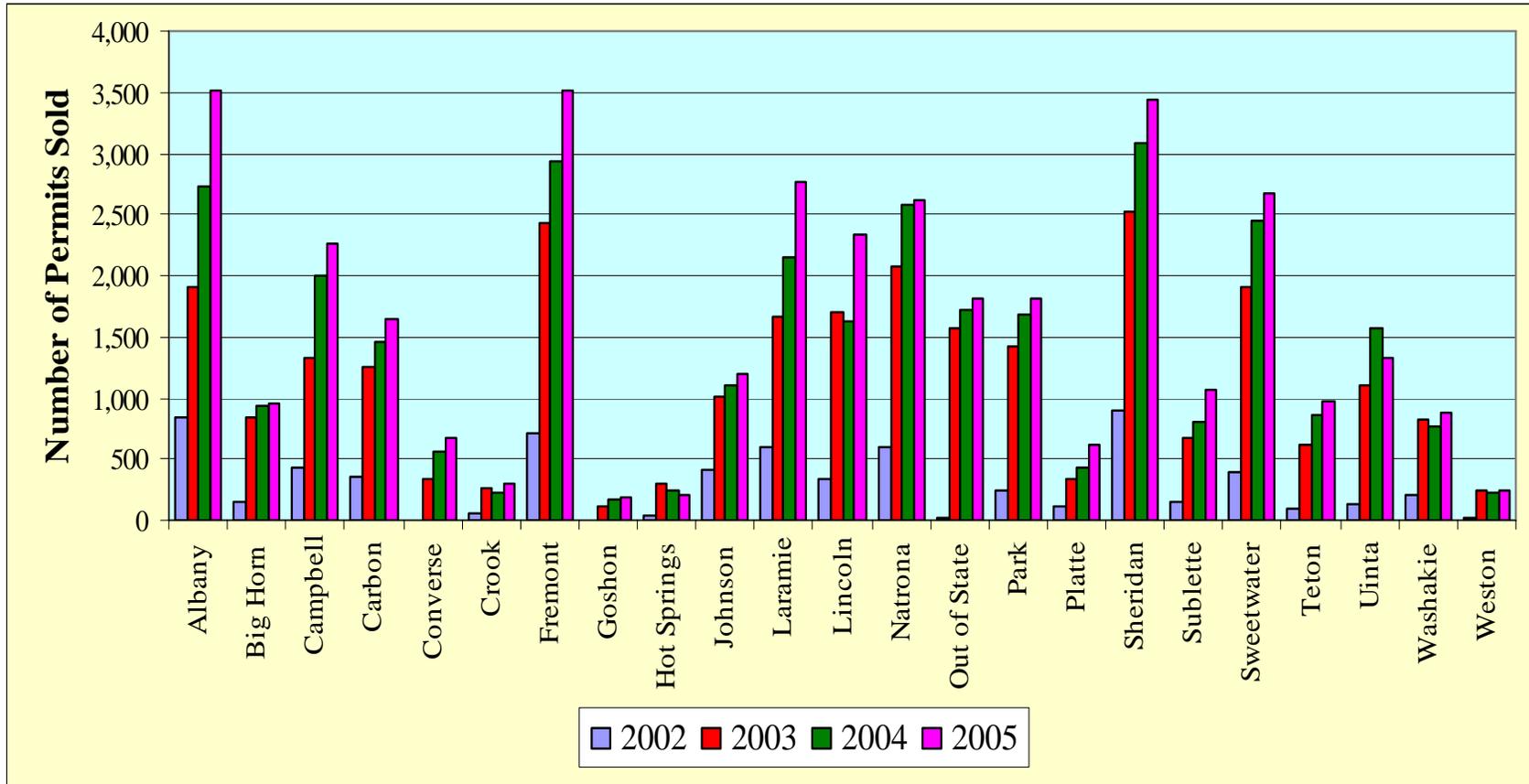


Figure 2 shows the number of permits sold by Wyoming counties for the years 2002 to 2005. It is interesting to note that the counties with the highest permit sales are also “gateways” to some of the more desirable public land recreation areas. Counties such as Albany (Medicine Bow National Forest (N.F.)-Snowy Range), Fremont (Shoshone N.F.-East side of Wind River Range), Sheridan (BigHorn N.F.-East side of Big Horn range), and Sweetwater (BLM lands, Bridger Teton N.F. and Wasatch N.F., West side of Wind River range and North slope Uinta range). These are also population centers in the state, but note also how permit sales in these counties exceed sales in other populous counties such as Natrona, Laramie, and Campbell, suggesting permit demand may be more related to the availability of trails in a region.

Part of the WSTP’s work has been to get trails, routes, and roads designated or “enrolled” in the State Trails Program. Local, state and federal land managers can enroll these pathways in the program to help promote ORV use in their area. Specific meaning is attached to each of these words as to their use and what type of licensing/permitting is required to ride on each (see Appendix I).

Figure 2. Total number of permits sold by county, 2002 to 2005



Survey Methodology

The mail survey was conducted using a modified Dillman method (Dillman, 2000). The State Trails program drew a random sample of 1,000 resident and 1,000 non-resident 2004 permit holders from their database of over 32,000 total permits. A trip diary was developed (See Appendix C) and mailed to the individuals in the sample in June 2005. The purpose of the trip diary was two fold; it informed respondents of the survey and allowed them to keep accurate records of their ORV activities during the most active time of the year for ORV recreation. Thus, when respondents received the survey later in the year, they could more accurately recall their activities. This was done to mitigate potential recall bias in the survey.

The survey instrument was pre-tested by a sample of ORV riders interviewed at a local motor sports store in Laramie, Wyoming in September 2005. The pre-test indicated no significant problems with the survey instrument. The finalized survey instrument (See Appendix B) was then mailed in October 2005 to 949 residents and 947 non-residents (accounting for delivery failures from trip diary mailings).

The main objectives of the survey were to gauge location and frequency of ORV usage and obtain demographic and expenditure information for economic analysis. The secondary objective was to discern user satisfaction perception of their ORV experience in Wyoming. An estimate of the impact of ORV usage on the Wyoming economy is obtained from this information. Prior to mailing, the survey was submitted to the University's Institutional Review Board (IRB) for tests on human subjects, as required, since the survey asks personal financial information from respondents. The IRB exempted the survey from review. The survey was mailed out October, 25, 2005. Two weeks after the initial survey mailing, a reminder postcard was sent out. Two weeks after that, a second survey was mailed to those in the sample who had not responded to date. Responses were received over a three month period, from early November, 2005 until late January, 2006. Details of the response rate are presented in Table 1.

Because a list of 2005 permit holders was not yet available, the addresses in the sample were taken from the list of 2004 Wyoming permit holders. In order to avoid recall bias, only surveys where the respondents indicated that they had used an ORV for recreation purposes in Wyoming in the past 12 months were used in the analysis. As a result, 17 percent of resident and 36 percent of the non-resident surveys that were returned were not useable. This suggests a substantial turnover in ORV permit holders in Wyoming, particularly for non-residents. Thus, while the overall response rate to the survey was close to 40 percent, the proportion of useable surveys was closer to 30 percent. In comparison, a study in Colorado received a 37.5 response rate (Hazen and Sawyer, 2001)

Table 1. Surveys mailed and response rate.

	Mailed	Returned	Usable
Resident	949	344 (36.2%)	287 (30.2%)
Non-Resident	947	393 (41.5%)	250 (26.4%)
Total	1,896	737 (38.9%)	537 (28.3%)

It should be noted that during the return period there were a number of phone inquiries from respondents about the survey. These calls were not inventoried and ranged from supportive, through inquisitive to antagonistic. Approximately 50 telephone inquiries were received in total. The researchers feel that this broad range of sentiment is indicative of the passion respondents feel about ORV use in general. To get a sense of this sentiment, see Appendix D which records

some of the comments written on returned surveys and comments received during the telephone survey.

II. Resident survey results

Resident Survey Section I: General Usage Information

This section provides information on general usage of ORVs by Wyoming residents. It is based on the results of the resident portion of the survey. Of the 344 residents who returned their survey, 83 percent (287) had ridden an ORV in Wyoming during the past 12 months. The following results are based on the responses of these 287 residents.

June through October were the most popular months for residents to ride an ORV in Wyoming (Table 2). Between June and October, at least 70 percent of respondents reported riding their ORVs some time during the month. August was the peak month with over three-fourths of respondents reporting ORV usage. April, May, and November represent shoulder seasons for ORV use by residents with 40 to 60 percent of resident respondents reporting riding ORVs. However, every month (January through December) had at least 20 percent of resident respondents riding some time during the month. This usage pattern is consistent with a seasonal use pattern for Wyoming's climate. What is somewhat surprising is the relatively higher use seen in the winter months of December through March. The researcher's interviews during the pre-testing of the survey indicated that some people use their ORVs year around, with the exception of deep snow. These results support those comments.

Table 2. Months respondents rode ORVs in Wyoming-residents.

	Percent		Percent
January	20.9%	<i>July</i>	74.6%
February	21.3%	<i>August</i>	75.3%
March	28.2%	<i>September</i>	73.5%
April	36.9%	<i>October</i>	70.0%
May	59.9%	<i>November</i>	39.7%
June	72.5%	<i>December</i>	25.1%

The number of total months per year of riding varied substantially among resident riders. Over 14 percent of respondents had ridden their ORVs seven months out of the year (Table 3). The percent of respondents riding for just one, four, five, six or 12 months were all clustered between 10 percent and 11 percent. An almost equal number of respondents had ridden for one month and twelve months. However, only 28 percent of respondents rode more than 7 months. The average number of months residents reported riding ORVs in Wyoming during the last twelve months was 6.0.

Table 3. Number of total months respondents rode ORVs in Wyoming-residents.

	Percent		Percent
1 Month	10.5%	<i>7 Months</i>	14.3%
2 Months	5.6%	<i>8 Months</i>	6.3%
3 Months	8.7%	<i>9 Months</i>	4.9%
4 Months	11.1%	<i>10 Months</i>	3.8%
5 Months	11.5%	<i>11 Months</i>	2.4%
6 Months	10.1%	<i>12 Months</i>	10.8%

Over one half the participants (56 percent) have been riding ORVs for 10 years or less (Table 4). Another 28.5 percent have been riding between 11 and 20 years and another 10.2 percent between 21 and 30 years. Just five percent have been riding for more than 30 years. The average number of years residents have been riding ORVs was 12.6.

Table 4. Number of total years respondents have ridden ORVs-residents.

	Percent
5 or Less	29.9%
6 to 10	26.1%
11 to 15	12.3%
16 to 20	16.2%
21 to 25	6.0%
26 to 30	4.2%
More than 30	5.3%

Nearly one-half of resident respondents rode an ORV 20 days or less during the past 12 months (Table 5). Another 30 percent rode between 21 and 40 days. Only one-quarter had ridden more than 40 days during the last 12 months, with only 8 percent riding more than 70 days. Overall, the residents reported riding an average of 32.5 days in the past 12 months.

Table 5. Total number of days riding in Wyoming during last twelve months-residents.

	Percent
10 or Less	23.5%
11 to 20	22.4%
21 to 30	16.7%
31 to 40	12.8%
41 to 50	8.2%
51 to 60	6.0%
61 to 70	2.1%
More than 70	8.2%

The researchers wanted to know whether respondents were primarily weekend or weekday recreational riders (Question 4 in the survey). Residents' responses were split evenly at 50 percent for weekday and 50 percent for weekend riding, showing a broad range of use. Anecdotal evidence suggests that weekend riding is more popular, but if residents are using ORVs during vacation time, this may account for the weekday use.

Resident respondents riding in Wyoming often participated in recreation activities in addition to ORV riding just for pleasure (Table 6). In particular, ORVs can be used as a mode of transportation to and from a recreation site, such as in fishing, camping or hunting, as well as the primary recreation activity of riding for pleasure. The results show that over 60 percent of residents engaged in camping and hunting activities while riding an ORV in Wyoming. Fifty-seven percent of resident respondents reported fishing activities as part of a recreation trip that included ORVs in Wyoming, and 34 percent participated in other recreation activities. These responses are illustrative of the multi-purpose role of ORVs in people's outdoor recreation experiences. It also demonstrates one reason why ORVs are so popular.

Table 6. Percent of respondents who participated in other recreation activities while riding ORVs in Wyoming-residents.

	Percent
Camping	66.9%
Hunting	62.7%
Fishing	57.1%
Other	34.5%

Due to the dual roles that ORVs play in recreation, it was important to determine the amount of time spent riding as opposed to other activities. More than two-thirds of the resident users reported spending 50 percent or less of the days indicated in Table 5 actually riding ORVs (Table 7). Another 10 percent spent between 51 and 75 percent of the days riding ORVs while those riding between 76 and 100 percent of the days accounted for only 21.8 percent. The average time spent riding ORVs was 45 percent.

Table 7. Percent of time ORV riding-residents.

	Percent
25 or less	34.7%
26 to 50	33.1%
51 to 75	10.5%
76 to 100	21.8%

Resident respondents reported an average of 2.5 ORVs per household during the last 12 months. About 80 percent were all terrain vehicles (ATVs), 12 percent were off-highway motorcycles, and 7 percent were other (unspecified) cross-country vehicles (Table 8). In terms of resident respondent households, 97 percent owned at least one ATV, while 12 percent owned at least one off-highway motorcycle, and 8 percent owned at least one of some other type of cross-country vehicle.

Table 8. Type of ORVs in household-residents.

	Percent
ATV	80.2%
Motorcycle	12.3%
Other	7.4%

The decision to participate and where to participate in a recreation activity is derived from a complex set of factors. In essence, it is the sum of the satisfaction that one receives from all the attributes of participation in a particular location. In order to gauge the relative importance of these factors, a set of questions was asked respondents regarding their feelings about the importance of trail characteristics and trail setting. Table 9 provides a summary of the mean rating for trail characteristics as indicated by resident respondents. Table 10 provides a summary of the mean rating of trail setting attributes. The means are based on a Lickert scale of 1 to 5 with 1 being not important and 5 being very important. The highest rated trail characteristics were: 1) More designated trails, 2) Accurate and easy to read trail maps, 3) More designated open riding areas, and 4) More designated roads. Three of the top four characteristics cited deal with the desire for more places to ride. This was a common theme in the comments of respondents as

well. The three lowest rated characteristics were: 1) Services available near the trailhead, 2) Trails that are easy to ride and 3) Trails that are challenging.

Table 9. Trail characteristic attributes-residents.

	Mean
More designated trails	3.96
Accurate and easy to read trail maps	3.91
More designated open riding areas	3.88
More designated roads	3.81
Signage on trails	3.42
Length of trail	3.40
Trail enforcement	3.20
More trails that are legal for youth	3.06
Loops trails	3.01
Trails that are challenging	3.00
Trails that are easy to ride	2.96
Services available near trailhead	1.97

In terms of trail setting attributes, Table 10 provides a summary of the mean ratings by residents. The three highest rated trail settings were: 1) Natural/scenic surroundings, 2) Wildlife viewing, and 3) Having solitude on the trail. These three attributes are also attributes found primarily on public lands, suggesting the role of public lands in providing recreation opportunities for ORV riding. The three lowest rated characteristics were: 1) Seeing other riders, 2) ORV supplies available nearby and 3) Restroom availability.

Table 10. Trail setting attributes-residents.

	Mean
Natural/scenic surroundings	4.29
Wildlife viewing	4.15
Having solitude on the trail	3.60
Distance from home	3.06
Parking availability	2.80
Restroom availability	2.18
ORV supplies available nearby	1.77
Seeing other riders	1.77

Respondents from Wyoming were asked what they would do if for some reason they were unable to ride an ORV for recreational purposes in Wyoming. The majority of participants (45 percent) said they would *increase* participation in other outdoor recreation activities *in Wyoming*, approximately 24 percent said they would *increase* participation in other outdoor recreation activities *in other states*, while another 23 percent would *decrease* overall participation in outdoor recreation activities (Table 11). Additionally, over 8 percent answered as other.²

² Other included activities such as: camping, fishing, relaxing, walking more, riding a horse, hunting, driving a jeep, etc. (a breakdown of activities listed by respondents is listed in Appendix G).

Table 11. Change in level and location of outdoor activities if unable to ride ORVs for recreation in Wyoming-residents.

	Percent
Increase in other outdoor activities in Wyoming	45.3%
Increase in other outdoor activities in other states	23.7%
Decrease in outdoor activity	22.6%
Other (specified)	8.4%

Respondents were asked to rate their overall satisfaction with recreational ORV riding in Wyoming (Question 11). Over three-quarters said they were *very* or *somewhat satisfied* and almost a quarter of residents said they were *very satisfied* (Table 12). In contrast, 16 percent said they were *somewhat dissatisfied* while 9 percent said they were *very dissatisfied* with recreational ORV riding in Wyoming. Anecdotally, the interviews during the pre-test discovered that there is a sentiment in some ORV users that there are conflicting laws when it comes to trail designation. Forest Service roads are enrolled in the Wyoming State Trails program. So some purchasers of the Wyoming ORV permit assume that these are valid trails for all ORV riders. Yet the Forest Service will ticket unlicensed ORV users (mainly youth) riding on National Forest roads. The misunderstanding is likely reflected in some of the responses received for this question.

Table 12. Overall satisfaction with recreation riding in Wyoming-residents.

	Percent
Very Satisfied	24.0%
Somewhat Satisfied	51.3%
Somewhat Dissatisfied	15.9%
Very Dissatisfied	8.9%

Resident Survey Section II: Annual Trip Information

This section was designed to determine what recreation areas in Wyoming were important to ORV users. Wyoming was divided into 18 ORV regions, based mainly on the major mountain ranges and basins in the state (See map, Appendix A). Total number of trips and total number of days by area are important factors in determining the popular spots to recreate.

Table 13 shows the percentage of trips by area in Wyoming, based on the 4,892 trips reported by residents. The three most frequently visited areas in terms of trips were: 1) The Big Horn Mountains, 2) Southwestern Wyoming, and 3) The East side of Wind River Range. The three least frequently visited areas in terms of trips were: 1) The Uinta Mountains, 2) Southeastern Wyoming, and 3) The Sierra Madre Mountains. The average number of ORV trips in Wyoming, by residents during the last twelve months was 18.9.

Table 14 summarizes the percentage of days of ORV use, by area, in Wyoming based on 7,285 days reported by resident respondents. The three most frequently visited areas in terms of days were: 1) The Big Horn Mountains, 2) Southwestern Wyoming, and 3) Central Wyoming. The three least frequently visited areas in terms of days were: 1) Uinta Mountains, 2) Sierra Madre Mountains, and 3) The Powder River Basin. The ranking of areas by trip in Table 13 was somewhat different than the ranking of areas by days in Table 14 because some areas tend to be associated with shorter length trips. The average number of days of ORV recreation in Wyoming

during the last twelve months was 28.2. This was not statistically different from the average number of days reported for the data in Table 7 (32.5 days).

Table 13. Total number of trips by area-residents.

	Percent		Percent
Big Horn Mountains	13.5%	<i>Jackson Hole Area</i>	4.4%
South Western Wyoming	11.8%	<i>Wyoming Range</i>	4.4%
East Side Wind River Mtn.	7.8%	<i>Laramie Range</i>	4.2%
Central Wyoming	7.7%	<i>Laramie Peak Area</i>	3.5%
Black Hills Area	6.7%	<i>Powder River Basin</i>	2.9%
Big Horn Basin	6.6%	<i>East of Yellowstone N.P.</i>	2.5%
Snowy Range	6.6%	<i>Sierra Madre Mountains</i>	2.4%
Star Valley Area	6.5%	<i>South Eastern Wyoming</i>	1.7%
West Side Wind River Mtn	5.6%	<i>Uinta Mountains</i>	1.2%

Table 14. Total number of days by area-residents.

	Percent		Percent
Big Horn Mountains	16.1%	<i>South Eastern Wyoming</i>	4.3%
South Western Wyoming	11.5%	<i>Wyoming Range</i>	4.0%
Central Wyoming	8.5%	<i>Jackson Hole Area</i>	3.6%
East Side Wind River Mtn	7.8%	<i>Laramie Range</i>	3.2%
Black Hills Area	6.6%	<i>East of Yellowstone N.P.</i>	3.1%
Snowy Range	6.4%	<i>Laramie Peak Area</i>	3.0%
West Side Wind River Mtn	6.1%	<i>Powder River Basin</i>	2.7%
Big Horn Basin	4.8%	<i>Sierra Madre Mountains</i>	2.4%
Star Valley Area	4.4%	<i>Uinta Mountains</i>	1.7%

ORV recreation can occur on a number of different land ownership types in Wyoming, ranging from Forest Service and BLM lands to State and private lands, often in the same trip. Table 15 summarizes the distribution of trips reported by residents in terms of land ownership type. The most frequent category was “other”, which in most cases involved a trip where several different land ownership types were accessed during the same trip. In terms of one specific land ownership being accessed during a trip, over 36 percent of residents indicated the Forest Service and 14 percent indicated the BLM.

