

**Gasoline Consumption
Attributable to ATVs
in Maine**

Prepared for

The Commission to Study Equity in the
Distribution of Gas Tax Revenues Attributable to
Snowmobiles, All-Terrain Vehicles and Watercraft

Submitted by

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Preface

This report was prepared for the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft, pursuant to a Cooperative Agreement between the University of Maine and the Maine Office of Policy and Legal Analysis, Maine Department of Conservation, Maine Department of Inland Fisheries and Wildlife, Maine Department of Transportation, and Maine Department of Marine Resources, project number 2001160.

The opinions expressed here are those of the authors and do not represent the views of the Margaret Chase Smith Center for Public Policy or the University of Maine.

The authors wish to thank the Maine Departments of Conservation, Inland Fisheries and Wildlife, Transportation and Marine Resources and the Committee Chairs Senator Marge Kil Kelly, and Representative Joseph Clark, and Patrick Norton, Office of Policy and Legal Analysis, for their invaluable assistance.

Executive Summary

This study was conducted by the Margaret Chase Smith Center for Public Policy (MCSC) of the University of Maine at the request of the Maine Legislature's Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft. The Commission was created by the Legislature with a charge to collect and analyze information to determine an equitable distribution of gas tax revenues used in the enforcement and enhancement of programs supporting off-road vehicle use in Maine. The Commission concluded that snowmobiling, boating and ATV use has increased significantly over recent years and now constitutes an important part of the economies of many regions of the State. The Commission concluded that more information about the amount of gasoline consumed by boats, snowmobiles and ATVs should be collected before any action was proposed concerning the equitable distribution of gasoline tax revenues.

This report, the first of three, presents the results of a survey ATV users whose ATVs were registered in the State of Maine during 2000. In April and in June of 2001, telephone interviews were completed with 671 randomly selected Maine ATV owners. The study had a cooperation rate of 78% among persons who were successfully contacted. These data show that the average registered ATV consumed 43.6 gallons (rounded to the nearest tenth) of gasoline during the most recent one-year period ending in April 2001. Approximately 96% of all gasoline used in these ATVs was purchased in Maine. Since there were 39,643 registered ATV users this means that the total quantity of fuel consumed in Maine in 2000, adjusted for out-of-state purchases, by Maine registered ATVs was 1,664,497 gallons. The excise tax on gasoline imposed by the State of Maine is \$0.22 per gallon. Therefore, the operator of a Maine registered ATV pays *on average* \$9.24 per year per ATV, and operators of all Maine registered ATVs together pay \$366,189 per year in Maine gasoline fuel excise taxes.

Since these data were gathered from a random sample rather than the entire population of all Maine registered ATVs, the quantity of average and total fuel use and average and total taxes paid are subject to error. This sampling error is typically quantified by confidence intervals based upon the sample data. A 95% confidence level means that in 95 out of 100 samples of the same size, the true average fuel use of the population of all ATVs will be within the confidence interval. The confidence interval for average fuel use, regardless of where purchased, per registered ATV ranges from 38.95 to 48.17 gallons per year. For gasoline purchased in Maine, the 95% confidence interval ranges from 37.56 to 46.42 gallons per year. The total quantity of tax paid to Maine by Maine registered ATVs, after accounting for out-of-state purchases, ranges from \$327,554 to \$404,825 with the expected (mean) value of \$366,189.

Total gas tax collections for fiscal year 2000 were \$146,190,243 with \$64,948 returned to the ATV Recreational Management Fund (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine registered ATVs represent 0.25% of all State gasoline excise tax receipts. At the same time, the revenues returned to the ATV Recreational Management Fund represent 18% of the estimated revenues collected from Maine registered ATVs.

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Introduction

This study was conducted by the Margaret Chase Smith Center for Public Policy (MCSC) of the University of Maine at the request of the Maine Legislature's Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft. The Commission was created by the Legislature with a charge to collect and analyze information to determine an equitable distribution of gas tax revenues used in the enforcement and enhancement of programs supporting off-road vehicle use in Maine. The Commission concluded that snowmobiling, boating and ATV use has increased significantly over recent years and now constitutes a significant and important part of the economies of many regions of the State. The Commission concluded that more information on the amount of gasoline consumed by boats, snowmobiles and ATVs should be collected before making any recommendations on the equitable distribution of gasoline tax revenues.

Survey Methodology

Gasoline use by Maine registered ATVs was determined through telephone survey interviews with the owners or operators of a random sample of ATVs registered in Maine. The ATVs whose owners would be interviewed were selected randomly by the Margaret Chase Smith Center for Public Policy, using the file of vehicles with current registrations provided by InforMe, a company that maintains the records for the State of Maine. Vehicles newly registered after December of 2000 were not included because they were registered in the very recent off-season. The sample was an interval sample taken from vehicle registrations ordered by Maine's standard geocodes.¹ The result was a sample implicitly stratified by geography, which means that ATVs in all geographic areas of the state had a chance of selection directly proportional to the number of ATVs in their area. The interviews took place during a two-week period from April 9 to April 23, 2001, and from May 31 to June 6, 2001. The June interviews were conducted to permit inclusion of 2,375 registrations that were not provided in the original file from which the April sample was drawn.

Questionnaire development

A list of potential question topics was developed by the Margaret Chase Smith Center for Public Policy, following a review of the literature on off-road vehicle use, discussion at Commission meetings, and the Center's experience with utilization studies of various types. It was revised following discussion at the November 29, 2000 Commission meeting. Most topics were reflected in the eventual survey instrument, and additional questions were included where clarification was deemed necessary for the analysis. The final survey questionnaire is given in Appendix 3.

¹Geocodes are standard five-digit numeric codes for each Maine minor civil division. The first two digits represent the county in which the minor civil division is located.

Survey implementation

From the State's list of registered ATVs, a random sample of Maine registered ATVs was drawn. Non-registered vehicles were not included in the sample. Notification letters were mailed to sample members shortly before the interviewing was begun. These letters listed the sponsors, described the reason the study is being conducted and the use that will be made of the data (to measure the amount of gasoline consumed by registered ATVs). In addition, the letter described the role of the Margaret Chase Smith Center for Public Policy, and informed potential respondents that their participation would be voluntary and that their individual responses would remain confidential (see Appendix 2). This information was repeated at the beginning of each interview as part of the informed consent process.

The interviews were conducted by telephone from the Margaret Chase Smith Center for Public Policy at the University of Maine.

All interviewers participated in a four-hour training session designed specifically for this study, using a series of study-specific materials (see Appendix 4). They were provided background information on the project, the charge of the Commission, the purpose of the study, and how and when to contact respondents. Interviewers were provided a set of question-by-question instructions on the meaning and intent of each question, potential respondent concerns, and appropriate methods of handling those concerns. In addition, interviewers conducted two hours of practice interviews before implementation of the survey.

A protocol was developed specifying the number of contact attempts to be made on a schedule of varying times of day and days of the week to ensure that all potential respondents had optimal and equal opportunity to participate in the survey. Interviewers documented all attempts to contact respondents.

Data entry and verification

All gasoline use data were double entered to check for input accuracy. Extreme values of fuel use were also checked by hand. In particular, all reports of zero fuel use were verified to ensure that non-reporting of fuel use was not counted as no fuel use; 4 responses (representing 0.5% of total responses) of no fuel use were verified. All very large values of fuel use, 250 gallons per year or more, were hand-checked for accuracy and internal consistency. Seven records of high fuel use were judged to be inaccurately recorded or implausible, and were not included in the gasoline use calculations. The highest remaining observed fuel use was 500 gallons per year. In addition, non-gasoline data fields were checked to remove out-of-range codes (e.g., a code 5, when only codes 1, 2, or 3 are possible), and logical inconsistencies (such as incorrectly followed skip instructions).