Table 15. Trips by land ownership-residents.

	Percent
USFS	36.4%
BLM	14.0%
Other	49.6%

In terms of days by land ownership type, the most frequent category reported by residents was USFS (Table 16). This again reflects the different land ownerships associated with ORV trails. Following USFS was “Other” and then the BLM. Comparison of the percentage of trips and days by land ownership suggest that Forest Service trips tended to be longer than either BLM trips or other trips (36.4 percent of trips versus 44.7 percent of days).

Table 16 Days by land ownership-residents.

	Percent
USFS	44.7%
BLM	12.7%
Other	42.6%

The information presented in Table 17 relates back to the dual use issue discussed for Tables 6 and 7. In this case, respondents were asked the primary purpose of the trips that involved recreational use of an ORV in Wyoming during the past 12 months. This was done in order to determine whether ORV use was the primary purpose of the trip or if ORVs were primarily a means of transportation to participate in other recreation activities. Resident respondents indicated that for over one-half of the trips, ORV riding was the primary purpose. Hunting represented nearly 23 percent of the trips, followed by camping (13 percent) and fishing (10 percent). Approximately four percent of respondents indicated some other recreation activity. These results serve to highlight the dual role that ORVs play in outdoor recreation and the reason for their popularity.³

Table 17. Primary purpose of recreation trips listed in Table 12-residents.

	Percent
ORV Riding	50.5%
Camping	12.7%
Fishing	10.5%
Hunting	22.6%
Other	3.7%

Resident Survey Section III: Specific Information for Most Recent Trip in Wyoming

This section deals with specific information related to the most recent trip resident respondents took in Wyoming. Information from the most recent trip is important because it is used in the economic analysis portion of the project. By asking about the most recent trip, the researchers are hoping to minimize recall bias and obtain the most accurate information. Because the ORV survey was administered in November, hunting was over-represented in the sample in terms of the primary purpose of the most recent trip relative to annual usage as represented in the previous section. To adjust for this, the sample was weighted to make the distribution of the sample for the most recent trip more comparable with the distribution for the whole year (Table 18). This was accomplished by multiplying the un-weighted data by a conversion factor so its ratio matched the annual ratio. This was necessary because there were statistical differences in trip characteristics between different types of trips. The results presented in this section are based on the weighted sample for primary purpose of the most recent trip.

The number of people in the traveling party for the most recent trip varied considerably. This suggests a combination of both large and small groups using ORVs in Wyoming. Approximately 78 percent of the groups consisted of 5 people or less and 22 percent of the groups consisted of more than 5 people. The three, four and 6 to 10 categories were relatively evenly distributed. The most frequent group size was two people with 36 percent, more than

³ Trips primarily for other recreation activities included activities such as: boating, hiking, and many people listed two or more recreation activities from the list given as their primary purpose of trip.

twice the size of the nearest group (Table 19). Overall, the average size of the traveling party was 4.2.

Table 18. Primary purpose of most recent trip-residents.

	Annual (Table 19)	Un-Weighted Most Recent	Weighted Most Recent
ORV Riding	50.5%	36.7%	49.9%
Hunting	22.6%	49.4%	22.4%
Other	26.9%	13.9%	27.7%

Almost a quarter of resident respondents did not indicate a passenger vehicle for their trip. This suggests that those individuals may have been riding from their residence (Table 19). The most frequent category was those individuals that brought just one vehicle (36.4%), followed by another quarter of the respondents who brought two vehicles. Respondents who brought three or more vehicles accounted for just 14 percent of the total. There were no respondents who brought more than 10 vehicles in their traveling party. The average number of vehicles taken on the most recent trip was 1.5.

Over one-half the resident parties took two or less ORVs on their most recent trip (Table 19). Another 28 percent took three to four ORVs and approximately 18 percent of the parties took more than four ORVs on their most recent trip. The average number of ORVs was 3.25. There was an average of about 1.3 individuals per ORV in the traveling party.

Table 19. Percentage of people, passenger vehicles and ORVs in traveling party taken on most recent trip-residents.

	People	Vehicles	ORVs
Zero	0.0%	24.5%	0.0%
One	6.3%	36.4%	20.6%
Two	35.7%	24.9%	33.3%
Three	14.9%	5.9%	13.5%
Four	15.7%	2.8%	14.3%
Five	5.5%	2.8%	4.4%
6 to 10	16.5%	2.8%	11.5%
More than 10	5.5%	0.0%	2.4%

During their most recent trip, resident respondents spent an average of 2.3 nights away from their primary residence (Table 20). Over one-third of the resident respondents did not spend any nights away from home indicating their most recent trip was a day trip. Those spending two nights away from home accounted for nearly 20 percent, followed by those spending four nights away from their home with 13 percent. There were no resident respondents that spent more than 10 nights away from home on their most recent trip.

Almost 80 percent of resident respondents traveled *less than* two hours to reach their recreation destination on their most recent trip (Table 21). Residents who traveled three to five hours accounted for an additional 16 percent while those traveling *more than* five hours were estimated at nearly 5 percent. Average time spent traveling to a destination was 1.8 hours. These responses suggest that residents tended to ride their ORVs fairly close to home.

Table 20. Number of nights spent away from home-residents.

	Percent		Percent
Zero	36.4%	<i>Six</i>	6.5%
One	6.9%	<i>Seven</i>	2.8%
Two	19.8%	<i>8 to 10</i>	4.1%
Three	6.5%	<i>11 to 15</i>	0.0%
Four	12.9%	<i>16 to 20</i>	0.0%
Five	4.1%	<i>More than 20</i>	0.0%

Table 21. Travel time in hours-residents.

	Percent
One Hour or Less	43.5%
Two Hours	35.9%
Three Hours	8.4%
Four Hours	5.1%
Five Hours	2.5%
More than 5 hours	4.6%

Resident respondents traveled an average of 82 miles (one-way) to recreate on ORVs in Wyoming (Table 22). Nearly 87 percent of respondents traveled less than 150 miles to their recreation destinations. This data reinforces the notion of shorter trips for residents.

Table 22. Miles traveled away from home (one-way)-residents.

	Percent
50 Miles or Less	39.5%
51 - 100 Miles	34.6%
101 - 150 Miles	12.7%
151 - 200 Miles	3.5%
201 - 250 Miles	3.1%
More than 250 Miles	6.6%

In terms of miles traveled *on ORVs* during the trip, over three-quarters of resident respondents traveled 60 miles or less (Table 23). Those traveling *more than* 60 miles during their trip accounted for just 24 percent. Only 3.6 percent traveled *more than* 200 miles. This difference in riding intensity probably relates to the primary purpose and length of the trip. The average for a trip was 55 miles or about 16 miles per day.

Over 80 percent of resident ORV riders rode 10 hours or less during their most recent trip with almost equal amounts spending either 5 hours or less, or 6 to 10 hours riding (Table 24). At the other extreme, only six percent of resident ORV riders rode *more than* 25 hours during the trip. The average number of hours spent riding ORVs during the most recent trip was 9.3 hours. Respondents reported average gasoline consumption of 7.7 gallons of gas by their ORV during their most recent trip.

Table 23. Miles traveled on ORV-residents.

	Percent
20 Miles or Less	27.0%
21 to 40 Miles	26.6%
41 to 60 Miles	22.6%
61 to 80 Miles	6.9%
81 to 100 Miles	3.6%
101 to 150 Miles	5.6%
151 to 200 Miles	4.0%
More than 200 Miles	3.6%

Table 24. Hours spent on ORV for most recent trip-residents.

	Percent
5 Hours or Less	41.8%
6 to 10 Hours	38.9%
11 to 15 Hours	6.7%
16 to 20 Hours	4.2%
21 to 25 Hours	2.5%
More than 25 Hours	5.9%

Table 25 illustrates resident expenditures from their most recent ORV trip in Wyoming. The average amount spent per trip was \$219.73 for residents on in-state trips. The largest categories of spending were: 1) gasoline (includes both vehicle and ORV) 2) groceries and liquor 3) restaurants and bars and 4) oil/repairs/maintenance. Note that resident spending for overnight accommodations averaged only \$9.44, which suggests they may be camping as opposed to using cabin/hotel accommodations.

Table 25. Mean most recent trip expenditures-residents.

	Resident trips
Gasoline	\$80.06
Restaurant and bars	\$20.95
Groceries and liquor	\$66.12
Overnight accommodations	\$9.44
ORV guides/tour packages	\$0.10
Day user fees & donations	\$1.26
Oil/repairs/maintenance	\$24.27
Retail items	\$3.18
Entertainment	\$2.47
Other expenses	\$11.88
Total	\$219.73
Per Person Per Trip	\$90.05
Per Person Per Day	\$27.04

Average reported expenditures cover 2.4 individuals. Extending this average to overall expenditures resulted in an estimate of \$90.05 per person per trip. Based on the average total trip

length from Table 20 (2.3 nights + 1.0 day = 3.3 days) the overall average total trip expenditure for residents is estimated to be \$27.04 per person per day. There were not enough observations to estimate day and overnight trip expenditures separately.

Resident Survey Section IV: Annual Expenditure Information and Safety Programs

Table 26 summarizes resident respondent’s annual ORV expenditures. Residents reported spending a total of \$3,534 on their ORVs during the past 12 months. The largest categories of expenditures were: 1) Purchasing of new/used ORVs, 2) Purchasing ORV trailers, 3) Accessories and 4) Annual repairs. Most of the resident expenditures were in Wyoming, with only \$380 on average being spent out-of-state. On a per person basis, annual expenditures on ORVs averaged \$1,599 with \$1,427 being kept in Wyoming. On a per ORV basis (2.5 ORVs per respondent household), ORV expenditures averaged \$1,414 with \$1,261 being spent in Wyoming.

Table 26. Mean annual expenditures-residents.

	Average	Average
	Total	Wyoming
New/Used ORV	\$2,316.75	\$2,152.87
ORV trailers	\$675.66	\$506.50
Safety equipment	\$87.91	\$81.62
Clothing	\$54.45	\$49.96
Accessories	\$134.82	\$124.07
Annual Repairs	\$127.89	\$110.18
Registration/license/permit	\$82.08	\$77.31
Club dues	\$3.46	\$2.73
ORV mag. subscriptions	\$3.85	\$2.79
ORV storage costs	\$29.49	\$28.66
Other	\$17.52	\$16.37
Total	\$3,533.88	\$3,153.06
Per Person	\$1,599.04	\$1,426.72
Per ORV	\$1,413.55	\$1,261.22

Table 27. Information on ORV safety programs-residents.

		Percent
Participation in ORV Safety Program	Yes	43.1%
	No	56.9%
Need for More ORV Safety Programs	Yes	66.3%
	No	33.7%
ORV Safety Program Format Preferred	Brochure	19.9%
	Classroom	7.3%
	Outdoor	46.0%
	Video	26.1%

When asked about ORV safety program participation, nearly 57 percent of residents said they *had not* participated in a safety program (Table 27). Yet, two-thirds of respondents felt there was a need for more ORV safety programs. If given a choice between brochure, classroom instruction, video presentation or hands-on outdoor instruction, 46 percent of residents would

prefer an outdoor, hands-on program. The least favorite safety format preferred was classroom instruction at just 7.3 percent.

Rising gasoline prices were part of the economic landscape in 2005, particularly when Hurricane Katrina briefly pushed gas prices over \$3 per gallon in September, about a month prior to mailing the survey. The researchers wanted to determine if rising gas prices played a role in the number of trips taken, the amount time spent riding ORVs, and the number of ORVs owned. Almost half of respondents said they *would not* change the number of trips they take and over half said they *would not* change the amount of time they spent riding ORVs. A significant majority (88 percent) said they would not change the number of ORVs they own (Table 28). In summary, higher gas prices appear to have had a measurable but limited effect on ORV usage in the short-run, particularly in terms of numbers of trips and riding time.

Table 28. Effects of rising gasoline prices-residents.

	1)None	2	3) Some	4	5) A lot
Number of trips	46.5%	5.7%	22.0%	9.6%	16.3%
Riding time	56.3%	5.8%	19.5%	7.2%	11.2%
Number of ORVs	87.9%	1.1%	6.2%	0.4%	4.4%

Resident Survey Section V: Demographic Information

This section of the survey was designed to help the understanding of who recreation ORV users are. Information on age, gender, education, and household financial resources were gathered.

Of the 287 resident households that responded, there were a total of 719 ORV riders. This averages to 2.5 ORV riders per household. The majority of all recreational ORV users (41.6 percent) were in the 40 to 59 year old category. Respondents between the ages of 20 to 39 accounted for a quarter of the total and those under 20 comprised another 20 percent. In addition, ORV riders over the age of 59 were estimated at only 13.5 percent (Table 29). Table 30 shows that males dominate recreation ORV riding, totaling almost 91 percent of the respondents surveyed. A note of caution, since this survey was sent to the name for the person for whom the permit was issued, it does not mean that females in the household do not use ORVs. Rather it means that most ORVs in Wyoming are registered in a males name and as a result, they were more likely to have been the one who responded to the survey.

Table 29. Age distribution-residents.

	Percent
Under 20	19.7%
20 to 39	25.2%
40 to 59	41.6%
60 to 80	13.4%
Over 80	0.1%

Table 30. Gender distribution-residents.

	Percent
Male	90.7%
Female	9.3%

Table 31 shows the categories for the highest year of formal education completed. Those who had finished high school (27.8 percent) were the highest, followed by 25 percent having some college and 17.3 percent completing a bachelor’s degree. Thirty-one percent did not pursue educational opportunities beyond high school, while almost 45 percent had some post-high school education short of a bachelor’s, or post-graduate degree and 24 percent had a college degree.

Table 31. Education distribution-residents.

	Percent
Grades 1 to 8	0.4%
Some High School	3.2%
Finished high school	27.8%
Technical college	10.6%
Some college	25.4%
Associates degree	8.8%
Bachelor's degree	17.3%
Post graduate degree	6.7%

The median household income in Wyoming, in 2004, was \$45,456 (\$44,389 nationally) (Census, 2006). Over a quarter of the respondents categorized themselves as having between \$70,000 and \$99,999 in pre-tax annual household financial resources (Table 32). Another 15 percent reported between \$100,000 and \$149,999, and some 13 percent reported between \$50,000 and \$59,999. The cluster of categories between \$40,000 and \$149,999 accounted for almost 79 percent of the respondents. Respondents reporting *less than* \$40,000 accounted for about 15 percent of the sample resident respondents and those at the other end of the spectrum reporting *more than* \$149,999 accounted for just 6 percent.

Table 32. Annual household financial resources distribution-residents.

	Percent
Under \$5,000	0.4%
\$5,000 to \$9,999	0.4%
\$10,000 to \$19,999	1.9%
\$20,000 to \$29,999	5.7%
\$30,000 to \$39,999	6.9%
\$40,000 to \$49,999	12.3%
\$50,000 to \$59,999	13.4%
\$60,000 to \$69,999	11.5%
\$70,000 to \$99,999	26.4%
\$100,000 to \$149,999	14.9%
\$150,000 to \$199,999	3.4%
Over \$200,000	2.7%

III. Non-resident survey results

Non-Resident Survey Section I: General Usage Information

This section provides information on general usage of ORVs by non-residents recreating in Wyoming. It is based on the results of the non-resident responses to the survey. The same survey was sent to both residents and non-residents, but surveys received from non-residents were analyzed separately as they represent a distinctly different group of users. Of the 393 non-residents who returned their survey, 64 percent (250) had ridden an ORV in Wyoming during the past 12 months. The following results are based on the responses of these 250 non-residents.

As opposed to the resident respondents, where the most popular ORV month was August, the most popular month for non-residents was October, followed by September, July, and August (Table 33). ORV usage during September and October coincides with big game hunting seasons in many parts of the state. Only limited non-resident ORV usage occurred in Wyoming between December and April. However, every month saw at least some non-resident ORV usage.

Table 33. Months respondents rode ORVs in Wyoming—non-residents.

	Percent		Percent
January	2.0%	July	30.0%
February	4.4%	August	28.8%
March	2.4%	September	33.6%
April	6.0%	October	42.4%
May	14.8%	November	15.6%
June	19.6%	December	3.6%

Nearly 60 percent of non-resident respondents rode ORVs in Wyoming during only one of the last 12 months (Table 34). Almost 20 percent rode ORVs during two of the last 12 months. Additionally, Less than a quarter of the respondents had ridden ORVs in Wyoming more than two of the last 12 months. The average number of months riding an ORV in Wyoming for non-residents was 2 months.

Table 34. Number of total months respondents rode ORVs in Wyoming—non-residents.

	Percent		Percent
1 Month	58.8%	7 Months	1.6%
2 Months	19.6%	8 Months	2.0%
3 Months	7.2%	9 Months	0.4%
4 Months	4.8%	10 Months	0.4%
5 Months	3.2%	11 Months	0.4%
6 Months	1.6%	12 Months	0.0%

Over half of the non-resident respondents (51 percent) have been riding ORV(s) for ten years or less (Table 35). Nearly 27 percent have been riding between 11 and 20 years and another 15 percent between 21 and 30 years. Overall, respondents reported riding ORVs an average of 14.4 years. The distribution of non-resident responses for this question is similar to those of resident respondents.

Table 35. Number of total years respondents have ridden ORVs–non-residents.

	Percent
5 or Less	28.1%
6 to 10	22.9%
11 to 15	13.7%
16 to 20	12.4%
21 to 25	8.0%
26 to 30	7.2%
More than 30	7.6%

During the last twelve months, 87 percent of non-resident respondents reported riding in Wyoming for 20 days or less (Table 36). Only 13 percent rode more than 20 days. No respondents rode more than 70 days. The average time spent riding in Wyoming was 10.5 days. Not surprisingly, these results indicate that non-residents ride ORVs in Wyoming much less frequently than residents (10.5 days vs. 32.5 days).

The researchers wanted to know whether respondents were primarily weekend or weekday recreational riders. Non-residents reported riding about 60 percent of their time on weekdays and 40 percent of their time on weekends. Whereas, resident respondents were split evenly at 50 percent each for weekday and weekend riding. The difference between residents and non-residents may be indicative of more vacation type ORV usage by non-residents.

Table 36. Total number of days riding in Wyoming during last twelve months–non-residents.

	Percent
10 or Less	70.4%
11 to 20	16.9%
21 to 30	5.8%
31 to 40	4.1%
41 to 50	1.6%
51 to 60	0.8%
61 to 70	0.4%
More than 70	0.0%

As with residents, ORV usage by non-residents in Wyoming was often in conjunction with other outdoor recreation activities (Table 37). Over one-half of non-residents had engaged in either camping or hunting at least part of the time while riding ORVs in Wyoming. More than one-quarter had engaged in fishing. Compared to residents, non-resident participation in activities in addition to riding ORVs was somewhat less (Table 6).

Table 37. Percent of respondents who participated in other recreation activities while riding ORVs in Wyoming–non-residents.

	Percent
Camping	52.0%
Hunting	54.8%
Fishing	27.2%
Other	17.2%

Table 38 shows that in terms of time spent riding ORVs, more than three-fourths of the non-resident respondents, recreating in Wyoming, spent 50 percent or less of their time during the days indicated in Table 36 actually riding ORVs. This is slightly more than these same categories for residents (68 percent). The disparity between residents and non-residents is not as great in the other categories. The average amount of time non-residents spent riding ORVs was 38 percent.

Table 38. Percent of time ORV riding–non-residents.

	Percent
25 or less	45.4%
26 to 50	31.1%
51 to 75	7.7%
76 to 100	15.8%

The average number of ORVs non-resident respondents owned during the last 12 months was approximately 2.5 per household. This is the same estimate obtained for resident respondents. Likewise, the non-resident responses in Table 39 are similar to those obtained for residents and reported in Table 8. In terms of individual households, 94 percent of the non-resident households in the survey owned at least one ATV, while 18 percent owned at least one off-highway motorcycle, and 8 percent owned at least one of some other type of cross-country vehicle.

Table 39. Number of ORVs in household–non-residents.

	Percent
ATV	77.6%
Motorcycle	15.2%
Other	7.1%

The decision to participate and where to participate in a recreation activity is derived from a complex set of factors. In essence, it is the sum of the satisfaction that one receives from all the attributes of participation in a particular location. In order to gauge the relative importance of these factors, a set of questions was asked respondents regarding their feelings about the importance of trail characteristics and trail setting. Table 40 provides a summary of the mean rating for the trail characteristics as indicated by non-residents. These means are based on a Lickert scale of 1 to 5 with 1 being not important and 5 being very important. The three highest rated trail characteristics were: 1) More designated trails, 2) Accurate and easy to read trail maps, and 3) More designated open riding areas. The three lowest rated characteristics were: 1) Services available near trailhead, 2) More trails that are legal for youth, and 3) Trails that are easy to ride. The three most important attributes for both residents and non-residents are the same.

In terms of trail setting, Table 41 provides a summary of the mean ratings by non-resident respondents. The three highest rated trail settings were: 1) Wildlife viewing, 2) Natural/scenic surroundings, and 3) Having solitude on the trail. The three lowest rated characteristics were: 1) Seeing other riders, 2) ORV supplies available nearby and 3) Restroom availability. The three highest (and the three lowest) attributes rated by non-residents were that same as those reported by residents.

Table 40. Trail characteristic attributes–non-residents.

	Mean
More designated trails	3.87
Accurate and easy to read trail maps	3.84
More designated open riding areas	3.79
Length of trail	3.62
More designated roads	3.55
Signage on trails	3.55
Trail enforcement	3.03
Trails that are challenging	2.99
Loops trails	2.86
Trails that are easy to ride	2.74
More trails that are legal for youth	2.64
Services available near trailhead	2.22

Table 41. Trail setting attributes–non-residents.

	Mean
Wildlife viewing	4.18
Natural/scenic surroundings	4.17
Having solitude on the trail	3.66
Parking availability	2.61
Distance from home	2.59
Restroom availability	2.09
ORV supplies available nearby	2.09
Seeing other riders	1.71

Non-resident respondents were asked what they would do if for some reason they were unable to ride an ORV for recreation purposes in Wyoming. The majority of respondents (51 percent) said they would *increase* participation in outdoor recreation activities *in other states*, approximately 21 percent said they would *increase* participation in other outdoor recreation activities *in Wyoming*, while 15 percent would *decrease* overall participation in outdoor recreation activities and 14 percent answered as other⁴ (Table 42). Though not specifically asked, these responses imply that most respondents would continue to use ORVs, just not in Wyoming. It also suggests that while ORV's are only part of many recreation experiences, most non-resident respondents would cease coming to Wyoming if they were unable to ride an ORV here.

Respondents were asked to rate their overall satisfaction with recreation ORV riding in Wyoming. Fifty-six percent said they were *very satisfied* and 35 percent said they were *somewhat satisfied* (Table 43). Only 7 percent said they were *somewhat dissatisfied* and only 3 percent said they were *very dissatisfied* with recreation ORV riding in Wyoming. Compared with resident's responses, non-residents obtained significantly more satisfaction from ORV usage in Wyoming (Table 12).

⁴ Other included activities such as: camping, fishing, relaxing, walking more, riding a horse, hunting, driving a jeep, etc. (a breakdown of activities listed by participants is illustrated in Appendix F).

Table 42. Other outdoor recreation if unable to ride ORV for recreation in Wyoming–non-residents.

	Percent
Increase in Other Activity	20.7%
Increase Activity in Other State	50.6%
Less Activity	14.8%
Other	13.9%

Table 43. Overall satisfaction with recreation riding in Wyoming–non-residents.

	Percent
Very Satisfied	55.6%
Somewhat Satisfied	34.7%
Somewhat Dissatisfied	6.7%
Very Dissatisfied	2.9%

Non-Resident Survey Section II: Annual Trip Information

This section was designed to determine what recreation areas in Wyoming were important to non-resident ORV users. Wyoming was divided into eighteen ORV regions, based mainly on the major mountain ranges and basins in the state (See map. Appendix A). Total number of trips and total number of days by area are important factors in determining the popular spots to recreate.

Responses to question 12 indicate areas frequented by non-residents over the last year. Table 44 summarizes these responses as the percentage of trips, by area, based on 1,137 trips to Wyoming. The three most frequently visited areas in terms of trips were: 1) The Snowy Range, 2) The Big Horn Mountains, and 3) The Big Horn Basin. The three least frequently visited areas were: 1) The Jackson Hole Area, 2) The Wyoming Range, and 3) South Eastern Wyoming. Non-resident respondents made an average of 5.2 ORV trips to Wyoming during the last twelve months.

Table 44. Total number of trips by area–non-residents.

	Percent		Percent
Snowy Range	23.5%	<i>East of Yellowstone N.P.</i>	2.5%
Big Horn Mountains	11.6%	<i>Uinta Mountains</i>	2.5%
Big Horn Basin	10.7%	<i>Powder River Basin</i>	2.4%
South Western Wyoming	9.3%	<i>Laramie Range</i>	2.0%
Sierra Madre Mountains	7.2%	<i>Central Wyoming</i>	1.8%
West Side Wind River Mtn	6.9%	<i>Laramie Peak Area</i>	1.8%
Star Valley Area	6.3%	<i>South Eastern Wyoming</i>	1.7%
Black Hills Area	4.6%	<i>Wyoming Range</i>	1.1%
East Side Wind River Mtn	3.3%	<i>Jackson Hole Area</i>	0.8%

Table 45 summarizes the percentage of days of ORV use by non-resident respondents in Wyoming based on the 2,544 days reported. The three most frequently visited areas in terms of days were: 1) The Snowy Range, 2) Big Horn Mountains, and 3) South Western Wyoming. The three least frequently visited areas in terms of days were: 1) Uinta Mountains, 2) South Eastern Wyoming, and 3) The Black Hills. The ranking of areas by trip was somewhat different than the

ranking of areas by days because some areas tend to be associated with shorter length trips. Non-resident respondents spent an average of 11.6 days in Wyoming during the last twelve months. As a check on our data, this number was compared to the results for the number of days (Table 36). There was no statistical difference between the two results, showing consistency in respondent’s answers (10.5 versus 11.6).

Table 45. Total number of days by area–non-residents.

	Percent		Percent
Snowy Range	22.6%	<i>Laramie Range</i>	3.3%
Big Horn Mountains	18.0%	<i>Wyoming Range</i>	3.2%
South Western Wyoming	7.9%	<i>East of Yellowstone N.P.</i>	3.1%
West Side Wind River Mtn	7.4%	<i>Central Wyoming</i>	3.0%
Sierra Madre Mountains	5.6%	<i>Laramie Peak Area</i>	2.0%
Big Horn Basin	5.1%	<i>Jackson Hole Area</i>	1.9%
Star Valley Area	4.9%	<i>Black Hills Area</i>	1.8%
Powder River Basin	4.1%	<i>South Eastern Wyoming</i>	1.5%
East Side Wind River Mtn	3.6%	<i>Uinta Mountains</i>	1.0%

ORV recreation occurs on several different land ownership types in Wyoming, including both public (Forest Service, BLM, and State) and private lands, often in the same trip. Table 46 summarizes the distribution of trips reported by non-residents in terms of land ownership type. The Bureau of Land Management and the U.S. Forest Service are the two largest land managers in the state and include some of the most popular ORV destinations. For this reason, they were singled out for inclusion in the survey. The most frequent category was “other”. In most cases this involved several different land ownerships types accessed during the same trip. In terms of one specific land ownership being accessed during the trip, approximately 38 percent of non-residents indicated the Forest Service and about 10 percent indicated the BLM.

Table 46. Trips by land ownership–non-residents.

	Percent
USFS	37.6%
BLM	10.3%
Other	52.1%

In terms of days by land ownership type, the most frequent category reported by non-resident respondents was again, “other” (Table 47). Following “other” was the Forest Service and then the BLM. Comparison of the percentage of trips and days by land ownership suggest that trips to Forest Service lands tended to be longer trips than either to BLM lands or other trips (37.6 percent vs. 44.6 percent).

Table 47. Days by land ownership–non-residents.

	Percent
USFS	44.6%
BLM	9.6%
Other	45.8%

In some cases riding ORVs is the primary reason for a trip, in others the primary purpose is for some other recreation activity. Non-residents were asked for how many recreation trips listed in Table 44 was the primary purpose of the trip to ride ORVs and how many trips was ORV riding mainly a means of transportation to participate in other recreation activities such as camping, fishing or hunting. Almost 40 percent responded that hunting was the primary purpose, followed closely by ORV riding with 37 percent. Fishing, camping and other activities accounted for approximately a quarter of the total (Table 48).⁵

Table 48. Primary purpose of recreation trips listed in Table 44–non-residents.

	Percent
ORV Riding	37.1%
Camping	8.1%
Fishing	8.2%
Hunting	39.1%
Other	7.5%

Non-Resident Survey Section III: Specific Information for Most Recent Trip in Wyoming

This section presents specific information related to the most recent trip non-resident respondents took to Wyoming. Because the ORV survey was administered in November, hunting was over-represented in the sample in terms of the primary purpose of the most recent trip relative to the distribution in Table 48. To adjust for this, the sample was weighted to make the distribution of the sample for the most recent trip more comparable with the distribution for the whole year (Table 49). This was accomplished by multiplying the un-weighted data by a conversion factor so its ratio matched the annual ratio. This was necessary since there were statistical differences in trips characteristics between different types of trips. The results presented in this section are based on the weighted sample for primary purpose of the most recent trip by non-resident respondent.

Table 49. Primary purpose of most recent trip–non-residents.

	Annual (Table 16)	Un-Weighted Most Recent	Weighted Most Recent
ORV Riding	37.1%	33.0%	37.0%
Hunting	39.1%	49.3%	39.2%
Other	23.8%	17.7%	23.8%

The number of non-residents in the traveling party for the most recent trip varied considerably. The average group size was 6 individuals. The two most frequent group sizes were 6 to 10 people and two people (Table 50). This suggests a combination of both large and small groups using ORVs.

Over one-third of the respondents had just one passenger vehicle in their traveling party. Two vehicles and three vehicles were the next most frequent categories (Table 50). There were 11.5 percent of respondents who reported not bringing a passenger vehicle on their most recent trip. These individuals may have been non-residents who may have rode ORVs directly from where

⁵ Trips primarily for other recreation activities included activities such as: boating, hiking, and many people listed two or more recreation activities from the list given as their primary purpose of trip.

they were staying during their visit to Wyoming. The average number of passenger vehicles taken on the most recent trip was two.

Forty-two percent of the non-resident parties took two or less ORVs on their most recent trip (Table 50). Another 31 percent took between three and four ORVs. Non-residents took an average of 4.2 ORVs on their most recent trip in Wyoming. These results suggest that there were on average about 1.4 individuals in the traveling party per ORV.

Table 50. Percentage of people, passenger vehicles and ORVs in traveling party taken on most recent trip—non-residents.

	People	Vehicles	ORVs
Zero	0.0%	11.5%	0.0%
One	4.4%	34.4%	15.4%
Two	22.5%	27.8%	26.9%
Three	11.0%	12.3%	15.4%
Four	17.6%	5.3%	15.9%
Five	7.9%	4.8%	7.0%
6 to 10	23.3%	1.8%	13.2%
More than 10	13.2%	2.2%	6.2%

Table 51 shows that during their most recent trip, non-residents spent an average of nine nights away from their primary residence, with the majority of those nights in Wyoming (7 nights). Almost 30 percent of respondents spent between 8 and 15 nights, while 19 percent spent two to three nights. These two groups can be looked at as representing two different types of trips, weekend or long-weekend trips and vacation (destination) type trips. Note that almost nine percent did not spend any nights away from home, indicating their trips were likely day trips. Respondents spent an average of 8.2 days in Wyoming, and reported riding ORVs an average of 6.9 days.

Table 51. Number of nights away from home, nights outside Wyoming, days in Wyoming and days riding ORVs in Wyoming—non-residents.

	Nights Away	Nights Outside	Days in	Days Riding ORVs
	From Home	Wyoming	Wyoming	in Wyoming
Zero	8.7%	61.6%	1.4%	3.2%
One	4.1%	9.6%	2.7%	4.5%
Two	10.0%	11.4%	7.3%	11.8%
Three	9.1%	4.1%	10.5%	11.8%
Four	5.9%	4.1%	15.0%	13.2%
Five	6.4%	0.9%	11.4%	12.7%
Six	5.5%	0.9%	8.2%	12.3%
Seven	8.7%	0.9%	8.6%	6.8%
8 to 10	16.4%	2.3%	15.9%	10.5%
11 to 15	10.5%	2.3%	9.1%	5.5%
16 to 20	5.5%	0.9%	3.2%	2.3%
More than 20	9.1%	0.9%	6.8%	5.5%

Non-residents traveled substantial distance to ride ORVs in Wyoming. Over 50 percent (54.4 percent) of respondents traveled *more than* five hours to Wyoming. Seventeen percent of respondents traveled three hours to reach their recreation destination (Table 52). Average time spent traveling to their destination was 10.3 hours. Travel time could indicate two different types of non-residents. Nearby non-residents from neighboring states and longer distance non-residents from farther away.

Table 52. Travel time in hours–non-residents.

	Percent
One Hour or Less	4.9%
Two Hours	7.5%
Three Hours	17.3%
Four Hours	8.8%
Five Hours	7.1%
More than 5 hours	54.4%

Survey data on miles traveled to destination for non-residents supports the above assumption. The number of miles traveled one-way to recreate in Wyoming averaged 575 miles, with the majority (57 percent) traveling *more than* 250 miles (Table 53). An additional 16.7 percent traveled between 101 to 150 miles.

Table 53. Miles traveled away from home (one-way)–non-residents.

	Percent
50 Miles or Less	5.0%
51 - 100 Miles	5.4%
101 - 150 Miles	16.7%
151 - 200 Miles	9.0%
201 - 250 Miles	7.2%
More than 250 Miles	56.6%

Non-resident ORV users tended to fall into two groups in terms of miles traveled on ORVs. Again, this could be an indicator of different types of trips (Table 54). Approximately 46 percent traveled less than 60 miles during their stay, while more than 37 percent traveled 100 miles or more. The average number of miles on an ORV for the trip was 106 miles or about 15 miles per day riding in Wyoming.

Table 54. Miles traveled on ORV–non-residents.

	Percent
20 Miles or Less	13.6%
21 to 40 Miles	16.9%
41 to 60 Miles	16.0%
61 to 80 Miles	8.9%
81 to 100 Miles	7.5%
101 to 150 Miles	15.5%
151 to 200 Miles	9.9%
More than 200 Miles	11.7%

Over one-half (57 percent) of non-residents rode ORVs 10 hours or less on their most recent trip. Nearly 39 percent rode between 6 and 10 hours (Table 55). The average number of hours spent riding ORVs during the most recent trip was 15.7 hours. Non-residents indicated that on average they consumed 13.4 gallons of gasoline in their ORVs during the trip.

Table 55. Hours spent on ORV for most recent trip–non-residents.

	Percent
5 Hours or Less	18.3%
6 to 10 Hours	38.6%
11 to 15 Hours	8.4%
16 to 20 Hours	11.4%
21 to 25 Hours	6.9%
More than 25 Hours	16.3%

Table 56 illustrates non-residents expenditures during their most recent ORV trip to Wyoming. The traveling party spent an average of \$964.30 while on the trip, with \$599.33 (62 percent) being spent specifically in Wyoming. The largest categories of spending were: 1) Gasoline (includes both passenger vehicle and ORV) 2) Restaurants and bars 3) Groceries and liquor and 4) Overnight accommodations. The majority of all spending categories amounts were made in Wyoming, except for gasoline (45 percent). This probably reflects the relatively long distances traveled by non-residents to get to Wyoming transporting ORVs. Because almost all trips to Wyoming by non-residents involved an over night stay, no attempt was made to estimate day trip expenditures.

Table 56. Most recent trip expenditures–non-residents.

	Total	Wyoming
Gasoline	\$331.24	\$147.74
Restaurant and bars	\$137.12	\$97.59
Groceries and liquor	\$131.03	\$86.20
Overnight accommodations	\$121.23	\$77.00
ORV guides/tour packages	\$2.78	\$2.71
Day user fees & donations	\$11.28	\$10.32
Oil/repairs/maintenance	\$27.99	\$16.22
Retail items	\$79.32	\$54.24
Entertainment	\$29.17	\$21.61
Other expenses	\$93.14	\$85.70
Total for trip	\$964.30	\$599.33
Per person per trip	\$351.93	\$218.73
Per person per day	\$35.26	\$26.81
Per person per ORV day(6.9 days)	\$51.00	\$31.70

Non-resident survey data reports expenditures based on an average of 2.7 individuals per trip. Extending this number to total expenditures resulted in an estimate of \$351.93 per person per trip, with \$218.72 being spent in Wyoming. Based on the average total trip length from Table 51 (9 nights plus 1 day) the average total trip expenditure for non-residents was estimated to be

\$35.26 per person per day. Based on the average number of days in Wyoming from Table 51 (8.16 days) per person, per day in trip expenditures in Wyoming are estimated to be \$26.81.

Non-Resident Survey Section IV: Annual Expenditure & Information and Safety Programs

Table 57 summarizes non-resident annual ORV expenditures. Non-residents reported spending an average of \$3,631 on their ORVs during the past 12 months. The largest categories of expenditures were: 1) Purchasing of new/used ORV, 2) Purchasing ORV trailers, and 3) Annual repairs. Since this data represents non-resident respondents, most of these expenditures (84 percent) were made outside of Wyoming. However, \$595 of these annual expenditures were made in Wyoming. On a per person basis, annual ORV expenditures averaged to \$1,666 with \$273 being spent in Wyoming. On a per ORV basis, ORV expenditures averaged \$1,482 with \$243 being spent in Wyoming.

Table 57. Mean annual expenditures–non-residents.

	Average	Average
	Total	Wyoming
New/Used ORV	\$2,471.83	\$469.39
ORV trailers	\$646.36	\$21.86
Safety equipment	\$63.91	\$8.30
Clothing	\$43.93	\$5.47
Accessories	\$81.95	\$10.19
Annual repairs	\$144.38	\$25.21
Registration/license/permit	\$74.91	\$26.24
Club dues	\$4.96	\$1.70
ORV mag. subscriptions	\$3.48	\$0.00
ORV storage costs	\$34.85	\$2.35
Other	\$60.36	\$24.71
Total	\$3,630.92	\$595.42
Per Person	\$1,665.56	\$273.13
Per ORV	\$1,482.01	\$243.03

When non-residents were asked if they had participated in an ORV safety program, almost two-thirds indicated that they had not (Table 58). However, nearly the same percentage indicated that they thought there was a need for more ORV safety programs. If given a choice, 45 percent of non-residents would prefer an outdoor (hands-on) program. Twenty-seven percent preferred a video format and 23.6 percent a brochure. The least preferred safety format was classroom instruction at just 2.4 percent.

One would think that rising gasoline prices might affect the attitudes of non-residents traveling long distances to Wyoming to recreate. However, the results from question 27 clearly show that non-resident respondents, if anything, were less inclined than residents to change behavior. One explanation for this could be that non-residents had planned their trip earlier in the year and gas prices were a relatively small part of overall trip costs. Even so, the researchers wanted to determine if rising gas prices played a role in the number of trips taken, the amount time spent riding ORVs, and the number of ORVs owned. Over half of the non-resident respondents said they would not change the number of trips they take nor the amount of time they spend riding their ORVs (Table 59). Conversely, over 17 percent said that gas prices would change the number of trips taken, while almost 16 percent said that higher fuel prices would have some

effect on trips and riding time. A significant majority (85 percent) said that they would not change the number of ORVs they own.

Table 58. Information on ORV safety programs–non-residents.

		Percent
Participation in ORV safety program	Yes	36.8%
	No	63.2%
Need for more ORV safety programs	Yes	63.3%
	No	36.7%
ORV safety program format preferred	Brochure	23.6%
	Classroom	2.4%
	Outdoor	45.2%
	Video	27.2%

Table 59. Effects of rising gasoline prices–non-residents.

	1)None	2	3) Some	4	5) A lot
Number of trips	53.5%	4.5%	15.6%	9.1%	17.3%
Riding time	56.2%	9.1%	16.5%	6.2%	12.0%
Number of ORVs	85.4%	4.6%	5.4%	2.1%	2.5%

Non-Resident Survey Section V: Demographic Information

This section of the survey was designed to increase understanding of who recreation ORV users are. Information on age, gender, education, household financial resources and place of residence was gathered.

Of the 250 non-resident households that responded, there were a total of 598 individuals who used ORVs. The average number of ORV riders was 2.4 per household. The majority of all recreation ORV users (45.2 percent) were in the 40 to 59 year old category. Those under the age of 40 accounted for 41 percent (Table 60). Males dominated the respondent sample, accounting for almost 93 percent of the respondents (Table 61). Again this may be more of a reflection of who registers the ORV(s) rather than who, within the household, rides ORVs.

Table 60. Age distribution–non-residents.

	Percent
Under 20	21.4%
20 to 39	19.9%
40 to 59	45.2%
60 to 80	13.4%
Over 80	0.2%

Table 61. Gender distribution–non-residents.