Survey Disposition and Response Rate

From the State’s list of registered ATVs obtained from InforMe a random sample of 1,606 Maine registered ATVs was drawn. The list contains no telephone numbers: although they are collected on the registration application form, they are not key-entered. From the 1,606 in the sample, possible phone numbers were identified using a combination of phone book and Internet searches for 1,172 individuals. Attempts to contact sample members were made between 5:00 and 9:00 p.m. weekday evenings, from 9:00 a.m. to 5:00 p.m. Saturdays, and 1:00 to 5:00 p.m. Sundays. No interviewing took place Easter Sunday, April 15. A total of 3,861 contact attempts were made during the survey. Nearly three-quarters of completed interviews were conducted within the first three call attempts. When an apparently valid telephone number was available, an average of 7.5 attempts were made for sample members whom interviewers were eventually unable to contact.

Table 1: Survey Sample Disposition

Outcome	Number	Percent of Sample
Completed an interview	671	41.8%
No phone # available	434	27.0%
Unable to contact	177	11.0%
Refused	124	7.7%
Wrong number	86	5.4%
Ineligible	53	3.3%
Disconnected	43	2.7%
Complete, not entered	11	0.7%
Not in service	4	0.2%
Terminated by respondent	3	0.2%
Total in sample	1606	100%

During the course of attempting to contact sample members, 53 were determined to be ineligible for participation in the survey primarily because they did not own the selected ATV during the period covered by the survey or because they would not be available for an interview during the interview period. Forty-seven phone numbers were either not in service or were disconnected and 86 were wrong numbers. An additional 177 sample members could not be contacted after multiple attempts on different days of the week and different times of the day. The final disposition of all sample members is given in Table 1.

Telephone contact was made with a total of 862 individuals. Of those, 124 refused to participate in the survey, three were terminated at respondents’ request during the interview, and eleven interviews were completed after compilation and cleaning of the final data file and were not included in the analysis. Interviews were completed with 671 individuals resulting in a survey cooperation rate of 78%. See Table 2 for details.

Table 2: Outcome when Respondent was Contacted

Outcome	Number	Percent of Those Contacted
Completed an interview	671	77.84%
Refused	124	14.39%
Ineligible	53	6.15%
Terminated by respondent	3	0.35%
Complete, not entered	11	1.28%
Total contacted	862	100.00%

Results from the Survey

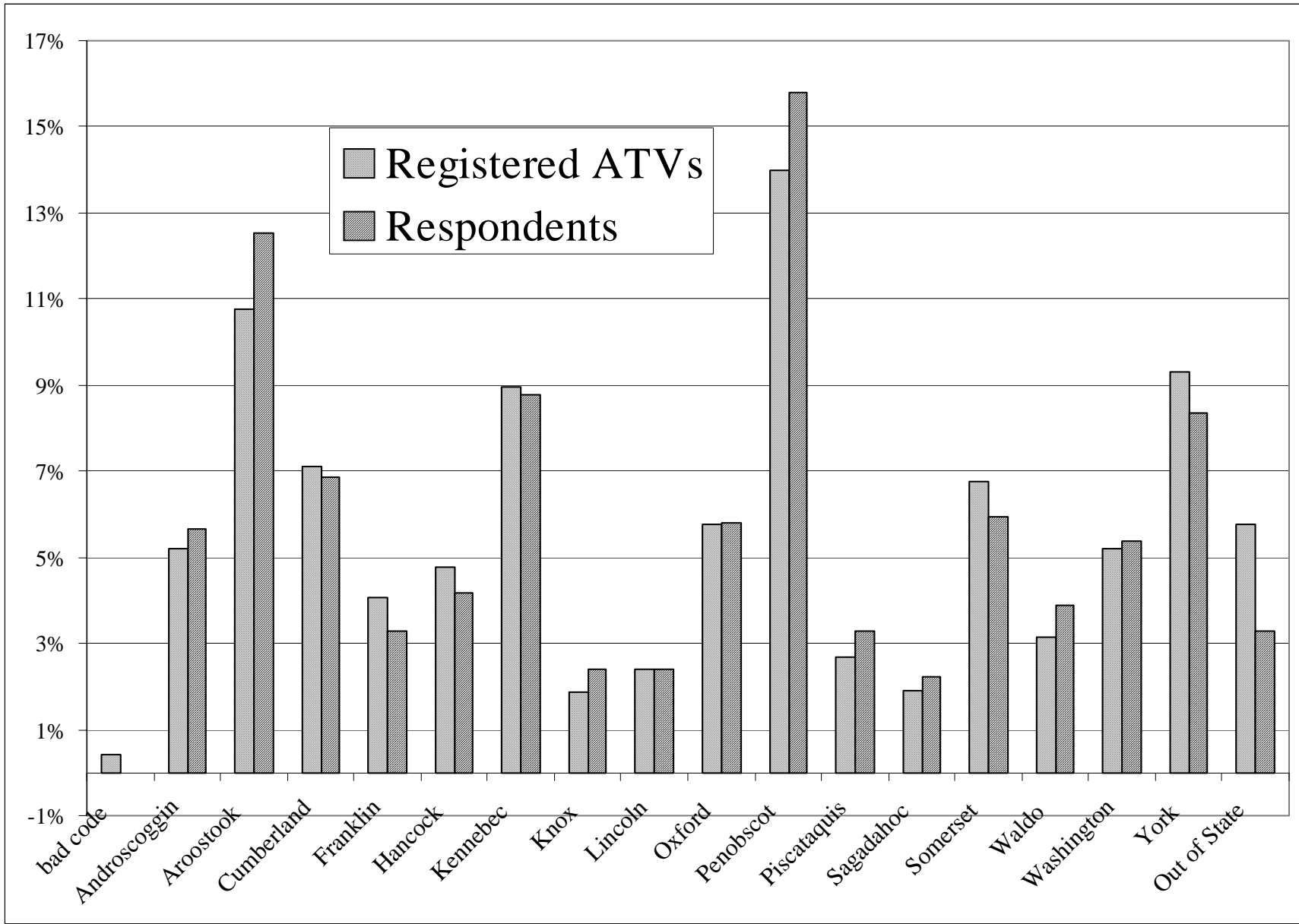
Geographic distribution of ATVs

The geographic distribution of the owner-operators of all Maine registered ATVs include all 16 Maine counties as well as 6% from out of state. As is seen in Table 3 and Figure 1 this same geographic distribution is represented very well in the sample of 671 individuals who completed interviews. This means that our results represent the geographic diversity of ATV owners.

Table 3: Geographic Location of Registered ATVs and Survey Respondents

County	Population		Respondents	
	number	percent	number	percent
bad code	168	0.42%	0	0.00%
Androscoggin	2063	5.20%	38	5.66%
Aroostook	4264	10.76%	84	12.52%
Cumberland	2815	7.10%	46	6.86%
Franklin	1610	4.06%	22	3.28%
Hancock	1889	4.77%	28	4.17%
Kennebec	3544	8.94%	59	8.79%
Knox	736	1.86%	16	2.38%
Lincoln	946	2.39%	16	2.38%
Oxford	2284	5.76%	39	5.81%
Penobscot	5550	14.00%	106	15.80%
Piscataquis	1064	2.68%	22	3.28%
Sagadahoc	752	1.90%	15	2.24%
Somerset	2673	6.74%	40	5.96%
Waldo	1244	3.14%	26	3.87%
Washington	2067	5.21%	36	5.37%
York	3691	9.31%	56	8.35%
Out of State	2282	5.76%	22	3.28%