	Percent
Male	92.4%
Female	7.6%

Table 62 shows the categories for the highest year of formal education completed. The category for those who had finished high school (26 percent) was the highest, followed by 22 percent with some college and 17 percent completing a bachelor’s degree. Thirty percent did not pursue educational opportunities beyond high school, while almost 46 percent had some post-high school education short of a bachelor’s, or post-graduate degree, and 25 percent with a college degree.

Table 62. Educational distribution–non-residents.

	Percent
Grades 1 to 8	0
Some high school	3.6%
Finished high school	25.9%
Technical college	14.6%
Some college	21.5%
Associate’s degree	9.7%
Bachelor's degree	17.4%
Post graduate degree	7.3%

Over a quarter (27 percent) of the respondents, categorized themselves as having between \$70,000 and \$99,999, before tax household financial resources (Table 63). The cluster of categories between \$50,000 and \$149,999 accounted for 64 percent of the non-resident respondents. Respondents reporting *less than* \$50,000 accounted for almost 26 percent of the sample population. Those at the other end of the spectrum reporting *more than* \$149,999 accounted for 10 percent.

Table 63. Household financial resources–non-residents.

Household Financial Resources	Percent
Under \$5,000	0.4%
\$5,000 to \$9,999	0.8%
\$10,000 to \$19,999	0.0%
\$20,000 to \$29,999	5.4%
\$30,000 to \$39,999	10.0%
\$40,000 to \$49,999	9.2%
\$50,000 to \$59,999	12.1%
\$60,000 to \$69,999	7.5%
\$70,000 to \$99,999	26.8%
\$100,000 to \$149,999	17.6%
\$150,000 to \$199,999	5.0%
Over \$200,000	5.0%

Of the top ten states for place of residence, Colorado accounted for 22 percent of non-residents recreating in Wyoming (Table 64). South Dakota (12.4 percent), Utah (12.0 percent) and Wisconsin (11.2 percent) were the other most popular states frequenting Wyoming for ORV recreation. Note, “other” makes up 15.2 percent of the total but includes 19 states with five respondents or less in each.

Table 64. Respondents by place of residence (Top 10 states and other) –non-residents.

	Percent
Colorado	22.0%
South Dakota	12.4%
Utah	12.0%
Wisconsin	11.2%
Nebraska	7.2%
Montana	6.0%
California	4.8%
Iowa	2.8%
Michigan	2.4%
Missouri*	2.0%
Washington*	2.0%
Other**	15.2%

*Missouri and Washington tied for 10th at 5 participants each.

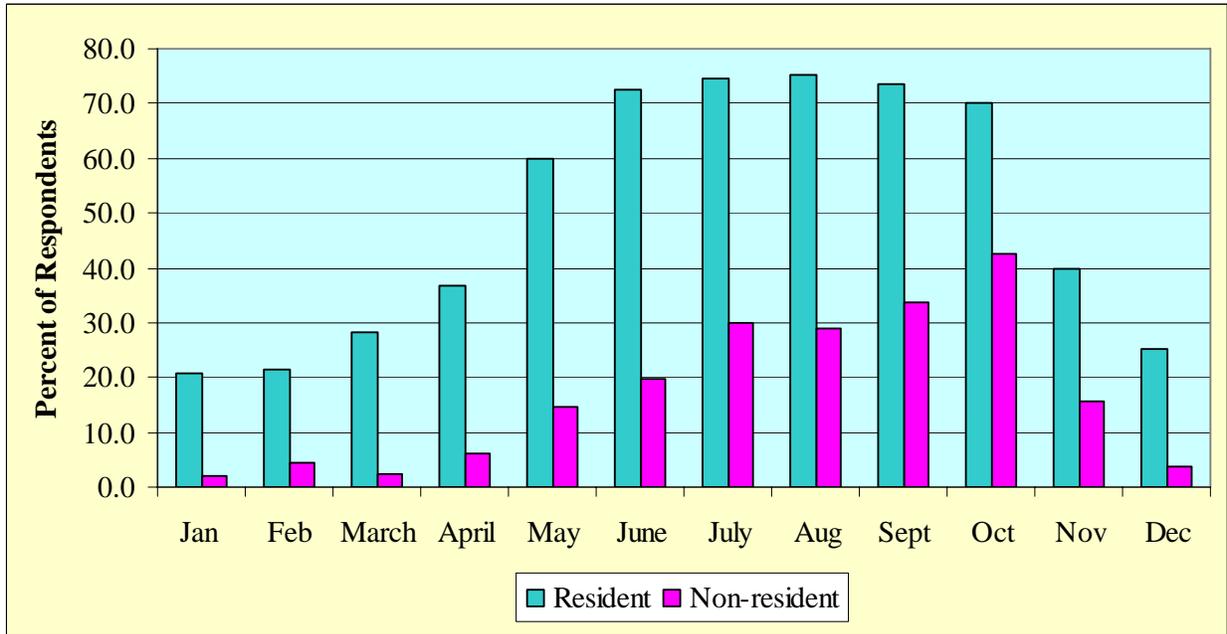
**Includes the following states (each had less than 5 participants): Alabama, Arizona, Arkansas, Florida, Idaho, Indiana, Maryland, Massachusetts, Nevada, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Vermont.

IV. Selected comparisons of resident and non-resident sub-populations

The mail survey revealed some significant differences in where, why, and how resident and non-resident respondents use ORVs in Wyoming. These differences have important implications for the land managers, business owners and communities that will be affected by them. This section examines these differences side-by-side in order to give a clearer picture of their meaning. Since these results have already been presented in the previous sections, the entire survey will not be evaluated in this manner; only those areas that the researchers feel lend important insight. A complete listing of side-by-side results is presented in Appendix H.

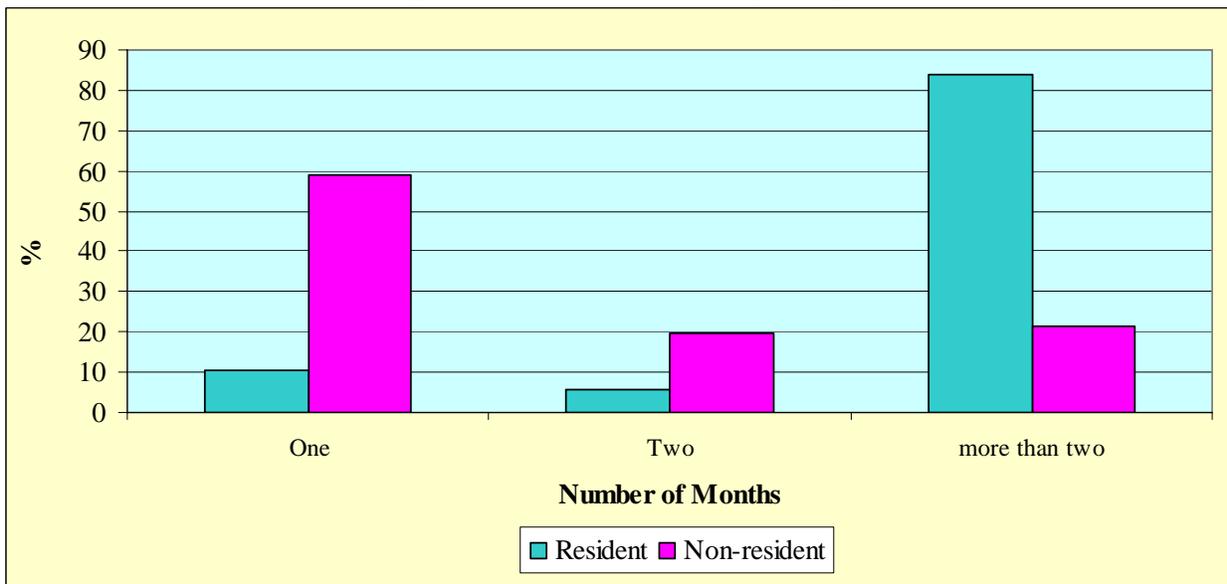
Figure 3 shows reported ORV usage by month for both resident and non-resident respondents. Note how resident use ramps up in the spring and plateaus in the summer, tapering off in the fall. Where as, non-resident use increases to a later plateau and then goes on to peak in the traditional hunting season month of October before dropping steeply into winter. This illustrates that although there is considerable overlap, there are some fundamental differences in general use as well. As with several of the following graphs, the reason for these differences may have a lot to do with the distance (and the expense there of) that non-residents have to travel to recreate in Wyoming.

Figure 3. ORV usage by month—resident and non-resident.



Naturally, because of travel distance, non-residents could not ride ORVs as often as resident respondents. This explains Figure 4, which shows the number of months in which a respondent rode an ORV in Wyoming. Residents tended to use their ORVs in multiple months, somewhat evenly distributed up to seven months. Non-residents tended to have ridden ORVs in Wyoming predominately in just one or two months of the year. This information is important for land managers and business people who would like to plan ahead for peak use by non-residents.

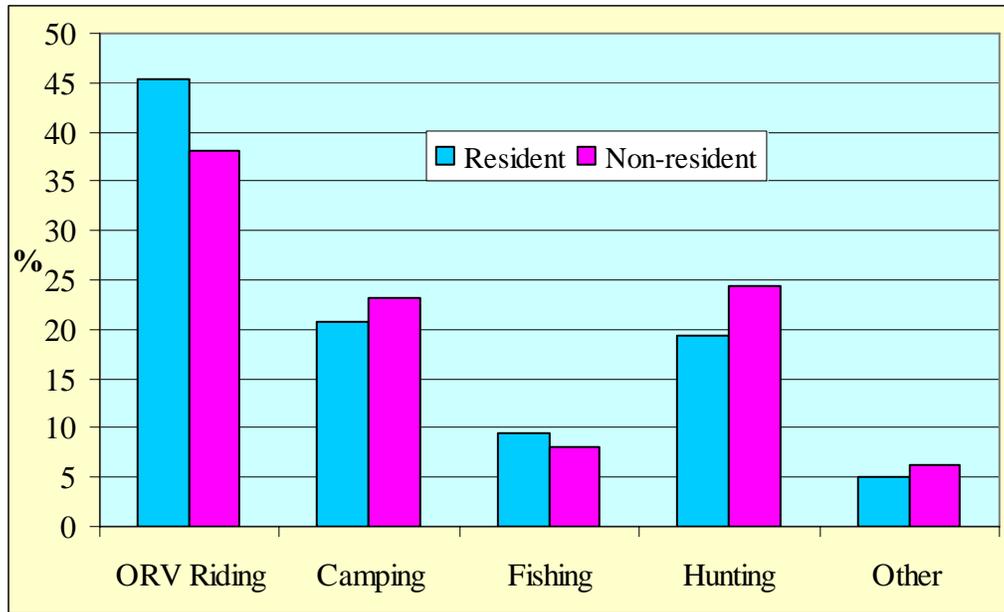
Figure 4. Number of months respondents rode ORVs in Wyoming—resident and non-resident.



The results show that non-resident respondents, in comparison to residents, tended to engage in more heavily in activities in addition to riding ORVs while in Wyoming (Figure 5). If one thinks about non-residents planning a trip to Wyoming, this is understandable as they will try to maximize the value of their trip (in both time and money) by engaging in multiple recreation

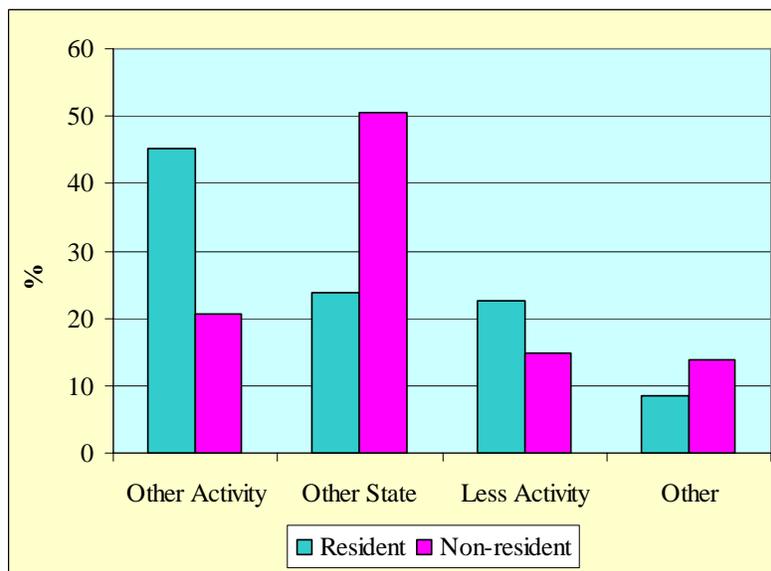
activities that they may not normally do at home. In this case, ORVs become part of the recreation package and not the reason for it. Residents on the other hand, have closer access to these and other outdoor activities and may not have to plan ahead so far to accomplish them in concert. So it is not that residents do not do the other activities, it is just that they are better able to focus their recreation time.

Figure 5. Percent of time on activities—resident and non-resident.



If for some reason, non-resident respondents were no longer able to ride ORVs in Wyoming, the majority of them would go to some other state (Figure 6). From a travel and tourism perspective, these are lost tourists and tourism dollars. Residents tended to respond by saying that they would shift outdoor activities away from ORVs. Access to recreation opportunities and time constraints likely played a key role in the responses.

Figure 6. Other outdoor recreation if unable to ride ORVs in Wyoming—resident and non-resident.



Residents and non-residents also had some interesting differences in destination preferences. This is illustrated in the survey results by the percent of trips to the different ORV regions (Figure 7). By a wide margin, non-residents tended to use the Snowy Range. Also represented are the Big Horn Mountains, the Big Horn Basin and Southwestern Wyoming. Residents' destination pattern is more geographically spread out, somewhat along population lines, with the Big Horn Mountains and Southwestern Wyoming in the lead, followed by the East side of the Wind River Range and Central Wyoming. What is also interesting in this pattern is that it also speaks to the land ownership type. The ORV areas were deliberately drawn by the researchers to simulate the natural breaks between forest lands and plains, which is roughly the division between lands managed by the Forest Service and the BLM and private lands in Wyoming. So an area with the words "mountains" or "range" in it infers an area predominantly managed by the Forest Service. Looked at this way, both residents and non-residents tended to prefer the forest lands (Tables 16 and 47).

Figure 7. Destination by percent of trips—resident and non-resident.

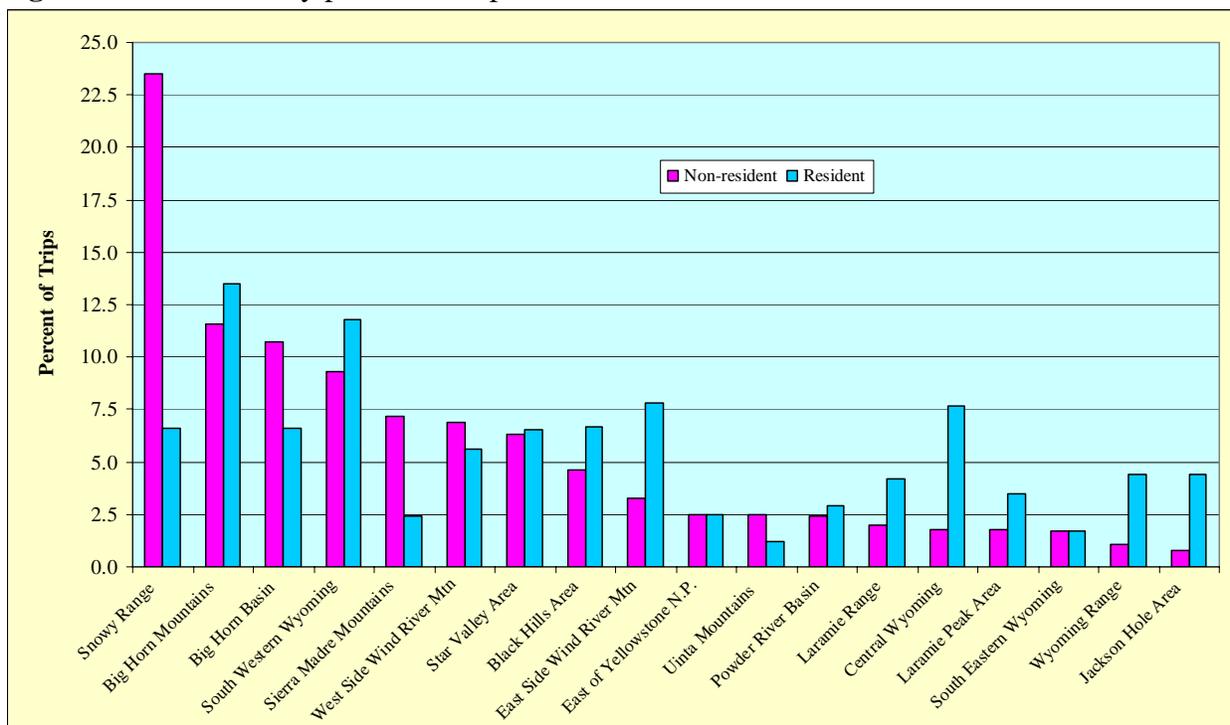
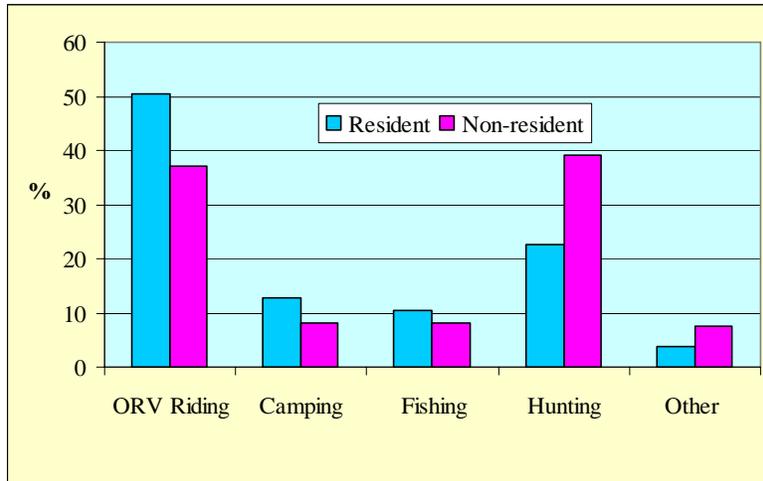


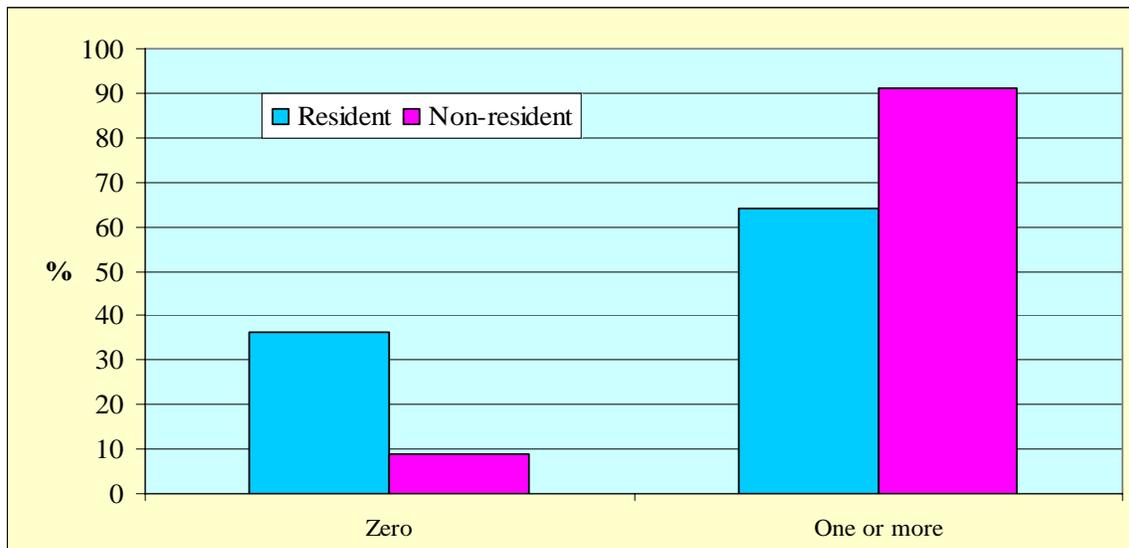
Figure 8 shows the primary purpose of all recreation trips reported by residents and non-residents. Here the multipurpose aspect of ORVs can be seen as shown by residents' preference for ORV riding and non-residents' preference for hunting as the primary purpose of trips. It is important to note that this graph represents all trips, including resident day-trips. Residents have access to ride ORVs nearby and therefore their ability to focus on recreation riding shows up here. Never the less, as a general pattern of usage, this data represents an estimate of the overall distribution of how ORVs are used recreationally in Wyoming.

Figure 8. Primary purpose of recreation trips—resident and non-resident.



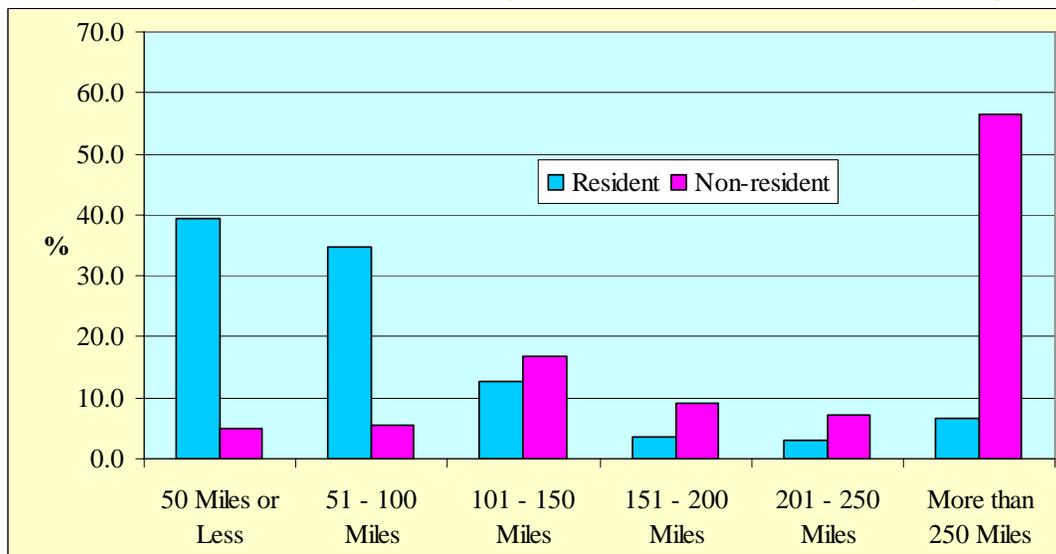
Time is an important and valuable commodity. With regard to ORV users in Wyoming, time plays a role in how often they are able to ride ORVs and how long they can ride. Figure 9 shows the percent of respondents who spent nights away from home for both residents and non-residents on their most recent trip. More than 36 percent of residents spent zero nights away from home compared to 8 percent for non-residents. Whereas, nearly 64 percent of residents spent at least one night away from home and over 92 percent of non-residents. This supports the pattern that residents tend to take shorter trips and non-residents tend to spend more time on a trip.

Figure 9. Percent of respondents who spent nights away from home, most recent trip—residents and non-residents.



Related to time away from home is the number of miles to a destination (Figure 10). While the majority of residents traveled less than 100 miles on their most recent trip to their destination, the majority of non-residents traveled more than 250 miles.

Figure 10. Miles traveled from home (one way) for recreation ORV use in Wyoming



This section has highlighted some of the more significant differences from the mail survey in resident and non-resident ORV users. These differences are mainly based on the fact that non-residents must travel a longer distance to recreate on ORVs in Wyoming.

V. Telephone survey

A separate telephone survey was conducted to estimate the total number of Wyoming residents who used or owned ORVs in the past twelve months. This information was important to the research project in estimating the statewide economic impact of ORVs, since ORV registrations do not provide a complete count of ORVs in Wyoming. The researchers developed an eight question survey which was administered by the Wyoming Survey and Analysis Center (WYSAC). Four of the questions were associated with ORVs and four were associated with snowmobiles. Although snowmobiles are outside the scope of the study, the researchers felt that it would be useful to compare snowmobile with ORV use. The text of the survey can be found in Appendix E.

The WYSAC used a random digit dial method to reach 635 Wyoming households between February 2nd and February 12th, 2006. Of the households responding, 52 percent of the respondents were female and 48 percent male. Results from the telephone survey were based on all members of a household (including the interviewee). The margin of error for the telephone survey was ± 5.6 percent.

ORV question results

The results indicated that 37 percent of Wyoming households used an ORV during the past twelve months. As shown in Table 65, one-third of those Wyoming households that responded positively had only one member that used an ORV during the past twelve months. Almost 29 percent of households had two members that rode an ORV. Usage by more than four household members was just 6.4 percent. The average number of ORV riders per household was 2.4. This was not statistically different from the number of ORV riders reported by residents with registered ORVs (2.4 versus 2.5).

Table 65. Percent of Wyoming household members using ORVs in the last 12 months.

	<i>None</i>		62.0%
	<i>One or more</i>		37.3%
Number of riders in households with ORV riders			
One	33.3%	<i>Four</i>	17.3%
Two	28.7%	<i>Five</i>	3.4%
Three	14.3%	<i>More than five</i>	3.0%
Average = 2.4 riders/household			

The majority of households where ORV use occurred rode ORVs for 20 days or less during the past twelve months (56.3 percent). Those riding between 21 and 30 days accounted for 14 percent. ORV usage in 9.5 percent of the households was more than 100 days during the past twelve months with 5.6 percent reporting more than 200 days (Table 66). It is possible that these households may be using ORVs for uses other than recreation, such as ranching, even though the questionnaire specifically asked about recreation usage. The average number of days reported riding ORVs per household was 30.1.

Table 66. Number of days during the past 12 months household members used ORVs.

	Percent
10 or Less	41.6%
11 to 20	14.7%
21 to 30	13.8%
31 to 40	5.2%
41 to 50	2.2%
51 to 60	3.5%
61 to 100	9.5%
101 to 200	3.9%
More than 200	5.6%

Almost 40 percent of Wyoming households (39.4 percent) owned an ORV during the last twelve months. The majority of those households (50.2 percent) owned just one ORV (Table 67). Households owning two or three ORVs accounted for 40 percent. Households owning four or more ORVs represented 10 percent of the total. The average number of ORVs owned was 2.02. This was statistically different from the number of ORVs reported by resident respondents with registered ORVs (2.02 versus 2.51). Thirty percent of ORV owners also owned a snowmobile.

Table 67. Number of ORVs owned during the past 12 months.

	<i>None</i>		63.3%
	<i>One or more</i>		36.7%
Number of ORVs in households with ORV riders			
One	50.2%	<i>Four</i>	4.8%
Two	26.5%	<i>Five</i>	2.0%
Three	13.3%	<i>More than five</i>	3.2%
Average = 2.02 ORVs /household			

Snowmobile question results

The results indicated that 17 percent of Wyoming households used a snowmobile during the last twelve months (Table 68). This was less than one-half the ORV use rate. This indicates greater popularity of ORVs, possibly due to their year-around-use and multiple-use capabilities.

However, the average number of household members that used a snowmobile (2.5) was similar to the average for ORV riders (2.4).

Table 68. Percent of Wyoming household members using snowmobiles in the last 12 months.

<i>None</i>		83.0%	
<i>One or more</i>		17.0%	
Number of riders in households with ORV riders			
One	35.2%	<i>Four</i>	16.7%
Two	24.1%	<i>Five</i>	2.8%
Three	17.6%	<i>More than five</i>	3.7%
Average = 2.5 riders/household			

The majority of households where snowmobile use occurred (55 percent) rode their snowmobiles for 10 days or less, an approximately 13.5 percentage point increase over that of ORV days (Table 69). Only 2.8 percent of the households rode between 101 and 200 days, while there were no households that rode more than 200 days (more than likely due to no snow). The average number of days riding snowmobiles was considerably less than that of ORV riding at 22.8 days per household during the last twelve months. This is not surprising, given the specialized nature of these vehicles and their requirement for snow and the variability in the amount of snow in any given year.

Table 69. Number of days during the past 12 months household members used snowmobiles.

	Percent
10 or Less	55.1%
11 to 20	14.1%
21 to 30	13.0%
31 to 40	3.8%
41 to 50	1.9%
51 to 60	3.7%
61 to 100	5.6%
101 to 200	2.8%

Slightly less than 15 percent of households reported owning a snowmobile in the past 12 months. However, the average number of snowmobiles owned per household was higher than the ORV average (2.48 snowmobiles versus 2.02 ORVs). Of those households with snowmobiles, almost 33 percent owned one snowmobile, followed by 30.5 percent owning two and approximately 15 percent owning three. Households owning more than three accounted for the remaining 22 percent. Seventy-five percent of snowmobile owners also owned an ORV (Table 70).

The telephone survey estimated (with ± 5.6 percent error) the number of ORVs and snowmobiles owned by state residents, plus their estimated annual usage. This information, combined with demographic and expenditure information from our mail survey was used to assess the economic importance of ORVs in the State of Wyoming.

Table 70. Number of snowmobiles owned during the past 12 months.

	<i>None</i>		85.1%
	<i>One or more</i>		14.9%
Number of snowmobiles in households with snowmobile riders			
One	32.6%	<i>Four</i>	8.4%
Two	30.5%	<i>Five</i>	6.3%
Three	14.7%	<i>More than five</i>	7.4%
Average = 2.48 snowmobiles/household			

Using the estimates from the telephone survey and estimates of the number of households in Wyoming (Census, 2006) it was possible to estimate the number of households participating and the number of ORVs and snowmobiles owned by Wyoming residents in 2004. These values are presented in Table 71.

Table 71. Estimated number of Wyoming households and riders participating in ORV and snowmobile activities, 2004.

	ORVs	Snowmobiles
Number of households in Wyoming (Wyoming housing report, 2005)	202,496	202,496
Percent of households with ORV riders	37.3%	17.0%
Number of households with ORV riders	75,222	34,424
Number of riders per household	2.38	2.50
Est. number of ORV riders in WY	179,764	86,060
Wyoming population- 2004	506,529	506,529
Participation rate	35.5%	17.0%
Number of households with ORV riders	75,531	34,424
Number of days per household	30.07	22.77
Total number of household use-days	2,271,217	783,834

VI. Economic contribution of ORV riders

Tables 72 and 73 summarize the economic contribution of resident and non-resident ORV riding in Wyoming. Two estimates of resident ORV recreation spending are presented in Table 72. The first estimate (column two) is based on the number of resident 2005 ORV registrations in Wyoming. Wyoming State Trails Program data indicates that this was 28,150 machines. The second estimate (column three) is based on the results of the telephone survey of Wyoming residents. The results from the phone survey suggest a total of more than 150,000 ORV's in Wyoming in 2005. The reason for this difference is unclear but may indicate that only about 20 percent of ORV's in the state are registered with the State Trails Program. As shown in Table 72, this discrepancy makes a substantial difference in the estimates of recreation spending by resident ORV riders.

Based on the 28,150 registered resident ORVs, and the mail survey estimates of 1.3 people per ORV, and 28.2 days of ORV riding in Wyoming it is estimated that total resident recreation use for registered ORV's in Wyoming amounted to over 1 million use-days in 2005. The mail

survey results indicate that resident ORV riders spent an average of about \$27 per person per day while riding in Wyoming. This converts to an estimated \$27.9 million in total resident ORV trip expenditures in Wyoming for 2005. The mail survey results also indicate that residents spend an average of nearly \$1,300 per year in Wyoming on each ORV for equipment and other fixed expenditures. This converts to an estimated \$35.5 million in total resident ORV annual expenditures in Wyoming for 2005. Combining trip and annual expenditures indicates that residents spent a total of \$63.4 million to recreate on ORV's in Wyoming during 2005.

Table 72. Economic contribution of resident ORV riders in Wyoming.

	<u>Registrations</u>	<u>Telephone Survey</u>
<u>Estimated Expenditures</u>		
Total resident user-days	1,031,979	5,515,277
Daily trip expenditures in Wyoming	<u>\$27.04</u>	<u>\$27.04</u>
Total resident trip expenditures	\$27,907,836	\$149,149,784
Number of resident ORVs	28,150	150,444
Annual expenditures in Wyoming	<u>\$1,261.22</u>	<u>\$1,261.22</u>
Total resident annual expenditures	\$35,503,456	\$189,743,583
Total resident expenditures in WY	\$63,411,291	\$338,893,367
<u>State & Local Government Revenue</u>		
Sales tax revenue @ 5.2%	\$2,632,688	\$14,070,059
Gas tax revenue @ \$0.14 Per Gallon	\$334,944	\$1,790,063
Lodging tax collections @ 2.0%	\$23,979	\$128,155
Registration fee @ \$15.00	\$422,250	\$422,250
Total government revenue	\$3,413,862	\$16,410,528

Resident ORV use spending results in state and local government revenue. Four sources of revenue were considered including: 1) sales tax revenue from resident ORV expenditures, 2) gas tax revenue from resident ORV gas purchases, 3) lodging tax collections from resident ORV accommodation expenditures, and 4) resident ORV registration fees. From the mail survey results it is estimated that approximately 80 percent of resident ORV spending was subject to sales tax. At a 5.2 percent tax rate, which accounts for both the state rate and local options, this would represent \$2.6 million in sales tax revenue. The mail survey results also indicate that on average resident ORV riders used 2.3 gallons of gas per day of ORV riding in Wyoming. Applying this amount to the number of resident user days (1,031,979) indicates about 2.4 million gallons of gas per year being purchased for resident ORV riding. At the state's \$0.14 per gallon tax rate this represents nearly \$335,000 in gas tax revenue. In terms of lodging tax revenue, the mail survey results indicate that resident ORV riders spent approximately \$1.2 million on accommodations in 2005. Assuming a 2 percent tax rate this level of expenditure would have generated nearly \$24,000 in lodging tax revenue. Finally, the 28,150 resident ORVs each with a \$15 registration fee would generate more than \$422,000 of registration revenue. Combining these four revenue streams indicates that resident ORV use generated over \$3.4 million in state and local government revenue during 2005 based on ORV registrations. It should be noted that this amount is not necessarily all additional revenue to state and local governments in Wyoming since some of this revenue may have been collected from other expenditures by ORV riders if they had not spent it on riding ORV's. However, it is revenue that goes to offset any costs of the ORV trails program to state and local government in Wyoming.

Assuming that the estimates developed for registered ORVs are applicable to the over 150,000 ORVs indicated by the telephone survey, the estimates of the economic contribution of resident ORV riders increased by over five-fold. On this basis, total use days for resident ORV riders increase to 5.5 million days. Under this scenario total resident ORV trip and annual expenditures increase to \$338.9 million and total state and local government revenue increases to \$16.4 million.

Table 73 provides similar information for non-resident ORV riders in Wyoming during 2005. Similar to the resident rider analysis, two estimates of non-resident economic impact are presented in Table 73. The first estimate (column two) is based on the 11,071 non-resident ORV registrations in Wyoming for 2005 from the State Trails Program database. The second estimate (column three) is based on the results of the telephone survey assuming that if 20 percent of total resident ORV's are registered with the State Trails Program then 20 percent of non-resident ORV's are also registered. If this assumption is valid it makes a substantial difference in the estimation of the economic impacts of non-resident ORV riders.

Based on the 11,071 registered non-resident ORVs, and the mail survey estimates of 1.4 people per ORV, and 11.6 days of ORV riding in Wyoming it is estimated that total recreation use for non-resident registered ORV's in Wyoming was nearly 180,000 use days in 2005. The mail survey results indicate that non-resident ORV riders spent an average of about \$32 per person per day while riding in Wyoming. This converts to an estimated \$5.7 million in total non-resident ORV trip expenditures in Wyoming for 2005. The mail survey results also indicate that non-residents spend an average of approximately \$243 per year in Wyoming on each ORV for equipment and other fixed expenditures. This converts to an estimated \$2.7 million in total non-resident ORV annual expenditures in Wyoming for 2005. Combining trip and annual expenditures indicates that non-residents spent a total of \$8.4 million to recreate on ORVs in Wyoming during 2005.

Because non-resident expenditures represent new money to the Wyoming economy it is appropriate to consider the economic impact of the spending by non-resident ORV riders (Crompton, 2001). Non-resident ORV rider spending is important because it creates additional jobs and income for Wyoming residents. A 2003 IMPLAN model of Wyoming was used to estimate the economic impact of non-resident spending. Based on the \$8.4 million in visitor spending it is estimated that this economic activity generated directly or indirectly approximately 127 jobs and \$3.3 million in labor earnings.

Non-resident ORV use in Wyoming also results in state and local government revenue. The same four sources of revenue estimated in the resident analysis were also considered for non-residents. It is estimated from the mail survey results that approximately 70 percent of non-resident ORV spending was subject to sales tax. At a 5.2 percent tax rate, which accounts for both the state rate and local options, this would represent more than \$302,000 in sales tax revenue. The mail survey results also indicate that, on average, non-resident ORV riders used 1.9 gallons of gas per day while ORV riding in Wyoming. By applying this amount to the number of non-resident user-days (179,793), an estimated 350,000 gallons of gas per year is being purchased for non-resident ORV riding. At the state's \$0.14 per gallon tax rate this represents nearly \$50,000 in gas tax revenue.

In terms of lodging tax revenue, the mail survey results indicate that non-resident ORV riders spent approximately \$732,000 on accommodations in 2005. Assuming a 2 percent tax rate this

level of expenditure would have generated more than \$78,000 in lodging tax revenue. Finally, the 11,071 non-resident ORVs each with a \$15 registration fee results in more than \$166,000 of registration revenue. Combining these four revenue streams indicates that non-resident ORV use generated over \$530,000 in state and local government revenue during 2005 based on ORV registrations. This amount would represent additional revenue to state and local governments in Wyoming since these expenditures would be unlikely to occur in the state without non-resident ORV use.

Table 73. Economic contribution of non-resident ORV riders in Wyoming.

	<u>Registrations</u>	<u>Telephone Survey</u>
<u>Estimated Expenditures</u>		
Total non-resident user-days	179,793	960,880
Daily trip expenditures in Wyoming	<u>\$31.70</u>	<u>\$31.70</u>
Total non-resident trip expenditures	\$5,699,533	\$30,460,408
Number of non-resident ORVs	11,071	59,168
Annual expenditures in Wyoming	<u>\$243.03</u>	<u>\$243.03</u>
Total non-resident annual expenditures	\$2,690,569	\$14,379,396
Total non-resident expenditures in WY	\$8,390,102	\$44,839,804
<u>Economic Impact</u>		
Number of jobs	127	679
Earnings	\$3,305,819	\$17,667,518
<u>State & Local Government Revenue</u>		
Sales tax revenue @ 5.2%	\$302,031	\$1,614,168
Gas tax revenue @ \$0.14 Per Gallon	\$49,029	\$262,028
Lodging tax collections @ 2.0%	\$14,645	\$78,269
Registration fee @ \$15.00	\$166,065	\$166,065
Total government revenue	\$531,770	\$2,120,530

Assuming that the estimates developed from the telephone survey are applicable to non-resident ORV use and that registered non-resident use is applicable to total non-resident use, the estimates of the economic impact of non-resident ORV riders increases by over five-fold. On this basis, total use-days for non-residents increases to nearly 961,000 days. Under this scenario, total non-resident ORV trip and annual expenditures increase to \$44.8 million. Total economic impact increases to nearly 680 jobs and \$17.7 million in labor earnings. Finally, total state and local government revenue increases to \$2.1 million.

VII. Summary and conclusions

Off-road vehicle use has become a popular recreational pursuit in Wyoming for both residents and visiting non-residents alike. In 2002, the Wyoming State Trails Program (a unit of the Wyoming Department of State Parks and Cultural Resources) instituted an ORV permit program to address the growing use of ORVs and try to help it fund activities related to ORV use, such as maintaining trails, printing maps and safety materials. With an established permit program in place by 2005, the WSTP wanted to better understand who ORV users are, where they recreate, how often, and their economic importance to the state. For this effort, they enlisted a team of

researchers from the University of Wyoming, Department of Agricultural and Applied Economics. This report is the result of that study.

The researchers used a random sample of 949 resident and 947 non-resident 2004 ORV permit purchasers supplied by the WSTP to conduct a mail survey. In addition, the researchers contracted with the Wyoming Survey and Analysis Center to conduct an eight question, statistically valid, random-digit-dial telephone survey of the state of Wyoming. The 635 respondents of this survey were asked about ORV and snowmobile ownership. The results of this survey served to quantify the total number of ORVs owned by state residents. This information was, in turn, used in the economic analysis of the ORV use information obtained from the mail survey.

The results indicate that ORV use in Wyoming is wide spread. The multi-purpose nature of ORVs means that they are ridden virtually throughout the year. Non-residents tend to come to Wyoming to recreate on ORVs just one or two months out of the year, concentrated in late summer and fall. Residents' have an earlier peak in August, which is really part of a broad plateau of summer and fall use (Figures 3 and 4).

The multi-use nature of ORVs also lends them to participation in other activities. Recreationists primary activity is not necessarily riding ORVs, but involves the use of an ORV, such as hunting and fishing. In this respect, non-residents led residents in the hunting category, where residents led in the ORV riding category. This is not surprising since residents have more opportunity to ride. Whereas, non-residents have to plan what may be a single trip to Wyoming and thus may want to include several activities in their recreation experience (Figure 5).

Should there be some kind of restriction on ORV use in Wyoming residents indicated that they would shift activities, yet still pursue outdoor recreation in the state. Non-residents, however, indicated that they would go to another state to pursue ORV recreation opportunities. This represents a potential loss of tourists and tourism related dollars to the state's economy.