Figure 1: Geographic Location of Registered ATVs and Survey Respondents



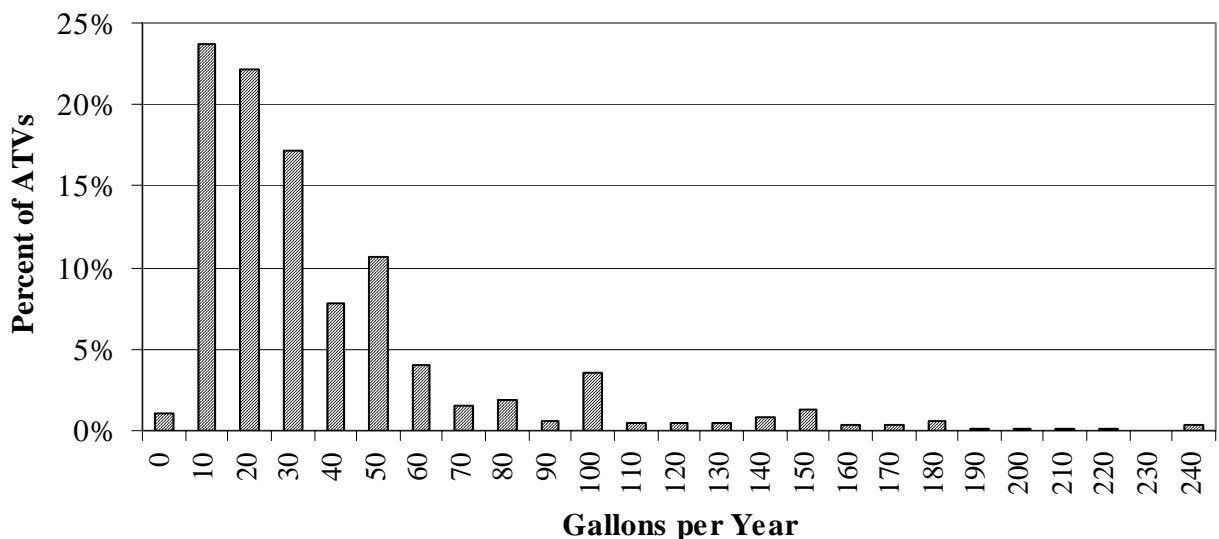
Gasoline use by ATVs

In our sample, the average registered ATV consumed 43.6 gallons of gasoline (rounded to the nearest tenth) during the most recent one-year period ending in June 2001. Since our sample is a random sample of the population of all registered ATVs in the State of Maine, we can estimate the total quantity of gasoline used by registered ATVs based on our sample. Given that there are 39,643 registered ATVs this means that the total quantity of fuel consumed by Maine registered ATVs was 1,726,844 gallons in the one-year ATV season ending in June of 2001.

Since these data were gathered from a random sample rather than the entire population of all Maine registered ATVs, the quantity of average and total fuel use and average and total taxes paid are subject to error. This sampling error is typically quantified by confidence intervals based upon the sample data. A 95% confidence level means that in 95 out of 100 samples of the same size, the true average fuel use of the population of all ATVs will be within the confidence interval. See Appendix 1 for additional details on statistical accuracy. The confidence intervals for average fuel use per registered ATV ranges from 38.95 to 48.17 gallons per year. This translates into a 95% confidence interval for total gasoline use of 1,543,930 to 1,909,758 gallons in the year ending June 2001.

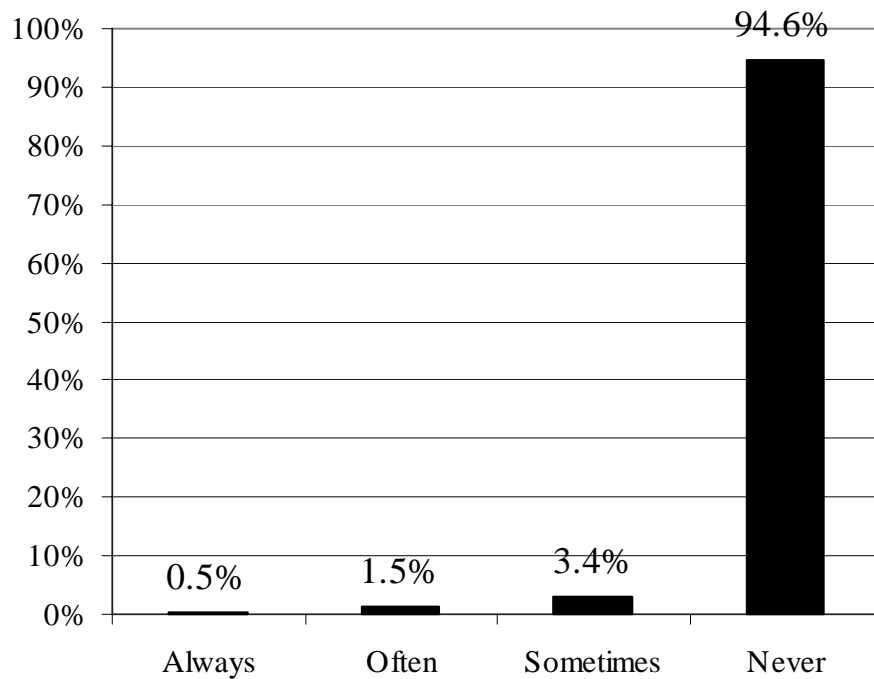
The distribution of annual gasoline use in ATVs in Maine is shown in Figure 2. The average number of gallons used is 44, and it is clear that the average (or mean) reflects a large number of vehicles that use fewer than 44 gallons, and a very small number that use far more. It is appropriate to use the average for the calculation of gasoline use and the confidence intervals in this section because of its statistical properties. To describe typical gasoline use by ATVs, the median is also useful. The median for this distribution is 25 gallons. That means that half of the vehicles use more than 25 gallons, and half use less.

Figure 2: Gasoline Use Per Year by Maine ATVs



Almost all the gasoline consumed by Maine ATVs (described above) was purchased in Maine. As can be seen in Figure 3, 95% of our respondents stated that they never purchase gasoline out of state. In computing gasoline purchased in Maine, a weight of 0 was applied to the gallons of gasoline used in vehicles whose owners bought all their gasoline out of state; a weight of 0.33 was applied to gallons of gasoline when owners reported they often buy gasoline out of state; a weight of 0.67 was applied to gasoline when owners sometimes purchase gasoline out of state; and a weight of 1.0 was applied when owners always buy their gasoline in Maine. Using these weights and aggregating, we find that approximately 96% of all gasoline consumed in Maine registered ATVs was purchased in Maine. Using this proportion of in-state to out-of-state gasoline purchases, we estimate that the total quantity of gasoline purchased in Maine for registered ATVs was 1,664,497, with lower and upper 95% confidence limits of 1,488,880 and 1,840,114 gallons.

Figure 3: ATV Gasoline Purchases Out of State



The excise tax on gasoline imposed by the State of Maine is \$0.22 per gallon. This means that the gasoline purchased in Maine for a Maine registered ATV contributes *on average* \$9.24 per year, and all Maine registered ATVs contribute \$366,189 per year in Maine gasoline fuel excise taxes. Using the confidence interval for gasoline sales in Maine shown above, this means that the total quantity of Maine gasoline tax paid by owners/operators of Maine registered ATVs ranges from \$327,554 to \$404,825 with the expected value of \$366,189.

Total gas tax collections for fiscal year 2000 were \$146,190,243 with \$64,948 returned to the ATV Recreational Management Fund (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine registered ATVs represent 0.25% of all State gasoline excise tax receipts. At the same time, the revenues returned to the ATV Recreational Management Fund represent between 16% and 20%, with a best estimate of 18%, of the estimated revenues collected from Maine registered ATVs.

Characteristics of ATV-owning households

The sampling procedure used in this study targeted individual vehicles, not owners, households, or businesses. Therefore, questions about the household, the ATV riders, and other vehicles owned by persons in the household were included to provide a more complete picture of ATV ownership, ridership, and use in Maine. Eighty-four of the 671 study ATVs are used at least occasionally for commercial purposes, and only four are reserved exclusively for commercial use. Because so many of the ATVs are used for mixed personal and commercial purposes, for brevity's sake we refer here to ATV-owning "households."

Forty percent of the households in this study have more than one ATV. There is an average (mean) of 1.5 ATVs per ATV-owning household, ranging from one ATV to a high of six. They are used by an average of 2.2 persons per household, and also by persons outside the household in 19% of cases.

The average age of ATV riders in the ATV-owning households is 36 years, ranging from infants to age 90. Most (87%) of the respondents to the survey, who are the persons in whose name the vehicles were registered or the persons most knowledgeable about the selected vehicles, are male. About one in ten of the respondents (11.7%) belongs to an ATV club. They have been riding ATVs for an average of 10 years, ranging from new riders with less than one year of experience to veterans of forty-five years.

Exactly 50% of the ATV-owning households own one or more gasoline-powered boats, and 53% own one or more snowmobiles.

Characteristics of the selected ATVs

The predominant manufacturers are Honda (38%), Polaris (25%), and Yamaha (18%). The remaining vehicles are Suzukis (9%), Kawasakis (5%), Arctic Cats (3%), and others (2%). These percentages correspond closely to the percentages of manufacturers represented in Maine's active ATV registration file.

Half of the vehicles in the survey were manufactured in 1996 or later. Their owners have had them for an average of almost five years. Most (87%) are four-wheelers. Most (73%) are four-stroke vehicles. About half of the vehicles have an odometer.

Most ATVs are capable of four-wheel drive: 34% have four-wheel drive, and 25% have full-time four-wheel drive. The remainder have two-wheel drive (38%) or are described by their owners as having “other” drive configurations.

The most common engine size is 300 cc (17% of the ATVs in the study), and 90% of the machines have 500 cc engines or smaller. One in ten is a small machine with an engine size of 200 cc or less.

How the ATVs are used

In 38% of the households with more than one ATV, the selected ATV is used more than the other(s), in 42% it is used about the same, and in 20% it is used less than the others. Although one might expect that the three figures would be roughly equal for the sample, it is quite possible (although the question was not asked) that relatively fewer of the selected ATVs are used *less* than the other ATVs because a household’s *least* used machines may not be registered, and therefore would not have been eligible for the study.

Respondents were asked to indicate the activities for which they use their vehicles. It is clear that most of the vehicles are used for multiple purposes. Only 13% of the vehicles are ever used for commercial purposes in a job or business. Almost three-quarters (73%) are used at least sometimes for hunting, fishing, or trapping (not as part of a job), and 39% are used often or only for that purpose. Relatively few are used in farming or land management: 63% are never used for that purpose, and only 11% are often (or only) used for that work. Home and yard maintenance use is somewhat more frequent: slightly more than one-quarter (27%) are used often (or only) for that purpose, almost half (47%) are used “sometimes,” and slightly more than one-quarter (26%) are used often or only for yard and home work.

It is clear that most ATV use is recreational. Two-thirds of owners say they often ride the vehicles for fun, and another 7% use them for that purpose exclusively. Slightly more than one-quarter (28%) say they only “sometimes” ride the selected ATV for fun, and only 7% of the vehicles are never used for recreation.

Where the ATVs are ridden

Just as the ATVs are used for multiple purposes, their owners ride them in multiple types of venues. Much ATV riding is done on the owner’s private land, or that of others: 57% ride often on their own land or that of their family, and an additional 32% say they do so sometimes. Nearly half ride at least sometimes on public lands (42%) or utility or rail corridors (47%). Most (84%) ride on private land that belongs to others. Over half (61%) ride on designated ATV trails: almost one-third (30%) ride such trails often.

More than four in five ATV riders (82%) at least sometimes trailer their ATVs to a place to ride them, and 14% always do so.

Very few ATV riders buy any gasoline out of state: only 5% do so even “sometimes.” The low frequency of out-of-state-gas purchases means that most of the gasoline used by the ATVs in this study produces gasoline tax revenues in Maine. About half (52%) generally buy gas at the same place each time.

Riding patterns: outings and trips

ATV riders travel an average of 21 miles at an outing, with trips ranging from less than a mile to 330 miles. Half the trips are fifteen miles long or less. Trips average 3.0 hours at a time, with a range from less than an hour to 20 hours riding time from start to finish. The ATVs were ridden on an average 67 days in the past year (from April of last year to this April; or, for the June supplement, from June to June). Use varied from none to a full 365 days.

Among those who had their ATVs more than a year, two-thirds (67%) described their time and distance on their ATV as typical of other years, 12% said they rode more in the past year than usual, and 21% said they rode less, perhaps because spring was late this year.

Riding patterns: seasons of the year

Although ATVs are ridden in all seasons of the year, summer and fall are the most popular seasons. About two-thirds of the ATV riders ride “a lot” in the summer, and almost as many (58%) ride a lot in the fall. In the spring, ATV riding declines somewhat: only one in five (21%) rides a lot. Another 37% ride “some” in the spring. In the winter, half still ride at least a little and 10% ride a lot.

Riding habits: safety

More than half (58%) of riders more often ride in a group than alone. Less than half (42%) never ride with a passenger, 47% sometimes do, and 11% usually or always have another person with them on their ATV.

Less than half (45%) never ride at night. Only a few make a habit of it, however: less than two percent usually or always ride at night.

ATV riders either make a habit of always wearing a helmet (31%) or of never doing so (43%). Relatively few wear a helmet part of the time.

Riding habits: long trips

More than one quarter (29%) of ATV riders take weekend or longer trips primarily for the purpose of riding their ATVs.

Riding preferences: trail riding and preferred facilities

When asked to indicate their one ideal kind of trail or riding facility, the respondents clearly prefer woods and trails (63%), with old and gravel roads a distant second (28%). Less than five percent prefer mud and water; less than two percent, gravel pits and play areas; and less than one percent, motocross, track and racing. Less than two percent volunteered that they do not like any kind of trail or facility.

Less than half (41%) of ATV riders use trails made specifically for ATVs. However, six in ten (61%) use “designated ATV trails,” which includes old roads, fire roads, and other corridors that are permitted for ATV use but which are not necessarily designed specifically for ATVs. Of those who do not currently use trails specifically made for ATVs, over three-quarters (77%) would like to do so.

Those who ride on trails made specifically for ATVs say that the closest such trail to their home is 20 miles or less (74%); 21 to 50 miles (14%); or more than 50 miles (11%). Those who ride the trails made specifically for ATVs rate the closest trail they ride (which may not be their favorite or the one they frequent the most) as excellent (23%), good (42%), fair (29%), or poor (6%).

Among ATV riders who either already use trails made specifically for ATVs or who would like to use such trails, 59% would travel at least fifty miles to use a good trail, while the remainder say that fifty miles is too far to travel. Opinions about the length of an adequate trail vary widely, from a mile or two to two thousand miles. The average (mean) length suggested is 51 miles (the mean is affected by the few respondents who want trails hundreds or thousands of miles long), and half the riders say that 25 miles or fewer (the median) would be adequate. The most frequently mentioned length is 20 miles (the mode).