Residents tend to be more spread out in their geographic use of the state. This is primarily the result of place of residence. Residents tend not to travel more than two hours and about 150 miles from home to recreate. Non-residents tend to travel 250 miles or more and showed a distinct preference for the Snowy Range, followed by the Big Horn Mountains and to some extent, Southwestern Wyoming (Figure 7). However, both residents and non-residents showed a preference for U.S. Forest Service lands (Tables 16 and 47). Only about 64 percent of residents spent at least one night away from home, compared to almost 92 percent of non-residents who spent at least one night away from home (Figure 9).

As previously stated, the telephone survey was critical in providing an estimate of the number of ORVs and riders in Wyoming in order to estimate the economic contribution of ORVs to the states economy. The survey had an error rate of ± 5.6 percent. The results indicate that about 37 percent of Wyoming households include ORV riders and those households average about 2.4 riders each. These recreationists ride ORVs an average of approximately 49 days per year, contributing almost 3.7 million household-use days per year (Table 71).

The project estimated the economic contribution of ORVs to Wyoming's economy. This was done for residents and non-residents from both the number of 2004 ORV registrations and the estimates from the telephone survey. Residents spent an average of \$27.04 per day on ORV trips

and annually about \$1,261 per ORV. Total resident expenditures in Wyoming for registered (2004) ORVs are estimated to be \$63.4 million (Table 72).

There is a significant difference between the number of registered ORVs and the number indicated by the telephone survey. The researchers are not able to account for this discrepancy. Suffice to say the researchers believe that the survey methodology is sound and that the estimate should be viewed as just that. The total number of ORVs in the state owned by residents is estimated to be more than five times the number registered. If these numbers are used to estimate expenditures by state residents, the resulting total is almost \$339 million per year (Table 72).

State and local government benefit from tax collections from ORV related spending as well. Based on registrations, the sum of sales tax, gas tax, lodging tax and registration fees equals about \$3.4 million. If these same taxes are based on the ratio found in the telephone survey, the sum would be over \$16.4 million (Table 72).

For non-residents, daily trip expenditures are estimated to be \$31.70 per person, per day. Total annual expenditures in Wyoming are estimated to be \$8.4 million, based on the number of ORVs registered by non-residents (2004). However, if the same ratio of registered ORVs to non-registered ORVs that was found in the telephone survey is applied to the non-resident numbers, the estimated total expenditures rise to \$44.8 million per year (Table 73).

The economic impact portion of the project was accomplished using IMPLAN software. This was applied to only the non-resident data since IMPLAN measures the economic contribution of monies added to the economy, not those spent within the economy. It is estimated that 127 jobs are contributed to the states economy by non-resident registrations, with earnings totaling \$3.3 million. If the telephone survey ratio is applied, a total of 679 jobs and \$17.7 million in earnings are contributed (Table 73).

Non-residents contribute new dollars to the states economy in the form of taxes as well. Based on registrations, the sum of sales tax, gas tax, lodging tax and registration fees equals about \$531,000. If these same taxes are based on the ratio found in the telephone survey, the sum would be about \$2.1 million (Table 73). The reason that non-resident spending is less than resident spending is that there are fewer non-resident ORV riders.

Off-road vehicles are significant phenomenon on the Wyoming landscape today. Their use has profound impacts for public land managers, small business owners and even rural residential homeowners. The information provided by this report will help all those involved with ORV management have a better understanding of their impact and help plan for the future.

VIII. References

Colorado Off-Highway Vehicle Coalition. *Economic Contribution of Off-Highway Vehicle Use in Colorado*. Prepared by Hazen and Sawyer, Environmental Engineers and Scientists. Denver, Colorado. 2001.

Cordel, H. Ken, Carter J. Betz, Gary Green and Matt Owens. *Off-Highway Vehicle Recreation in the United States, Regions and States: A National Report From the National Survey on Recreation and the Environment*. United States Department of Agriculture, Forest Service, Southern Research Station. Athens, Georgia, June, 2005.

Crompton, John L. *Onsite sampling: A Potential Source of Overestimating Visitor Use*. The Journal of Travel Research, The Travel and Tourism Research Association. Volume 39, Number 3, February 2001.

Dillman, Don A. *Mail and Internet Surveys: The Tailored Design Method, 2nd edition*. J. Wiley. New York. 2000.

Fisher, Andrea L., Dale J. Blaha, and Rosalind Bahr. *Off-Highway Vehicle Uses and Owner Preferences in Utah (revised)*. Prepared for: Utah Department of Natural Resources, Division of Parks and Recreation. By The Institute for Outdoor Recreation, Department of Forest Resources. Utah State University. Logan, Utah. Professional report IORT PR20001-02. 2002.

Minnesota Implan Group, Inc. IMPLAN version 2.0.1025, (2003 structural matrices)
http://www.implan.com/index.php?Base_Session=277ddc2e0e23c5d30707a8f5ecd38590

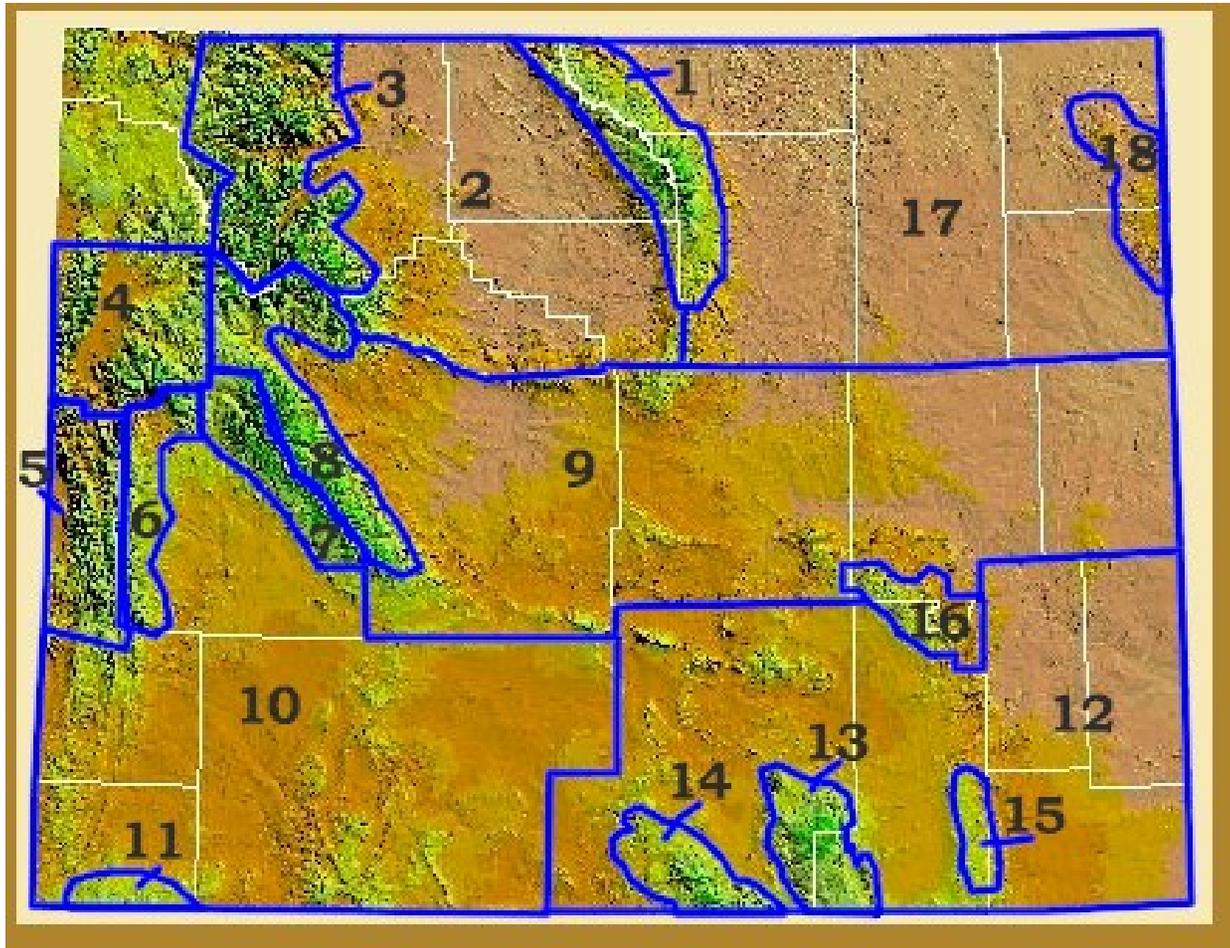
U.S. Census Bureau. *State and County Quick Facts: Wyoming*.
<http://quickfacts.census.gov/qfd/states/56000.html>. Last accessed 29 June 2006.

Wyoming Housing Database Partnership. A profile of Wyoming Demographics, Economics and Housing, Semi-annual Report, Ending June 30, 2005. Prepared by: Western Economic Services, LLC. Portland Oregon. August, 2005.

IX. Appendices

Appendix A: Map of Wyoming ORV Regions

Wyoming ORV Regions



- 1 Bighorn Mountains
- 2 Bighorn Basin area
- 3 Area East of Yellowstone N.P.
- 4 Jackson Hole area
- 5 Star Valley area
- 6 Wyoming Range
- 7 West side of the Wind Rivers
- 8 East side of the Wind Rivers
- 9 Central Wyoming
- 10 Southwestern Wyoming
- 11 Uinta Mountains
- 12 Southeastern Wyoming
- 13 Snowy Range
- 14 Sierra Madre Mountains
- 15 Laramie Range
- 16 Laramie Peak area
- 17 Powder River Basin
- 18 Black Hills area

Appendix B: Resident/Non-Resident Survey

2005 Off-Road Vehicle Survey



Wyoming State Trails Program

**State of Wyoming
Department of State Parks & Cultural Resources
Division of State Parks and Historic Sites**

And the

**University of Wyoming
Department of Agricultural & Applied Economics**

Section I: General usage information. This section is designed to help us understand how people use their ORVs (off-road vehicles).

1. Did you use your Off-Road Vehicle (ORV) for **recreation purposes** in **Wyoming** during the **LAST TWELVE MONTHS**? By ORV we mean ATVs, off-highway motorcycles, and other multi-wheeled cross-country vehicle, under 50 inches in width. *Note: Off-highway four-wheel-drive pickup and SUV recreation is not considered in this survey.*

- 1. YES (If YES please go to Question 2)
- 2. NO (If NO please go to Question 28)

2. Please circle **all** months that you rode your ORV for recreation purposes in Wyoming during the **LAST TWELVE MONTHS**.

- | | | |
|------------|------------|-------------|
| 1. NOV '04 | 5. MAR '05 | 9. JUL '05 |
| 2. DEC '04 | 6. APR '05 | 10. AUG '05 |
| 3. JAN '05 | 7. MAY '05 | 11. SEP '05 |
| 4. FEB '05 | 8. JUN '05 | 12. OCT '05 |

3. How many years have you been riding ORVs? _____ YEARS

4. Approximately how many total days did you ride ORVs for recreation purposes in Wyoming during the **LAST TWELVE MONTHS**? Please estimate how many of these days were on weekdays and how many were on weekends or holidays.

_____ NUMBER OF WEEKDAY DAYS
_____ NUMBER OF WEEKEND/HOLIDAY DAYS

5. Did you engage in any of the following other recreation activities during the days indicated in question number 4? (Please circle all that apply)

- | | |
|------------|--------------------------------------|
| 1. CAMPING | 4. OTHER ACTIVITIES (please specify) |
| 2. FISHING | _____ |
| 3. HUNTING | _____ |

6. What percentage of the time for the days listed in question number 4 was spent on the following activities? (Total should add to 100 percent)

_____ % ORV RIDING	_____ % HUNTING
_____ % CAMPING	_____ % OTHER
_____ % FISHING	

7. How many ORVs did you or people in your household own during the **LAST 12 MONTHS**? (Please do not include SUV's and off-highway pickups)

_____ NUMBER OF ATVs
_____ NUMBER OF OFF-HIGHWAY MOTORCYCLES
_____ NUMBER OF OTHER CROSS-COUNTRY VEHICLES

Please tell us a little about what is important to you in terms of an ORV recreation experience. For questions 9 and 10 below, please indicate how important each of the attributes is to your riding experience. (Please check the most appropriate answer)

8. Trail characteristics:	Not important			Very important	
	1	2	3	4	5
a. Length of trail	<input type="checkbox"/>				
b. Trails that are challenging	<input type="checkbox"/>				
c. Trail that are easy to ride	<input type="checkbox"/>				
d. Services available near trailhead	<input type="checkbox"/>				
e. Loop trails	<input type="checkbox"/>				
f. More designated trails	<input type="checkbox"/>				
g. More trails that are legal for youth	<input type="checkbox"/>				
h. More designated roads	<input type="checkbox"/>				
i. More designated open riding areas	<input type="checkbox"/>				
j. Signage on trails	<input type="checkbox"/>				
k. Accurate and easy to read trail maps	<input type="checkbox"/>				
l. Trail enforcement	<input type="checkbox"/>				

9. Trail setting:	Not important			Very important	
	1	2	3	4	5
a. Restroom availability	<input type="checkbox"/>				
b. Parking availability	<input type="checkbox"/>				
c. ORV supplies available nearby	<input type="checkbox"/>				
d. Seeing other riders	<input type="checkbox"/>				
e. Having solitude on the trail	<input type="checkbox"/>				
f. Natural/scenic surroundings	<input type="checkbox"/>				
g. Wildlife viewing	<input type="checkbox"/>				
h. Distance from home	<input type="checkbox"/>				

10. If you were for some reason unable to ride an ORV for recreation in Wyoming, what would you most likely do in terms of outdoor recreation? (Please circle the most appropriate response)

1. INCREASE PARTICIPATION IN OTHER OUTDOOR RECREATION ACTIVITIES IN WYOMING.
2. INCREASE PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES IN OTHER STATES.
3. DECREASE OVERALL PARTICIPATION IN OUTDOOR RECREATION ACTIVITIES.
4. OTHER (please specify) _____

11. Please rate your overall satisfaction with recreation ORV riding in Wyoming (Please circle the most appropriate answer)

- | | |
|-----------------------|--------------------------|
| 1. VERY SATISFIED | 3. SOMEWHAT DISSATISFIED |
| 2. SOMEWHAT SATISFIED | 4. VERY DISSATISFIED |

SECTION III: Specific Information for Most Recent Trip in Wyoming

We are interested in your trips that involve ORV usage for recreation. Think about your most recent trip that involved recreation ORV usage.

14. In what month was your **most recent Wyoming trip involving recreation ORV usage?**

(Please circle the appropriate answer)

- | | | |
|------------|------------|-------------|
| 1. NOV '04 | 5. MAR '05 | 9. JUL '05 |
| 2. DEC '04 | 6. APR '05 | 10. AUG '05 |
| 3. JAN '05 | 7. MAY '05 | 11. SEP '05 |
| 4. FEB '05 | 8. JUN '05 | 12. OCT '05 |

15. What was the primary destination in terms of the nearest town for your **most recent trip to/in Wyoming** that **involved the use of an ORV?**

_____ NEAREST TOWN IN WYOMING

16. What was the primary purpose of this **most recent trip?**

- | | |
|---------------|------------------------|
| 1. ORV RIDING | 4. HUNTING |
| 2. CAMPING | 5. OTHER RECREATION |
| 3. FISHING | (Please specify) _____ |

17. How many people were in your traveling party, how many passenger vehicles were used, and how many ORVs were taken on your **most recent trip?**

_____ NUMBER OF PEOPLE
_____ NUMBER OF PASSENGER VEHICLES
_____ NUMBER OF ORVs

18. Please indicate the amount of time you spent away from home and if any of those nights were outside Wyoming during this **most recent trip.**

_____ NUMBER OF NIGHTS AWAY FROM HOME
_____ NUMBER OF NIGHTS OUTSIDE WYOMING
_____ NUMBER OF DAYS IN WYOMING
_____ NUMBER OF DAYS IN WYOMING WHEN YOU RODE AN ORV

19. Please enter the travel time and distance (one-way) you traveled to the unloading site on your **most recent ORV related trip** to/in Wyoming.

_____ TRAVEL TIME IN HOURS
_____ MILES TRAVELED FROM HOME (One-way)

20. Please provide an estimate of the **total miles you traveled on your ORV** during your **most recent trip.** Also, please indicate the **total number of hours you spent on your ORV** during the same trip.

_____ TOTAL MILES TRAVELED ON ORV DURING TRIP
_____ TOTAL HOURS SPENT ON ORV DURING TRIP

21. Please provide your best estimate of the number of gallons of gas you used in your ORV(s) during your **most recent trip** to Wyoming.

_____ NUMBER OF GALLONS OF GAS USED IN ORV(s) ON TRIP

22. In the table below, please estimate your expenditures for your **MOST RECENT TRIP**.

Most recent trip expense category	Total expenses	Amount in Wyoming
Gas (for ORVs and towing vehicles)	\$	\$
Restaurant and bars	\$	\$
Groceries and liquor	\$	\$
Overnight accommodations (motel, campground, cabin, etc.)	\$	\$
ORV guides/tour packages	\$	\$
Day user fees and donations (do not include ORV permit fees)	\$	\$
Oil/repairs/maintenance	\$	\$
Retail items (souvenirs, etc.)	\$	\$
Entertainment	\$	\$
Other expenses (please list below)	\$	\$
	\$	\$
	\$	\$
	\$	\$
Number of people covered by these expenses		People

Section III: Expenditure information. This section is designed to help us understand your annual costs. That is, costs associated with owning and maintaining your ORV during the year.

23. **Annual Expenditures** – Please estimate the total amounts that you or members of your household spent on new/used ORVs and maintenance, repairs, accessories, and miscellaneous items for ORVs **DURING THE LAST TWELVE MONTHS**. Also please estimate how much of these expenditures were made in Wyoming.

Annual expense category	Total Expenses	Amount in Wyoming
New/used ORV(s) (Purchased this year)	\$	\$
ORV trailers	\$	\$
Safety equipment (Helmet, first aid equip. tools etc)	\$	\$
Clothing	\$	\$
Accessories (Covers, racks, winches, etc)	\$	\$
Annual repairs (chains, plugs, etc.)	\$	\$
Registration, licenses, permits, taxes	\$	\$
Club dues	\$	\$
ORV magazine subscriptions	\$	\$
ORV storage costs	\$	\$
Other (list below)	\$	\$
	\$	\$
	\$	\$
	\$	\$
Number of people covered by these expenses		People

24. H
a
v
e

y
o
u

p
a
r
t
i
c
i
p
a

ted in an ORV safety program?

6. \$40,000-\$49,999

12. OVER \$200,000

And finally, **THANK YOU** for taking the time to fill out our survey. Your responses will help the Wyoming State Trails Program to better address ORV opportunities in Wyoming. Your responses are completely confidential and will not be released in an individually identifiable form.

Please use this area for comments and suggestions regarding this survey.

Appendix C: Trip diary and cover letter

Wyoming State Trails Program Off-Road Vehicle Study

Dear Off-Road Vehicle user:

The Wyoming State Trails Program in conjunction with the University of Wyoming is conducting a study of off-road vehicle use in Wyoming. You have been randomly selected to participate in this study. Participation is voluntary, but will help us obtain accurate information on the State Trails program and your opinions regarding your off-road vehicle experiences this season. On the reverse side of this letter, please find a trip diary to record information from your off-road vehicle trips during 2005. A survey will be sent to you in late October.

Specifically, we are interested in finding out about your off-road vehicle trips, where you use your off-road vehicle in Wyoming, and your expenditures for fuel and other trip costs. This information will help us better understand where off-road vehicle users go each year, how often they use State Trails program trails, the types and amount of associated costs. **This information can be used for everything from planning for improvement of program trails to allocation of off-road vehicle permit revenue.**

You are one of a small number of off-road vehicle users being asked to give an accurate account of their off road vehicle experiences this season. In order that the results of the study truly represent the recreation experiences of people using off-road vehicles, **it is important that you keep track of each off-road vehicle trip on your trip record sheet.** The survey you receive in October will ask you for this important information. An accurate account of your off-road vehicle trips this season is very important to this study.

Your responses are completely confidential. You will not be individually identified in our results. Once the data from the survey including your trip information has been recorded and verified, the printed surveys will be destroyed. We will not use your address for any other mailings than this study.

If you lose your trip record sheet or it becomes full and you need another one, please call me at (307) 766-6205 or email me at: Foulke@uwyo.edu. I will mail a new one to you. I will also be happy to answer any questions you have just contact me at the above number or e-mail address.