Respondents were asked to describe one characteristic that a good ATV trail or facility should have. Many had difficulty selecting only one, and interviewers used neutral probes to help them select a single feature that they would like trails or facilities to have. The open-ended responses were content-analyzed for common themes, and grouped into code categories. An appropriate resulting code was then assigned to the answer given by each of the respondents. The most frequently mentioned characteristics are signs, markers, and directions (19%); followed by rest and picnic areas (11%); well-maintained trails (e.g., branches trimmed), mentioned by 9%; and smooth trails (8%). Other desired trail characteristics include restrooms, gasoline pumps, similarity to snowmobile trails, scenery, easy access and parking, wide trails (often mentioned in a safety context), snack bars, speed limits, varied terrain (including rough terrain), and bridges and bridge maintenance.

Appendix 1: Statistical Accuracy - A Note

Accuracy and confidence. All statistical studies are subject to error. The term “error,” as used in data analysis, does not mean “mistake.” Rather, it is a way of expressing the likelihood that the results obtained from a sample of a population are very similar to the results that would theoretically have been obtained if one were to collect data from absolutely every member of the population of interest (in this case, ATV owners). The degree of certainty of results based on a sample is expressed as a confidence interval. The confidence interval shows that the results obtained from a sample of a certain number of randomly selected ATV owners are likely to be within a specific margin of error of the results one would have obtained if an interview were completed with every ATV owner in Maine. The level of confidence for this study has been set at 95%: that is, if we were to conduct this study 100 times, with samples of 671 persons all drawn in the same way, in 95 of the 100 samples the results will be very close to the results that would have been obtained if we had interviewed all the ATV owners in the state. The actual width of the confidence interval for any particular data item depends upon the data distribution obtained from the study.



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Appendix 2: Sample Notification Letter

Dear ATV owner:

April 2, 2001

No one really knows how much gasoline is used by all the off-road vehicles in Maine. We are trying to find out, and we need your help. We are conducting a study to estimate the total number of gallons of gasoline used by all the ATVs, snowmobiles, and boats in Maine. As part of the study we are calling the owners of a random sample of ATVs. **An ATV registered to you is in that sample. It is the one whose registration number appears on the label above.** An interviewer will probably call you soon to ask you to do a ten-minute interview over the phone.

This study is being done by the Margaret Chase Smith Center for Public Policy at the University of Maine. We were asked to do the study by the Maine Legislature's Commission to Study Equity in the Distribution of Gas Tax Revenues. The study is being paid for by the State of Maine Departments of Conservation, Inland Fisheries and Wildlife, Transportation, and Marine Resources. The Commission and the Legislature will use the information we gather to help decide how to allocate gasoline tax money fairly among all users of various forms of transportation.

We think you will find the interview interesting. The questions will cover topics such as

- the features of your ATV
- what kind of riding you like
- how much gasoline you used throughout the past year in your ATV.

We realize that you may not know right off hand how much gas you used. The interviewer will be ready to figure that out with you. **The interview will go more quickly if you think ahead of time about the amount of gas you used and the number of miles you rode in the last year on the ATV above.**

The information that you give us will be kept confidential. We will not use your name in any way. Our report to the Commission will add everyone's answers together so no one can be identified. When our interviewer calls, we hope you will participate. In the interview, if we come to a question that you don't want to answer, you can just say so and the interviewer will move on to the next question.

We hope you will agree to be part of this effort to help the Maine Legislature better understand how much gasoline is used in Maine's off-road vehicles.

Ride safe,

Jonathan Rubin, Study Director

Appendix 3: Questionnaire with Frequency Results

How to read the frequencies, percentages, and other statistics inserted in this survey instrument

The univariate frequencies and percentages as well as some other statistics are inserted in the following copy of the survey instrument. The frequencies and percentages show the number and percentage of respondents who gave each of the possible substantive answers to the questions (i.e., the variables) in the survey. For some questions, where respondents give actual numbers (such as the number of snowmobiles they own), the appropriate average(s)—mean, median, and/or mode—are shown, with the range of values (the lowest answer and the highest).

“Substantive answers” are those that contain information. Non-substantive answers are not included in the percentages. Known colloquially as “missing data,” although they are not “lost,” these include DK (the code assigned when respondents don’t know what answer to give, even after probes), NA (for questions in which the respondent declined to answer or the data were improperly recorded or implausible), and INAP (for questions that not appropriate for an individual respondent and are correctly skipped by an interviewer according to the GO TO instructions on the questionnaire).

The results are shown in *italics*. Where two columns of numbers are shown to the left of the questions, the left column shows the number of persons giving each answer (the frequencies), and the right column shows the percentage of persons giving that answer. The missing data are not included in those percentages. In tables, the top number in each cell is the frequency, and the bottom number is the percentage.

Measures of central tendency (the averages) are displayed in or near the question to which they pertain. They are in *italics*. We have selected an appropriate average for each question. The *mean* is the familiar arithmetic average: the sum of all the answers, divided by the number who answered. The *median* is the answer value that divides the whole array of answers in half: half the persons gave an answer lower than that value, and half gave a higher answer. The median is useful to show a “typical” answer when there are some very large or very small answers that would distort a mean. The *mode* is the single value that is given by the highest number of respondents: it is the most frequently occurring answer.

Survey instrument — ATV gasoline use
With univariate frequencies and statistics inserted, in italics

Hello, This is _____, calling from the Margaret Chase Smith Center for Public Policy at the University of Maine. May I speak with _____?

We are talking with ATV owners to see how much gasoline they use in their ATVs. Did you get a letter telling about the study? (IF YES, CONTINUE. IF NO: "Let me tell you about it"; IF R WANTS ANOTHER LETTER SENT, WE WILL DO SO). The Maine Legislature's Gas Tax Equity Commission asked us to find out how much gasoline is used in off-road vehicles. This study is sponsored by several government departments — Conservation, Inland Fisheries and Wildlife, Transportation, and Marine Resources. The Commission and the Legislature will use the information we get to see that gas tax money is allocated fairly. Later on, we'll be interviewing people who own snowmobiles and boats. Right now we're talking with people who have registered ATVs.

Your participation is entirely voluntary, and your name will not be connected with your answers in any way.

Do you have any questions? May we proceed?
 (ANSWER ANY QUESTIONS; PROCEED IF R CONSENTS.)

We randomly selected vehicles to ask about, and my instructions are that we have selected the (BRAND) _____ with vehicle plate number (READ NUMBER) _____. Are you the person who knows the most about that vehicle? (IF YES, PROCEED; IF NO, THEN ASK FOR THAT PERSON, AND START AGAIN AT THE TOP.)

1. ENTER TIME NOW: ____ __: ____ __

2. Do you **still own** this vehicle?

<i>No. of cases</i>	641 95.53%	YES.....(GO TO Q4)	1
	30 4.47%	NO	2

3. Did you operate it **at all** this past year?

27 96.43%	YES		1
1 3.57%	NO		2

FIND OUT WHAT HAPPENED:

- IF R HAD THE ATV DURING SOME PART OF THE YEAR, CONTINUE THE IW.
 - IF R DID NOT HAVE THE ATV DURING ANY PART OF THE YEAR, MAKE IW ER NOTE AND TERMINATE: "Thank you, but we're only talking with people who had registered ATVs this past year. I'll make a note here." EXIT
- | | |
|----------------------------|---|
| INAP (CODED 1 IN Q2) | 0 |
|----------------------------|---|

4. **Counting this ATV, how many ATVs** do you have in your household?

ENTER NUMBER	__ __
DK	98
NA	99

*N=670
 Mean=1.54,
 Range=1-6*

5. How many people **in your household** use (this/these) ATV(s)?

N=667, mean=2.18, range=1-8

ENTER NUMBER: _____
 DK 98
 NA 99

What are their **ages**? I don't need to know who they are, just their ages.

ENTER AGE, OR CODE FOR DK--98; NA--99; INAP--00

INCLUDE R IF R USES THE ATV

N=1,441 persons, mean=36.19, range=0-90

PERSON #	AGE	PERSON #	AGE
1		5	
2		6	
3		7	
4		8	

6. Are there any people **outside** your household who regularly use these ATVs? (How many?)

538 80.54% NO, NONE 0
 55 8.23% ONE 1
 32 4.79% TWO 2
 43 6.44% THREE OR MORE 3
 DK 8
 NA 9

7. Does anyone in your household own any **gasoline-powered boats**? (IF YES: How many?)

N=668, mean=0.75, range=0-5

ENTER # OF BOATS _____
 NONE 00
 DK 98
 NA 99

8. Does anyone in your household own any **snowmobiles**? (IF YES: How many?)

N=668, mean=1.04, range=0-6

ENTER # OF SNOWMOBILES _____
 NONE 00
 DK 98
 NA 99

9. How many years have you yourself been **riding ATVs**?

N=668, mean=10.19, range=0-45

ENTER # YEARS (ROUND HALF YEAR
 TO NEAREST EVEN) _____
 LESS THAN ONE 00
 DK 98
 NA 99

10. Thank you. Now, let's go back to that ATV that we randomly selected. That's the one with registration tag (READ TAG NUMBER)_____ . How many wheels does it have?

22	3.28%	TWO	2
56	8.35%	THREE	3
583	86.89%	FOUR	4
2	.30%	FIVE	5
8	1.19%	SIX	6
		DK	8
		NA	9

11. That's a (MAKE/BRAND NAME), right? Let me get that down here...

23	3.43%	ARCTIC CAT	1
254	37.85%	HONDA	2
35	5.22%	KAWASAKI	3
169	25.19%	POLARIS	4
60	8.94%	SUZUKI	5
118	17.59%	YAMAHA	6
12	1.79%	OTHER (ENTER BRAND NAME_____)	7
		DK	8
		NA	9

12. What model is it? (These data are recorded only in text format, and are not included here)

ENTER MODEL_____	___	___	___
DK			998
NA			999

13. What is its engine size in cc's? *N=600, mean=324; median=300, mode=300, range=50-650*

ENTER ENGINE SIZE IN CC'S.	___	___	___
DK			998
NA			999

14. This ATV is a (YEAR), right? *N=670, median=1996, mode=2000, range=1970-2001*

ENTER YEAR (USE ALL 4 DIGITS)	___	___	___
DK			0008
NA			0009

15. For how many years have you owned it? *N=665, mean=4.76, median=3, range=0-30*

ENTER # OF YEARS:	___	___
LESS THAN ONE YEAR (CIRCLE 00, AND ENTER MONTHS, BELOW)		00
DK		98
NA		99

15a. IF LESS THAN A YEAR, # OF MONTHS	___	___
(LESS THAN 1 MONTH, ENTER 01) <i>N=29, mean=6.59</i>		
DK		98
NA		99
INAP, ENTERED YEARS		00

16. Is it a 2-stroke or a 4-stroke vehicle?

177	27.06%	2-STROKE	1
477	72.94%	4-STROKE	2
		SOMETHING ELSE (VOL.) (What is it?_____)	7
		DK	8
		NA	9

17. Is it 2-wheel drive , 4-wheel drive , or full-time 4-wheel drive ?			
249	37.67%	2-WHEEL	1
227	34.34%	4-WHEEL	2
166	25.11%	FULL-TIME 4-WHEEL	3
19	2.87%	OTHER (VOL.) (What is that? _____)	7
		DK	8
		NA	9
18. Does it have an odometer ? (mileage meter)			
333	50.30%	YES	1
323	48.79%	NO	2
6	0.91%	YES, BUT IT DOESN'T WORK (VOL.)	7
		DK	8
		NA	9
19. (ONLY IF THERE ARE OTHER ATVs IN THE HOUSEHOLD: Q4 IS MORE THAN ONE)			
Does this ATV get used more , about the same , or less than the other ATVs in your household?			
100	38.46%	THIS ONE USED MORE	1
109	41.92%	THIS ONE ABOUT THE SAME	2
51	19.62%	THIS ONE USED LESS	3
		DK	8
		NA	9
		INAP (NO OTHER ATVs IN HOUSEHOLD)	0

20. Thank you. Now I have some questions about **where** and **how** you use this vehicle. I'm going to read you a list of things that people often do with their ATVs, and for each one, please tell me if you use it **only** for that purpose, or **often**, **sometimes**, or **never** use this ATV for that purpose. First,...

	ONLY*	OFTEN	SOME-TIMES	NEVER
a. Commercial use in your job or business (E.G., LOBSTERING, FISHING)	4 0.60%	28 4.18%	52 7.76%	586 87.46%
b. Hunting, fishing, trapping — but not as part of a job	8 1.20%	254 37.97%	225 33.63%	182 27.20%
c. Farming, land management	3 0.45%	67 10.00%	178 26.57%	422 62.99%
d. Home and yard maintenance	1 0.15%	180 26.95%	315 47.16%	172 25.75%
e. Recreation — riding for fun	46 6.88%	399 59.64%	186 27.80%	38 5.68%
f. (UNLESS ONE ABOVE IS "ONLY") Anything else? (What?) _____	1 0.15%	8 1.22%	10 1.53%	636 97.10%

(*IF ONE ITEM IS "ONLY," THE REST SHOULD BE "NEVER.")

21. Now I'd like to know **where** you ride this ATV. For each item I read, please tell me if you **often**, **sometimes**, or **never** ride your ATV there.

	OFTEN	SOMETIMES	NEVER
a. Designated ATV trails	199; 30.11%	201; 30.41%	261; 39.49%
b. Utility corridors, abandoned rail corridors	99 14.93%	216 32.58%	348 52.49%
c. Public lands owned by the state or the town. (EXPLAIN: That includes State Parks, game management areas, public reserved areas)	74 11.11%	206 30.93%	386 57.96%
d. Private land that is yours or your family's	382 57.10%	211 31.54%	76 11.36%
e. Private land belonging to someone else	262 39.40%	295 44.36%	108 16.24%

22. Do you **truck or trailer** your ATV to take it somewhere to ride **always, often, sometimes, or never**?

92	13.73%	ALWAYS	1
164	24.48%	OFTEN	2
296	44.18%	SOMETIMES	3
118	17.61%	NEVER	4
		DK	8
		NA	9

23. Now I'm going to ask you some questions about buying gasoline **for this vehicle** — where you get gas, how much you use, how often you buy it, and so forth. In all these questions, **I'm asking just about this one ATV.**

First, do you usually **buy gas** for this vehicle **at the same place**, or do you buy it at **different places**?

349	52.25%	USUALLY SAME PLACE	1
319	47.75%	DIFFERENT PLACES	2
		DK	8
		NA	9

24. Do you buy gas **out of state** for this vehicle **always, often, sometimes, or never**?

3	0.45%	ALWAYS	1
10	1.49%	OFTEN	2
23	3.44%	SOMETIMES	3
633	94.62%	NEVER	4
		DK	8
		NA	9

25. Now we are coming to some questions about **how much gas you used in this ATV in the past year**; that is, from (THIS MONTH 2000) until today. Then, we're also going to be looking for your best estimate of the number of miles you traveled, the hours you rode, and so forth.

Before I go any further — do you happen to **know how many gallons of gas** you used in this ATV in the past year?

YES (How many is that?) ENTER#, GO TO Q33 (NEXT WHITE PAGE) _____ , _____

NO OR DK 99998

====>That's OK — we find that people often know some things that will help get to the number of gallons of gas. We can work with you to get there. I have my calculator ready here.

26. How do you think about the amount of gas you use in this vehicle? Do you usually think about the **miles you get per gallon**, or do you think about the **hours of riding time**, or do you think about the **gallons you buy**, or the **amount of money you spend**, or what?