Thanks,



Thomas Foulke, Project Leader
University of Wyoming

Dear Off-Road Vehicle user:

The Wyoming State Trails Program with assistance from the University of Wyoming is conducting a study of off-road vehicle use in Wyoming. You may recall that you received a trip record sheet in late June so you could keep track of your off-road vehicle trips. Even if you no longer have this sheet, we would appreciate your filling out the enclosed survey and returning it to us. Participation is entirely voluntary, but will help us obtain accurate information on the State Trails program and your opinions regarding your off-road vehicle experiences this season.

Specifically, we are interested in finding out about your off-road vehicle trips, where you use your off-road vehicle in Wyoming, and your expenditures for fuel and other trip costs. This information will help us better understand where off-road vehicle users go each year, how often they use State Trails program trails, the types and amount of associated costs. **This information can be used for everything from planning for improvement of program trails to allocation of off-road vehicle permit revenue.**

A postage paid return envelope is included for you to return the survey to us.

You are one of a small number of off-road vehicle users being asked to participate in this survey. If you still have the trip diary that was sent to you earlier, it may be helpful to have it nearby as you fill out the survey. The survey should take about twenty minutes to complete. An accurate account of your off-road vehicle trips this season is very important to this study.

Your responses are completely confidential. You will not be individually identified in our results. Once the data from the survey including your trip information has been recorded and verified, the printed surveys will be destroyed. We will not use your address for any other mailings than this study.

If you for some reason you need another survey, please call me at (307) 766-6205 or email me at: Foulke@uwyo.edu. I will mail a new one to you. I will also be happy to answer any questions you have concerning this survey, just contact me at the above telephone number or e-mail address.

Thanks,

A handwritten signature in black ink that reads "Thomas Foulke". The signature is written in a cursive style with a large, sweeping initial 'T'.

Thomas Foulke, Project Leader
University of Wyoming

Appendix E: Telephone survey

Off road vehicles include all terrain vehicles (ATVs), off-highway motorcycles and multi-wheeled vehicles under 50 inches in width.

Off-highway four-wheel drive pickups and SUVs used for recreation purposes are not being considered in this survey. Please do not include them in your account.

Also, do not include snowmobiles, when answering this question

1. During the past 12 months, how many members of your household (including yourself) used or rode off-road vehicles for recreation purposes in Wyoming?

_____ number of persons

2. Approximately, on how many days did you and (or) a member of your household use an off-road vehicle during the past 12 months in Wyoming?

If you and another member of your household rode together on any one day, count this as two days.

_____ Total number of days

3. During the past 12 months did you or a member of your household own any off-road vehicles?

1. Yes

2. No

4. How many off-road vehicles did your household own during the past 12 months?

_____ number of off road vehicles owned by household

5. During the past 12 months, how many members of your household (including yourself) used or rode snowmobiles for recreation purposes in Wyoming?

_____ number of persons

6. Approximately, on how many days did you and (or) a member of your household ride a snowmobile during the past 12 months in Wyoming?

If you and another member of your household rode together on any one day, count this as two days.

_____ days

7. During the past 12 months did you or a member of your household own a snowmobile?

1. Yes
2. No

8. How many snowmobiles did your household own during the past 12 months?

____ number of snowmobiles owned by household

Comment. That was the end of the survey. Thank you very much for your cooperation. Would you like to make any comments about the survey or about the use of ORV in Wyoming?

Appendix F. Respondent comments

Mail survey resident respondent comments

- Upset because had to purchase sticker and more FS trails are being closed. Probably won't go back to FS much in coming years because you can not go anywhere where roads are closed.
- Frustrated with anti-ORV people that treat horses as sacred. They can go anywhere.
- Thank you for taking the time to do this study.
- Upset at illegal trails on FS from employees!
- Should have section for reason ATV is used instead of walking, horse, auto, etc.
- Most of my ORV rides are from my garage (plowing snow in neighborhood).
- Very concerned about enforcement on the trails, many people abuse the rules and gives responsible riders a bad name (need more enforcement).
- Suggested that ORV stickers be transferable to other ORVs for same person if the initial ORV didn't run (broke down).
- Use the ATV for ice fishing and riding the Red Desert.
- The Bridgerton-Forest needs to follow Shoshoni Forest in trails and places for ORV riding.
- Stop closure of roads and trails. Currently must have a motor vehicle license and ORV permit to legally ride in many areas.
- Last trip was purely for seeing the aspen. Would be willing to pay more in fees if that would be spent to develop more ATV trails.
- People are abusing public land and more enforcement needs to be done. Half the ORVs during hunting season don't have ORV stickers. Pay money for fees but have no trails to ride in SW Wyoming, major changes need to be implemented.
- More ORV trails are needed in Natrona County.
- Live next to BLM and have acreage. FS around them has been closed to ATVs, they need our help to reopen at least the trails in the forest.
- Didn't like survey, FS is closing off too many roads/trails to ATVs (ex: Labarge Creek)!

- Love our ATVs and take them everywhere.
- Need ATV because I have bad lungs. Would like to see more enforcement of those who break the rules.
- ORV permits are bs. Have continually lost trails for 4 wheelers while snowmobiles continue to gain at our expense.
- Make fines and penalties harsh for those who break the rules. A few bad people should not reflect on the majority of us. Thanks.
- Would like to know why ORV stickers and ATV riders are funding all the trail programs, don't let a few bad people ruin it for everyone. Laramie Peak trail costs \$2 for ATVs all others are free (horses, hikers, bikers).
- The trails in Wyoming are great. Normally would get out more, it was just a bad year for us.
- Every year more and more trails are closed. I have a bad heart and spine and live on pain pills. The only way I can hunt is from ATV, I don't tear things up, please don't limit me anymore!!!
- Poor survey; doesn't show true experience of owning and riding ATVs.
- Thank you for asking.
- Freedom to go off roads to extract game. Should be strictly enforced and consequences understood.
- Retired and live in the Pinedale area. Has seen more trails closed in the past 10 years and watch FS destroy more land than ORVs could do. Check out Hidden Valley Ranch.
- Need more riding trails in Wyoming.
- Disappointed in FS closing more roads/trails. Heard tags are going up , don't mind fees - but more people will just quit buying the tags.
- Would have done safety classes, but they are always full. Not enough of them.
- State needs to do a better job of identifying the legal trails so those of us that obey the rules won't get criticized for those that do. We leave our area clean.
- Utah has a great trail system going, no reason Wyoming couldn't do the same. We need more trails open.
- Sport ATV riders travel out-of-state. South Dakota has numerous riding areas with motocross style riding. Chances are we will never bring our ATVs back to Wyoming.
- Survey covered a wide range, but feel should have covered parent responsibilities.
- Orving is a great family activity and ride when we camp. Wish there was more law enforcement or someone to report the bad users to.
- Need more upkeep on ORV trails.
- Like to see more elk and deer in Wyoming.
- Enjoy ORV riding as a family.
- Many trails are being closed would like to see them numbered and mapped. Several closings were to favorite spots that we have visited for years.
- If the FS keeps closing trails the only thing left to ride on are roads? Where does the sticker money go?
- With out the trails at my age I wouldn't be able to get to most fishing and hunting areas.

- Have cabin and private land, mostly ride for work.
- Love ORVs but concerned that more trails/roads will be closed to ORVs or that fees will be charged; this would limit many folks who can barely afford to ride anyhow.
- More enforcement of closures.
- Motorcycle trails deep in BLM and forest land would be best for us since we travel faster. Trails where all ride are dangerous.
- Too many trails being closed that are great for family rides. What are fees being paid for when trails are being closed? More need to open in Black Hills, Shoshone, Big Horns!
- Better mark trails in the same style marking as snowmobile style signs and legal access for fuel and supplies in these areas.
- They are closing more and more roads every year especially in the Medicine Bow National Forest area #21 (Elk area).
- Maps have a lot of room for IMPROVEMENT!!
- Pleased to see the interest in helping out the recreation opportunities for ORVs.
- Keep more existing forest road and two-track roads open.
- ORV stickers should be good for all states - GET TOGETHER - limited of where to go depending on the costs of ORV stickers.
- The FS closed and destroys roads that have been used for 50 years without any input from taxpaying public.
- There needs to be more enforcement on ATV users who insist on riding off trails and ruining the terrain. Also more safety and common respect for older generations down to the kids.
- STOP shutting down ORV trails. Every year more and more are being closed especially around the Pinedale area. Ride to hunt because of bad knees, the only way to get to and from hunting areas.
- Eliminate trails and allow us to use dirt roads.
- Opening more trails/roads in their entirety in the Big Horn Mountains, would be a great help to all involve using this road.
- Most ORV trips are from home to cabin and back.
- ORVs were made for rough country. If the trail system does not have areas to challenge riders, people will go off trail!
- Wyoming needs more open ORV trails. Rides Idaho because of the open and groomed trails. Would like to see the already established trail remain open. When Wyoming begins to accommodate ORVs then I will gladly do your survey.
- Need to open more trails in Black Hills National Forest. ORVs cause less erosion than cattle or forest management. Can't understand why USFS refuses to allow ATV travel on these old trails.
- Primary purpose of using ATV is for hunting. Offer an off-road permit for the purpose of retrieving carcasses off-road and off-trail.
- Would like to see more sand spots. Enjoy riding in the Sand Hills near Walden Colorado, and Rock Springs, however Rock Springs is much farther away.

- Need to open up more areas to ride in the Crandill Dead Indian area. Went up there this summer and all the roads to Camp Creek were closed, and there are miles and miles of roads there to ride on. Why is it all closed (area 3)?
- Ride almost every week depending on weather.
- Need education on stewardship of environment.
- The 'cut out' improvements on the trail for water run off are a complete waste of time and money. Personally feel the FS will use the "improvements" as an excuse to shut down more of our trails. Since they have made the cuts in the roads the waste cut areas are terrible, and they were NEVER that way until the FS did there "IMPROVEMENTS"!
- Don't use trail systems, therefore can't answer the questions pertaining to these trails. We ride our 4-wheelers on old desert roads.
- Use ATV for ranching and hunting purposes on BLM and deeded land.
- Wyoming trails are not family friendly! We wish we could enjoy Wyoming more with ATVs!
- No public trails on Shirley Mountain area.

Mail survey non-resident respondent comments

- Ride mostly on own land.
- Feel public lands should be more available to the public. BLM and FS agencies are restricting the lands too much.
- User input needed to propose new trails. More trail upkeep is needed as well as more loop & destination trails.
- Was a good well-thought out survey. Open more public land and stop FS from closing roads that should be open to the public who owns them.
- Wyoming needs to expand on areas allowing under 16 years to ride - especially in Fox Park region.
- Own cabin in Keystone, enjoy Wyoming, would come more if not for the travel time.
- Please keep main roads open and close side logging roads in a better way so there aren't so many gates to make it look un-natural.
- Please not so many survey questions.
- Enjoy using ATVs especially in winter months, makes it lots easier to get out and enjoy winter activities.
- Would be willing to participate in future studies. Excellent effort! Call if I can help.
- Thank you for listening.
- Enjoy time spent in Wyoming.
- Nice survey, survey important only IF improvements are planning to be made. Have several ATVs and use them for family outings. Trail maps are important as well as loop trails.
- Hunt with ATV because back surgery, and bad knees. The hunt is great but bringing in the game is a problem. I'm to be 80 years old in January.

- Love the camping, fishing, and riding trips to Wyoming. Hope we can make this an annual event with our church group.
- It would truly be a shame if started eliminating trails just because of extreme environmentalists, though it was in Wyoming's best interest.
- Will give up other things before we give up our camping and ATV's. An O.R. nurse and I see lots of injuries from ATVs. Thanks for including me in survey, it's been fun.
- Didn't answer trail characteristics, because only ride the desert.
- Appreciate being able to ride snowmobile and ATV in such beautiful country such as Greys River Drainage.
- Most states honor their resident permit for their ATV without buying an additional permit from Wyoming. Why don't you?
- Eighteen dollars a year is very much out of line with other states. We don't use trails. Registrations appear to be revenue generator. A reduced fee for just a few days in Wyoming would be more reasonable.
- More locations to buy ORV permits.
- Didn't receive a travel log.
- Hope that information given will help improve/expand ORV program to the point/level that future generations may benefit and access more rugged/remote areas of Wyoming.
- Visit Rob Roy Reservoir in summer and grandkids come but can't ride ARVs or will receive \$100 ticket, however the same aged kids can ride snowmobiles, not right!!! If continues, won't come back to Wyoming.
- There's a lot of gray area when it comes to roads/trails that are designated for motor vehicle use and those traveled by residents/ranchers.
- Please leave the Ferris Mountain area as is. Don't make it into a wilderness area. Keep the restricted vehicle signs where they are, except for retrieving game. People who utilize this area police it well and pick up after themselves.
- Trail map should be provided with the hunting license.
- Heard price of ORV stickers are going up in 2006. Feel \$15 is the right cost for what I get.
- Group of 5-7 men have been traveling to Medicine Bow for the past 5 years every September. Very enjoyable and peaceful.
- Won't come back to Wyoming for ATVing. Will go to South Dakota/Minnesota next year due to all the trails being closed. Enjoyed vacations in the past to Wyoming however this year planned on spending 12 days in Wyoming but only spent 2 and the rest in the Black Hills of South Dakota.
- Allow ORVs to ride on empty lake bottom (Guernsey State Park).
- Forest Service should ensure trails are assessable when opened if ORV permits are collected.
- Did not use ATV in winter 2005 because of gas prices to bring it from Pennsylvania.
- Own cabin in Union Pass near Dubois, store ATV in garage.
- Come every year, would like to get/see more information on different places to ride.
- Please open the trails that have been closed; talking about the trails that FS has closed

west of Albany.

- The abuse of ATV use in the Big Horns is important to me. It's increasing with little to no law enforcement.
- Needs to be more signs on trails so they are clearly marked and revise the maps that are handed out at the lodges.
- Thinks there is a good balance of ORV trails & closed off areas for the good of the wildlife.
- Beautiful Wyoming.
- When applying for license in Wyoming, for out-of-state we can't ride paved roads with ORV tags! Can out-of-state people register vehicles for paved roads? This needs to be at station when applying for tag.
- Needs to be more trails in FS to get good hunting areas and should be used to retrieve game. Dad is 80 years old, loves to hunt but limited to where he can ride ATV for hunt.
- Don't ride ORV, bring it every year for daughter to ride. Prefer riding horseback and opposed to increased ORV usage areas in Wyoming.
- Was on ATV tour (by him - for expenses) but were 24 other tourers.
- Had lots of fun, seen pretty sights.
- Don't feel we should have to pay a Wyoming recreation fee when our ATVs already are registered in our home state.
- Have hunted in Wyoming for many years, every year we have less freedom as far as where we can ride. This year we were harassed & accused of riding off trail. We rode the same trails we always did. There were no signs saying trails had been closed. We OWN the national forest - not the liberal tree hugging JERKS.
- Please quit closing trails!

Telephone survey respondent comments

- Against using National Forest land for livestock. In national forests all the existing roads should be usable for off-road vehicles. Off-roading in undesignated areas should be fines severely.
- Are bicycles considered off-road vehicles?
- As long as they are on established trails, it's ok. They should make sure ATVs don't hurt any grassland.
- As long as they stay where they are supposed to be going, I don't have a problem with it.
- ATV usage is severe problem in Medicine Bow Forest, Big Horn and the Black Hills areas. It's out of control.
- Both should be able to be rode and used.
- Don't like ORVs, they tear up nature, sound and animals in surface of the sand in deserts are disturbed. Especially in Yellowstone, there isn't a break from them. They make too much noise! The noise and disturbance of nature is the worst part.
- Don't outlaw it.
- Everybody just needs to use a little common sense.
- Everybody should own one, like to go four-wheeling in Moab Utah, the best.

- Four-wheelers should stay on trails and no on the prairies. It tears up the land and it's hard for others to get around in it.
- Glad we have the opportunity to use ORVs and snowmobiles in Wyoming.
- Good deal.
- Concerned about the forest service shutting down the roads for snowmobiles and off-trail riding because they are 'tearing' up the trails. Don't want it to happen.
- Hope this is for and not against.
- I'd like to know where to get information on what public areas are open to four-wheelers.
- I'd like to see a place for the kids to ride motocross bikes.
- I'm not against them at all.
- I'm not interested in them, they are not part of my life. As far as I a concerned they do not exist.
- I've been hunting for 21 years, and in the first portion, 16 years or so. So many times, I've been back in where there weren't supposed to be any off-road vehicles. I would see them coming past and there's nobody to monitor them or catch them. So I've walked all my life and you can tell it by looking at me. I'm in shape and have no reason to use an ORV or snowmobile (and proud of it)!
- I use ATVs in my business.
- I am for snowmobiles in Wyoming, even in parks.
- I am totally for the use of them and wish there were more trails.
- I can't imagine a recreation use for the off-road vehicles.
- I am totally for the use of snowmobiles in Yellowstone, in certain places. It is critical to our economy.
- I do not like the snowmobiles going through the parks like Yellowstone. It deteriorates the environment and creates pollution in Wyoming.
- I don't favor the use of snowmobiles. Snowmobiles need to have a restraint on them. I don't favor off-road vehicles because the behavior of the riders. I have seen them tear up streams and wildlife. If we have to ban the entire use of them.
- I don't have a problem with people using them lawfully. I do have a problem with snowmobiles in Yellowstone. I'd also like to see four stroke engines on them.
- I don't like off-road vehicles like four-wheelers for hunting purposes.
- I don't like them.
- I don't think that snowmobiles or off-road vehicles should be allowed in State parks. I don't think anyone under 18 should be able to use them anyway.
- I don't think they should ban them.
- I don't care for them because they are dangerous. A lot of kids get hurt on them because they haven't been taught properly how to use them. They also scare a lot of wildlife because they are too noisy. Wildlife use a lot of energy they should be saving.
- I enjoy the use of off-road vehicles and snowmobiles in Wyoming. Lucky to live in Wyoming.
- I hate off-road vehicles.

- I have no problem with people using them, just as long as they stay on the roads where they are supposed to be.
- I have only used off-road vehicles for business purposes, it's part of my job.
- I hope that it never gets to the point where we can't do that because it's something we really enjoy.
- I hope they don't close down the forest. It's a good way to get out and enjoy the country.
- I just assume they stay on designated areas.
- I just use mine on the ranch here. During hunting season I'm not sure everyone should be able to use them as much. It takes the sport out of hunting.
- I just wished they wouldn't let them use them in the national parks or in the parks period.
- I don't think they should use them at all, I think they are awful.
- I know there are a lot of them out there. As long as they stay off the main roads with motorcycles and snowmobiles, they're alright.
- I like it that they should be allowed to because that's part of Wyoming.
- I like off-road vehicles very much.
- I like to be outdoors, I don't like these off-road vehicles going where they are not supposed to go.
- I object to the fact that they have to be licensed and are not allowed on public roads.
- I promote and support the use of off-road vehicles, especially in Yellowstone. It helps the economics of towns, especially Cody.
- I see these people going out and using these off-road vehicles when the conditions aren't right and tearing up the area. If they continue to do this, I think eventually there won't be any place we can use them.
- I still use my pick-up off-road. We go four-wheeling, rock hunting and camping.
- I think they are a good thing to have and we should continue to allow people to ride them.
- I think it is a disgrace that there are not more places to use them in Wyoming.
- I think it is great.
- I think it is wonderful to use them, I am all for it. Sometimes we need to get out of our home.
- I think it looks like a lot of fun.
- I think it should be allowed. Should not be shutting off-roads so that you can not use them.
- I think it's great that they let them use them because if I owned them, I'd be using them myself.
- I think off-road vehicles are fine as long as people use them where they are legally allowed to.
- I think people should abide by the laws. I see trails where people go off the trails and tear up the forest, and I am disappointed in that. I own an ATV but I abide by the rules.
- There should be more strict rules so people wouldn't tear up the forest.
- I think snowmobiles and off-road vehicles are very dangerous.