MILES PER GALLON.==>GO TO Q27 (BLUE) 1

HOURS OF RIDING TIME. ==>GO TO Q28 (GREEN) 2

GALLONS ALONE. ==>GOTO Q31 (PINK) 3

AMOUNT OF MONEY.==> GOTO Q32 (YELLOW) 4

OTHER (VOL.) EXPLAIN BELOW____. .==>GOTO CLOSEST METHOD 5

DK (IF R IF NOT ABLE TO HELP CALC. GAS USE, THANK AND EXIT.) 8

NA (IF R REFUSES, THANK AND EXIT) 9

INAP (KNEW GALLONS IN Q25) 0

The data from the questions concerning gasoline use were extracted from the responses given to questions Q25 through Q32. While there are several methods by which respondents could arrive at their estimates of the amount of gasoline they used, only one estimate was obtained from each respondent. A summary of the derived measures is presented below.

Gasoline used by ATV operators

The mean number of gallons of gas consumed by the ATVs in the study is 43.6 gallons. The mean number of gallons of gas bought in Maine is 42.0 gallons, with a range of 0 to 500 gallons. The gas usage calculations are based on 642 cases.

Miles the ATVs were ridden

Respondents indicated the number of miles they rode in Q27B if they used miles per gallon to calculate their gas use, as 38 respondents did. If respondents did not use that method to calculate their gas use, they were asked the number of miles they rode in Q34; 430 respondents indicated a number of miles in response to that question. If a respondent was not able to give a number of miles, an approximation was obtained in Q35; those frequencies are reported at Q35 in this presentation.

The sum of miles ridden by the 468 respondents in Q27b and Q34 combined is 252,796 miles; the mean is 540.2 miles, and the range is 0 to 10,000.

BLUE PAGE

27. IF MILES PER GALLON:

a. Approximately how many **miles per gallon**, on average, did you get from your ATV in the last year?

ENTER # OF MILES PER GALLON (A) _____ . _____

b. And about how many **miles** did you drive?

ENTER # OF MILES (B) _____ , _____

$$B \div A = \text{GALLONS}$$

IWER: $B \div A = \text{GALS}$. CALCULATE: NUMBER OF MILES (B) DIVIDED BY THE NUMBER OF MPG (A). READ THE VALUES FOR A AND B TO R, AND ENTER THE RESULT IN THE BLANK IN THIS QUESTION:

c. If you got (A) **miles per gallon**, and drove (B) **miles**, then my calculation shows you used ($B \div A$) _____ gallons of gas over the past year. **Does that sound right?**

YES. . . =====>CIRCLE CODE 1 1

=====>ENTER # OF GALLONS R SAYS

“SOUNDS RIGHT” _____ , _____

=====>GO TO Q33.

NO. =====>GO BACK AND CHECK FIGURES WITH R,

=====> MAKE ANY INCREMENTAL ADJUSTMENTS R THINKS ARE NEEDED,

=====>AND/OR TRY ANOTHER MEASUREMENT METHOD,

=====>UNTIL R IS SATISFIED THAT THE ANSWER REASONABLY REFLECTS THE NUMBER OF GALLONS OF GAS USED.

GREEN PAGE

28. (IF HOURS OF RIDING TIME) Would that be **hours of riding per gallon**, or **gallons per hour of riding**?

- HOURS PER GALLON 1
- GALLONS PER HOUR----> GO TO Q30 2
- DK--TRY ANOTHER METHOD 8
- NA--TRY ANOTHER METHOD 9
- INAP (USED ANOTHER METHOD) 0

29. IF HOURS PER GALLON (CODED 1 IN Q28)

a. Approximately how many **hours per gallon**, on average, **did you get** from your ATV in the last year?

ENTER # OF HOURS PER GALLON (A) _____ • _____

b. And about how many **hours did you drive**?

ENTER # OF HOURS (B) _____, _____

$B \div A = \text{GALLONS}$

IWER: $B \div A = \text{GALS}$. CALCULATE: NUMBER OF HOURS (B) DIVIDED BY THE NUMBER OF HOURS PER GALLON (A). ENTER THE RESULT IN THE BLANK IN Q29c, BELOW:

c. If you got (A) hours per gallon, and drove (B) hours, then my calculation shows you used ($B \div A$) _____ gallons of gas over the past year. **Does that sound right?**

YES. . •CIRCLE CODE -----> 1

•ENTER # OF GALLONS R SAYS
"SOUNDS RIGHT" _____, _____

•GO TO Q33.

NO---->GO BACK AND CHECK FIGURES WITH R,
MAKE ANY INCREMENTAL ADJUSTMENTS R
THINKS ARE NEEDED, AND/OR TRY ANOTHER
MEASUREMENT METHOD, UNTIL R IS SATISFIED
THAT THE ANSWER REASONABLY REFLECTS
THE NUMBER OF GALLONS OF GAS USED.

30. IF GALLONS PER HOUR (CODED 2 IN Q28)

a. Approximately how many **gallons per hour**, on average, did you use in your ATV in the last year?

ENTER # OF GALLONS PER HOUR (A) _____

b. And about how many **hours did you drive**?

ENTER # OF HOURS (B) _____

A x B = GALLONS

IWER: $A \times B = \text{GALS}$. CALCULATE: NUMBER OF GALLONS PER HOUR (A) TIMES THE NUMBER OF HOURS (B). ENTER THE RESULT IN THE BLANK IN Q30c, BELOW:

c. If you got (A) gallons per hour, and drove (B) hours, then my calculation shows you used (A x B) _____ gallons of gas over the past year. **Does that sound right?**

YES. . •CIRCLE CODE -----> 1

•ENTER # OF GALLONS R SAYS

“SOUNDS RIGHT” _____

•GO TO Q33.

NO---->GO BACK AND CHECK FIGURES WITH R, MAKE ANY INCREMENTAL ADJUSTMENTS R THINKS ARE NEEDED, AND/OR TRY ANOTHER MEASUREMENT METHOD, UNTIL R IS SATISFIED THAT THE ANSWER REASONABLY REFLECTS THE NUMBER OF GALLONS OF GAS USED.

31. GALLONS (CODED 3 IN Q26)

a. Let's see if we can estimate the number of gallons you used. Do you usually fill the ATV tank **directly from a pump**, or use a **gas can**?

- FILL ATV TANK DIRECTLY FROM PUMP 1
- FILL ATV TANK FROM GAS CAN 2
- ABOUT EQUALLY TANK AND CAN (VOL.) 3
- DK 8
- NA 9

b. About **how many gallons** do you usually get when you fill up?

ENTER # OF GALLONS (B) •

c. About **how many times** did you **fill it** last year?

ENTER # OF TIMES (C) •

B x C = GALLONS

OWER: MULTIPLY THE # OF GALLONS (B) BY THE # OF TIMES (C), AND ENTER THE RESULT IN THE BLANK IN **Q31d** BELOW:

d. My calculation shows that you bought about _____ gallons of gas for that vehicle last year. **Does that sound right?**

YES. •CIRCLE CODE -----> 1

•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" , _____

•GO TO Q33.

NO---->GO BACK AND CHECK FIGURES WITH R, MAKE ANY INCREMENTAL ADJUSTMENTS R THINKS ARE NEEDED, AND/OR TRY ANOTHER MEASUREMENT METHOD, UNTIL R IS SATISFIED THAT THE ANSWER REASONABLY REFLECTS THE NUMBER OF GALLONS OF GAS USED.