- I think snowmobiles are great but the middle class can't afford to ride them because the high price of gas and the price of the snowmobiles themselves.
- I think that there could be something done to make ATVs quieter. I do a lot of camping and they are loud.
- I think that everybody needs to take care of the environment and that if there is a trail that has been groomed, use it.
- I think that off-road vehicles should most definitely be allowed.
- I think they let off-road vehicles go where they don't need to go. They are destroying a lot of our environment and scenery that we are trying to protect.
- I think that people should use them if they want to use them and in a safe way.
- I think that snowmobiles should be allowed in Yellowstone, but Harley Davidson's without mufflers shouldn't be allowed. It's a complete travesty that Harley's without mufflers are allowed in Yellowstone or the Shoshone National park or any other park.
- I think that they are given a lot of leeway and I think ATVs are very destructive. I think that snowmobiles are terrible for noise pollution and monopolize national forests and public lands in general. It ruins the experience for other people on skis or snowshoes.
- I think that we need specific places for people to ride them.
- I think there are too many snowmobiles and I think that they scare off the wildlife. There should be more control on their use.
- I think they are alright in the right places.
- I think they are fine and I have friends who enjoy them.
- I think they have a right to do so.
- I use them at work and use them for spraying weeds. My folks use them to pump their wells. It is a way for them to save gas mileage.
- I was kind of against them but there are so many places you can't go with a pick-up so I guess I'm part of the "if you can't beat them, join them" crowd.
- I wish they would not happen at all most of the time, sometimes they ruin the environment.
- I wish they wouldn't use them because I feel they are tearing up the forest in the summer time.
- I wish they wouldn't use them right behind my house, they're too noisy.
- I would like to know how come you can license ATVs but not license and a Rhino, where two people ride side by side. It seems odd that Rhinos can not be licensed when they seem to be safer. Why can't a Rhino be licensed but a four-wheeler can be?
- I would like to see better cooperation between national parks and the public in Wyoming.
- I would like to see off-road vehicles not be charged the silly little tax every year.
- Snowmobiles should, since they have trails, but four-wheelers should not.
- I would like to see them not used as much in Wyoming
- If I had one I'd probably use it.
- If people get enjoyment out of that then let them get their enjoyment out of that.
- I'm sick of Californian's moving in here and telling me how to live.

- In our walks up here we see the damage where people drive off designated roads. It is a problem, there is terrible destruction of the ground.
- It's great to have ORVs and snowmobiles available for use.
- It is a good idea to control where they go so that they don't damage the environment, but I think people should be able to use them.
- It is real popular. I have a lot of friends who do it and they stick to the trails and don't go off them.
- It's a complex problem. It's had to limit it to the road when they started having \$15 stickers. I checked the Black Hills and they said you could ride anywhere that there wasn't a sign posted otherwise, now areas are closed off.
- It's getting more popular all the time. They need to be building more trails because of that. They're closing a lot more than they are opening.
- Just curious about the four-wheelers, whether or not they're trying to outlaw them?
- Keep our land free!
- Leave it as it is.
- Let them stay. If they take away all our recreation we won't have anything to do.
- Living where we do, near Montana, snow machines need a Wyoming sticker to run.
- When we go to Montana, they honor stickers. It's not a nice situation with the price of stickers and should be addressed. It gets expensive.
- My husband wanted a four-wheeler for hunting because vehicles can't go back in the woods and horses are hard to handle, so they are good for that. Some people are really reckless and I don't feel comfortable having my small children around them.
- Need more of them.
- Need to be more responsible about where they ride; just certain people not everybody.
- Need to be sued where they are supposed to.
- Never will let any children or myself get on a motorcycle. They're too dangerous.
- Never will own any snowmobiles. Will only own a Jeep for gold prospecting, no ORVs.
- Normally we do use snowmobiles but it just didn't work out this year, and of course we do miss going up into Yellowstone. As far as the ATVs go, I just think the erosion they cause is just terrible. We use the one we have just to get around the ranch.
- Not my favorite things.
- Off-road vehicles are a great threat to public land because of people who abuse the sue of off-road vehicles.
- Off-road vehicles need to remain on the roads and trails that are available to them.
- Off-road vehicles shouldn't be used in Yellowstone but they should be used in permitted areas.
- Off-road trails designated for quads is good and can be expanded, but responsible use.

- Trails are good. Do you have to have a license to ride on highways? Enjoy the back country.
- ORVs are fine for those who like them, but do not support them off roads (they should be on two tracks and specifically designated areas, especially on public land). Too many roads are made by them, their uses are abuses, and they screw up hunting.
- ORVs are very dangerous, especially the ones that the 'young people' ride outside of town.
- People aren't going to have a real good idea of how many days they spent using these vehicles. It is just going to be a guess.
- People need to ride with responsibility and used only where they are meant to be taken.
- People need to take more responsibility about where they drive, especially with four-wheelers. People are going off into areas where they aren't supposed to drive.
- Quit raising fees to use snowmobiles and restricting the areas that they can be used.
- Riders have to respect the environment they are riding in and try no to tear things up.
- Should be limited to emergencies, don't like to see motorcycles because they are destructive and should be controlled and limited.
- Snowmobilers have been going into wilderness areas that they shouldn't be going into that are off limits. Respecting other users is a problem too.
- Snowmobiles should be banned; they cause more trouble than they're worth. They go places they have no business going, they're noisy and they pollute the air. For recreation, they've gotten out of hand. ORVs have a good use for business, but for recreation the snowmobiles shouldn't be allowed in Yellowstone.
- Some areas should be set aside for off-road vehicles, but should not be able to go into areas where it would harm the environment or the wildlife, especially areas like
- Yellowstone or in the mountain areas.
- Some of the roads should be closed off, a lot of the country is getting torn up and it just looks terrible.
- Stickers for ATVs should be enough, shouldn't need a special license, and there should be more designated areas.
- Stop off-road access, it's ruining habitats. People need to learn to be responsible.
- The four-wheelers are going where they don't belong, it's ruining the terrain and hunting opportunities. It's like one bad apple ruins it for the rest of us.
- The forest service is closing roads that have been opened for 25 years, and they're telling me I can't use the roads due to some law. It irritates me that they closed the roads. I was here before they were.
- Their handy to use for a good cause.
- The only off-road vehicles I would outlaw is mountain back; hazardous to our
- environment. Off-road vehicles are ok.

- The only thing that kind of gets me is that they put off the pick-ups and stuff and they let four-wheelers and other vehicles on and I think that if they cut off the roads for some vehicles, they should cut them off for all of them.
- The only time we use them is for hunting.
- The price of the trails went from \$15 to \$25. I don't understand why it went up so much?
- There's a thing I like about Wyoming. There's plenty of places to use them.
- There are a few that abuse people's property with ORV use.
- There are sure getting to be a lot of them around.
- There had been misuse of off-road vehicles; inconsiderate of others who are in the same area.
- There needs to be education as to where they can go and can not go in the back country.
- They're fun.
- They're ok with me.
- They're safe if they're used wisely. ATVs are good vehicles for ranch work, and if used responsibly are excellent work vehicles.
- They're very useful, but they keep adding to the cost of them, making it hard to afford them.
- They don't hurt all the stuff that everybody says they do.
- They need to follow the rules about where they travel in the state.
- They need to stay on designated areas and roads. They are to ride responsibly and to enjoy the scenery in Wyoming, not tear up the land.
- They should be able to do it as long as they don't tear up the countryside.
- They should be allowed for use.
- They should be allowed. There should be special places where they are allowed so people can enjoy this beautiful landscape.
- They should be regulated. The engines should be four cycle not two. I think children under five feet tall should be allowed to ride them.
- They should be restricted to certain areas away from livestock and wildlife habitats.
- They should keep ATVs off the roadways and require a special license in order to operate them. Also, safety education should be required for the license.
- They should stay on designated trails.
- They shouldn't go in Yellowstone and places like that. There are enough places elsewhere. Some places should have no vehicles.
- They spoil hunting.
- They tear up the land, however Wyoming is big, it's not like we have a lot of protected area. On a sad note, I have had students chase deer on snowmobiles until they run the deer down and they die. Some are just irresponsible with them.
- The tree huggers are coming into Wyoming and trying to take away privileges. We should be able to enjoy the outdoors with our off-road vehicles.
- This survey doesn't ask enough questions to actually find anything out.
- Try not to tear up anyone's land.
- Use them for hunting.

- We appreciate going to the national forests and parks where they are prohibited.
- We don't like snowmobiles and motorcycles that tear up certain areas.
- We just assumed there weren't that many snowmobiles.
- We love every minute of it.
- We need a multiple use policy on public lands. You can't just say they are banned. I don't support that.
- We need more public trails. Not necessary to put plates on snowmobiles as it is being talked about because I pay \$25 for a sticker and a plate would be another \$75. The plates go to the county and they pocket the money when the stickers help maintain trails.
- We prefer that they stick to established forest roads. We have no complaints about the being stickered. If they are using county roads they need to follow the rules about licensing.
- We use ATVs for ranch work not recreation purposes.
- We were considering buying a snowmobile.
- When people are hunting with them, they use them to chase the elk not hunt elk. I would be ok with it if they got off the four-wheelers and planned the hunt.
- Wish the forest service would stop closing off the existing roads to snowmobilers and four-wheelers. People who four wheel on land where there are no trails and destroy the land should be fined severely. With regards to restrictions as far as Yellowstone, I think it's a big mistake. The state really needs to fight the government on that. They're saying it's a pollution issue, but I think they got more pollution from the campers in the summer.
- Wyoming needs to get designated trails for motorcycles and dirt bikes. Wyoming is terrible about that compared to Colorado and Idaho. For pleasure off trail dirt biking, you just have to be safe.

Appendix G. Other activities, Question 5

Non-Resident Other – Question 5

Did you engage in any of the following other recreational activities during the days indicated in question number 4? (Please circle all that apply)

1. CAMPING

2. FISHING

3. HUNTING

4. OTHER ACTIVITIES (please specify)

None	1
Photography	2
Boating/water craft	2
Riding/trail riding/club rides	8
Hiking	7
Snowmobiling	3

Scenery/sight seeing/wildlife viewing	9
Motorcycles	1
Vacation home (log cabin)	3
Vacation/visiting	4
Other (ie, hunting antlers, shooting targets, outfitting business, etc.)	3

Resident Other – Question 5

None	1
Photography	4
Boating/water craft/swimming	7
Riding/trail riding/club rides	37
Hiking	5
Snowmobiling	2
Scenery/sight seeing/wildlife viewing/exploring	29
Motorcycles/motocross	1
Vacation/visiting	3
Other (ie. rock hunting, poker runs, shooting targets, etc.)	18
Snow Plowing	5
Ranching/work	9
Cutting wood	4

Appendix H. Comparison of resident and non-resident responses 2005 ORV Survey - Residents vs Non-Residents

1. Did you ORV for recreational purposes in Wyoming in last 12 months?

	Resident	NonResident
Yes	83.4%	63.6%
No	16.6%	36.4%
Total	100.0%	100.0%

2. Months that you rode ORV

Nov 04	39.7%	15.6%
Dec 04	25.1%	3.6%
Jan 05	20.9%	2.0%

Feb 05	21.3%	4.4%
Mar 05	28.2%	2.4%
Apr 05	36.9%	6.0%
May 05	59.9%	14.8%
Jun 05	72.5%	19.6%
Jul 05	74.6%	30.0%
Aug 05	75.3%	28.8%
Sep 05	73.5%	33.6%
Oct 05	70.0%	42.4%

Number of months respondent rode ORV

Mean (days)	6.0	2.0
-------------	-----	-----

3. Years riding ORV

Mean (years)	12.6	14.4
--------------	------	------

4. Number of days rode in Wyoming

Mean (days)	32.5	10.5
-------------	------	------

5. Engaged in other activities

Camping	66.9%	52.0%
Hunting	62.7%	54.8%
Fishing	57.1%	27.2%
Other	34.5%	17.2%

6. Percentage of time spent on activity

ORV Riding	45.4%	38.1%
Camping	20.7%	23.2%
Fishing	9.5%	8.0%
Hunting	19.4%	24.4%
Other	5.0%	6.3%
Total	100.0%	100.0%

Percent time ORV riding

25 or less	34.7%	45.4%
26 to 50	33.1%	31.1%
51 to 75	10.5%	7.7%
76 to 100	21.8%	15.8%
Total	100.0%	100.0%

7. Number of ORV's

	Mean	Mean
ATV	2.01	1.9
Motorcycle	0.31	0.37
Other	0.19	0.18
Total	2.51	2.45

8. Trail characteristics (1 = not important to 5 = very important)

	Mean	Mean	
Designated Trails	3.96	3.87	2.3%
Trail Maps	3.91	3.84	1.8%
Designated Open Space	3.88	3.79	2.4%
Designated Roads	3.81	3.55	7.3%
Trail Signage	3.42	3.55	-3.7%
Trail Length	3.40	3.62	-6.1%
Trail Enforcement	3.20	3.03	5.6%
Legal for Youth	3.06	2.64	15.9%
Loop Trails	3.01	2.86	5.2%
Challenging Trails	3.00	2.99	0.3%
Easy Trails	2.96	2.74	8.0%
Services Near	1.97	2.22	-11.3%

9. Trail setting (1 = not important to 5 = very important)

	Mean	Mean	
Natural/Scenic	4.29	4.17	2.9%
Wildlife Viewing	4.15	4.18	-0.7%
Having Solitude	3.60	3.66	-1.6%
Distance from Home	3.06	2.59	18.1%
Parking Available	2.80	2.61	7.3%
Restroom Available	2.18	2.09	4.3%
Supplies Nearby	1.77	2.09	-15.3%
Seeing Other Riders	1.77	1.71	3.5%

10. If unable to ride ORV in Wyoming

Other Outdoor Activity	45.3%	20.7%
Other State	23.7%	50.6%
Decreased Activity	22.6%	14.8%
Other	8.4%	13.9%
Total	100.0%	100.0%

11. Overall satisfaction with ORV riding in Wyoming

Very Satisfied	24.0%	55.6%
----------------	-------	-------

Somewhat Satisfied	51.3%	34.7%
Somewhat Dissatisfied	15.9%	6.7%
Very Dissatisfied	8.9%	2.9%
Total	100.0%	100.0%

12. ORV Recreation trips and days in Wyoming

	Mean	Mean
Trips Last 12 Months	11.6	5.2
Days Last 12 Months	28.2	11.6

By Location

	Resident Trips	Non-Resident Trips	Resident Days	Non-Resident Days
Bighorn Mountains	13.5%	11.6%	16.1%	18.0%
Bighorn Basin	6.6%	10.7%	4.8%	5.1%
East of YNP	2.5%	2.5%	3.1%	3.1%
Jackson Hole Area	4.4%	0.8%	3.6%	1.9%
Star Valley	6.5%	6.3%	4.4%	4.9%
Wyoming Range	4.4%	1.1%	4.0%	3.2%
West Wind River	5.6%	6.9%	6.1%	7.4%
East Wind River	7.8%	3.3%	7.8%	3.6%
Central Wyoming	7.7%	1.8%	8.5%	3.0%
Southwest Wyoming	11.8%	9.3%	11.5%	7.9%
Uinta Mountains	1.2%	2.5%	1.7%	1.0%
Southeastern Wyoming	1.7%	1.7%	4.3%	1.5%
Snowy Range	6.6%	23.4%	6.4%	22.6%
Sierra Madre	2.4%	7.2%	2.4%	5.6%
Laramie Range	4.2%	2.0%	3.2%	3.3%
Laramie Peak	3.5%	1.8%	3.0%	2.0%
Powder River	2.9%	2.4%	2.7%	4.1%
Black Hills	6.7%	4.6%	6.6%	1.8%
Total	100.0%	100.0%	100.0%	100.0%

By land ownership

	Resident Trips	Non-Resident Trips	Resident Days	Non-Resident Days
USFS	36.4%	37.6%	44.7%	44.6%
BLM	14.0%	10.3%	12.7%	9.6%
Other/Combination	49.6%	52.1%	42.6%	45.8%
Total	100.0%	100.0%	100.0%	100.0%

13. Primary purpose of all trips

ORV Riding	50.5%	37.1%
Camping	12.7%	8.1%
Fishing	10.5%	8.2%
Hunting	22.6%	39.1%
Other Recreation	3.7%	7.5%
Total	100.0%	100.0%

17. People, vehicles, & ORVs on most recent trip

	Mean	Mean
Number of People	4.2	5.9
Number of Vehicles	1.5	2.1
Number of ORVs	3.3	4.2

18. Number of nights away from home

Mean (nights)	2.3	9.0
---------------	-----	-----

19A. Travel time in hours

Mean (hours)	1.8	10.3
--------------	-----	------

19B. Miles away from home (One-way)

Mean (miles)	81.9	575.2
--------------	------	-------

20A. Miles traveled on ORV during trip

Mean (miles)	55.2	106.1
--------------	------	-------

20B. Hours spent on ORV during trip

Mean (hours)	9.3	15.6
--------------	-----	------

21. Gallons of gas use in ORV during trip

Mean (gallons)	7.7	13.4
----------------	-----	------

22. Trip expenditures for most recent trip

	Resident Total Trip	Non-Resident Total Trip	Resident Wyoming	Non-Resident Wyoming
Total Trip	\$219.73	\$964.30	\$219.73	\$599.33
Per Person Per Trip	\$90.05	\$351.93	\$90.05	\$218.73
Per Person Per Day	\$27.04	\$35.26	\$27.04	\$26.81

23. Annual expenditures

	Resident Total	Non-Resident Total	Resident Wyoming	Non-Resident Wyoming
Annual Total	\$3,533.88	\$3,630.92	\$3,153.06	\$595.42
Per Person	\$1,599.04	\$1,665.56	\$1,426.72	\$273.13
Per ORV	\$1,413.55	\$1,482.01	\$1,261.22	\$243.03

24. Have you participated in an ORV safety program?

Yes	43.1%	36.8%
No	56.9%	63.2%
Total	100.0%	100.0%

25. Need for more ORV safety programs?

Yes	66.3%	63.3%
No	33.7%	36.7%
Total	100.0%	100.0%

26. Which ORV program format preferred

Brochure	19.9%	23.6%
Classroom	7.3%	2.4%
Outdoor	46.0%	45.2%
Video	26.1%	27.2%

27. Effects of rising gas prices

	Resident None	Non-Resident None
Reduced Number of Trips	46.5%	53.5%
Reduced Riding Time	56.3%	56.2%
Number of ORVs	87.9%	85.4%

29. Gender

Male	90.7%	92.4%
Female	9.3%	7.6%
Total	100.0%	100.0%

30. Age of ORV riders in household

Under 20	19.7%	20.1%
20 to 39	25.2%	20.9%
40 to 59	41.6%	45.3%
60 to 80	13.4%	13.5%
Over 80	0.1%	0.2%
Total	100.0%	100.0%
Mean	2.5	2.4

31. Highest grade of formal education

Grades 1 to 8	0.4%	0.0%
Some High School	3.2%	3.6%
Finished high school	27.8%	25.9%
Technical college	10.6%	14.6%
Some college	25.4%	21.5%
Associates degree	8.8%	9.7%
Bachelor's degree	17.3%	17.4%
Post graduate degree	6.7%	7.3%
Total	100.0%	100.0%

32. Household financial resources

Under \$5,000	0.4%	0.4%
\$5,000-\$9,999	0.4%	0.8%
\$10,000-\$19,999	1.9%	0.0%
\$20,000-\$29,999	5.7%	5.4%
\$30,000-\$39,999	6.9%	10.0%
\$40,000-\$49,999	12.3%	9.2%
\$50,000-\$59,999	13.4%	12.1%
\$60,000-\$69,999	11.5%	7.5%
\$70,000-\$99,999	26.4%	26.8%
\$100,000-\$149,000	14.9%	17.6%
\$150,000-\$199,999	3.4%	5.0%
Over \$200,000	2.7%	5.0%
Total	100.0%	100.0%

Appendix I. WSTP trails, routes, and roads definitions and licensing requirements. *Effective 1/10/08*



Off-Road Recreational Vehicle Program (ORRV)

Roads

Roads that are not designated by land managers for use Off-Road Vehicle (ORV) travel, and are NOT ENROLLED in the program. The ORV will require being Street Legal (Headlamp, tail light, brake light, red rear reflector, electric horn, left hand rear view mirror, insurance, Multi Purpose Vehicle (MPV) license plate). The operator must have a valid driver’s license or a permit.

Roads / Routes

Roads and or Routes that are designated by land managers for Off-Road Vehicle (ORV) travel. Once ENROLLED in the program, all (ORVs) must display a current State of Wyoming ORV sticker **OR** a valid license plate and the ORV must be Street Legal. The operator must have a valid driver’s license or permit.

All ORV travel must remain on designated roads/routes.

Note: *When operating at any time from one-half (1/2) hour after sunset to one-half (1/2) hour before sunrise, the ORV shall be equipped with a working headlamp, tail lights with a working brake light.*

Trails

Trails that are designated by land managers for Off-Road Vehicle (ORV) travel. Once ENROLLED in the program, all (ORVs) must display a current State of Wyoming ORV sticker. Regardless if the ATV or Motorcycle is Street Legal.

All ORV travel must remain on designated trails.

Note: *Federal land policy defines an ORV trail as being open to vehicles no greater than fifty (50) inches in width; therefore, ORVs or MPV’s greater than 50” inches are not allowed on Wyoming ORV trails. All ORVs must be equipped with a muffler with an approved spark arrester*

ORV Rules and Regulations Quick Chart

Land Manager Designation	ORV Sticker	License Plate Street Legal	Driver’s License	Proof of Insurance	Helmet 18 and under
Roads	NO	YES	YES	YES	Advised
Enrolled Roads or Routes	YES	NO	YES	NO	Advised
Enrolled Trails (50” or less)	YES	NO	NO	NO	Advised