YELLOW PAGE

32. AMOUNT OF MONEY (CODED 4 in Q26)

a. Do you know **how much you spent** on gas for this vehicle over the past year? (What was that?) (ROUND CENTS TO NEAREST \$)
ENTER DOLLAR AMOUNT (A) ----->GO TO Q32e \$ _____

b. IF NOT KNOWN: How much do you usually **spend** on gas when you **gas up**?
ENTER DOLLAR AMOUNT (B) \$ _____
(ROUND TO NEAREST DOLLAR)

c. About **how many times** last year did you gas up?
ENTER # TIMES (C) _____

IWER: MULTIPLY THE \$ AMOUNT (B) BY THE # OF TIMES (C), AND ENTER IN BLANK IN Q32d BELOW:

d. My calculations show that you spent about \$ _____ on gas for this vehicle last year. **Does that sound right?**
YES: ENTER \$ (D) \$ _____,
NO: GO BACK AND RE-FIGURE


e. The average price of gas in Maine was \$1.48 per gallon last year. I'm going to do some arithmetic here — **should I use \$1.48** per gallon, or should it be **higher** or **lower** to be close to the average you paid **where you fill up?** (IF HIGHER OR LOWER: What should I use for a price?)
ENTER PRICE PER GALLON USED (E) \$ ____ . ____ .
ROUND TO NEAREST CENTS (e.g., \$1.499 ==> \$1.50)

$(A \text{ or } D) \div E = \text{GALLONS}$

IWER: DIVIDE \$ SPENT (A) or (D) BY THE PRICE PER GALLON (E).
ENTER IN BLANK IN Q29F BELOW:

f. My calculation shows that you bought about _____ gallons of gas for that vehicle last year. **Does that sound right?**
YES. . •CIRCLE CODE -----> 1
•ENTER # OF GALLONS R SAYS
“SOUNDS RIGHT” _____,
•GO TO Q33.

NO---->GO BACK AND CHECK FIGURES WITH R, MAKE ANY INCREMENTAL ADJUSTMENTS R THINKS ARE NEEDED, AND/OR TRY ANOTHER MEASUREMENT METHOD, UNTIL R IS SATISFIED THAT THE ANSWER REASONABLY REFLECTS THE NUMBER OF GALLONS OF GAS USED.

33.  GIVE FEEDBACK: Thank you. That's very useful information.

IWER CHECK POINT

ON THIS SCALE OF 1 TO 4, HOW CERTAIN WAS R ABOUT HIS/HER ANSWERS TO THE GAS USE QUESTIONS?

281	43.91%	1--VERY CERTAIN	1
264	41.25%	2--	2
71	11.09%	3--	3
24	3.75%	4--VERY UNCERTAIN	4

IWER COMMENTS: *These data exist only in text form.*

34. IF R HAS ALREADY GIVEN YOU MILES RIDDEN IN Q27b, GO TO Q36.

Do you know about **how many miles** this vehicle was ridden in the past year? (How many?)

ENTER. # OF MILES.. .N=430, mean=496.48, range=0-10,000 . =====>.(GO TO Q36)	_____ , _____
DK.	99998
NA. . . . =====>(GO TO Q36)	99999
INAP (MILES GIVEN IN Q27b)	00000

35. IF R DK NUMBER OF MILES: I have some **ranges** here. Would you say it was 500 miles or more, or less than that?

====> MORE THAN 500: Was it 1000 or more, or less than that?	
1000 OR MORE	6
LESS THAN 1000:	
====>Was it 750 or more, or less than that?	
750 OR MORE	5
LESS THAN THAT	4
====>LESS THAN 500: Was it 250 or more, or less than that?	
250 OR MORE	3
LESS THAN THAT:	
====>Was it 100 or more, or less than that?	
100 OR MORE	2
LESS THAN THAT	1

DK	8
NA	9
INAP (MILES REPORTED IN RESPONSE TO Q27b or Q34)	0

<i>Number</i>		
24	13.87%	<100 miles
44	25.43%	100-249 miles
49	28.32%	250-499 miles
17	9.83%	500-749 miles
17	9.83%	750-999 miles
22	12.72%	1,000 miles or more

36. When you (or someone else) ride(s) this ATV, what is the average number of **miles** that it is ridden **at an outing?**

N=634, mean=21.30, median=15.0, range <1mile-330 miles

ENTER # OF MILES _____
 DK 998
 NA 999

37. On about how many **days of the past year** did someone ride this ATV?

IWER: IF NECESSARY, HELP R ARRIVE AT A NUMBER OF DAYS THROUGH FINDING OUT PATTERNS OF USE (WEEKENDS IN THE SUMMER, ETC.)

N=634, mean=66.77, median=35.5, range=less than a day to 365 days

ENTER # OF DAYS _____
 DK 998
 NA 999

38. On days that you (or someone else) ride(s) this ATV, for about how many **hours** at a time is it ridden **on a single outing?** *N=641, mean=3.04, median=2, range=less than an hour to 20 hours*

ENTER # OF HOURS _____
 DK 98
 NA 99

39. Was the time you spent and the distance **this ATV** was ridden this year **typical** of other years that this ATV was ridden? (IF NO: Was it ridden **more this year**, or **less**?)

372	57.59%	YES, TYPICAL	1
69	10.68%	RIDDEN MORE THIS YEAR	2
115	17.80%	RIDDEN LESS THIS YEAR	3
90	13.93%	HAD IT ONLY A YEAR/LESS (VOL.)	7
		DK	8
		NA	9

40. Thinking of the **four seasons** — winter, spring, summer, and fall — I'm going to ask you how much **this vehicle** is ridden in each of those seasons — **a lot, some, a little, or none**.
 First, in the winter.....

	A LOT	SOME	LITTLE	NONE
a. Winter	69 10.44%	108 16.34%	156 23.60%	328 49.62%
b. Spring	135 20.55%	244 37.14%	204 31.05%	74 11.26%
c. Summer	437 66.21%	136 20.61%	72 10.91%	15 2.27%
d. Fall	383 57.59%	186 27.97%	78 11.73%	18 2.71%

41. Now I have some general questions about ATV trails and facilities for recreation. From now on, we're talking about **all** the ATV riding **you yourself** do on **any** **ATV** — including the one we picked, but not limited to that one.

When you ride an ATV-- any ATV -- do you more often ride **alone**, or in a **group**?

276	41.82%	MORE OFTEN ALONE	1
384	58.18%	MORE OFTEN IN A GROUP	2
		DK	8
		NA	9

42. When you ride, how often do you ride **with a passenger** on the ATV— always, usually, sometimes, or never?

25	3.77%	ALWAYS	1
50	7.53%	USUALLY	2
311	46.84%	SOMETIMES	3
278	41.87%	NEVER	4
		DK	8
		NA	9

43. How often do you ride at **night** — always, usually, sometimes, or never?

2	0.30%	ALWAYS	1
9	1.35%	USUALLY	2
353	53.08%	SOMETIMES	3
301	45.26%	NEVER	4
		DK	8
		NA	9

44. How often do you wear a **helmet** — always, usually, sometimes, or never?

205	30.83%	ALWAYS	1
65	9.77%	USUALLY	2
109	16.39%	SOMETIMES	3
286	43.01%	NEVER	4
		DK	8
		NA	9

45. Do you ever travel for a **weekend or longer trip**, primarily for the purpose of riding your ATV?

189	28.59%	YES	1
472	71.41%	NO	2
		DK	8
		NA	9

46. There are several **kinds of trails or facilities** that ATV riders use, in Maine or elsewhere. I'm going to read you a list of five of them, and I'd like you to tell me which one you think you would like the **best**.

(READ LIST)

418	63.43%	Woods and trails,	1
12	1.82%	gravel pits and play areas,	2
30	4.55%	mud and water,	3
5	0.76%	motocross track and racing, or	4
186	28.22%	old and gravel roads?	5
8	1.21%	DON'T LIKE ANY FACILITIES (VOL.)	7
		DK	8
		NA	9

47. Do you ever ride ATVs on trails that are made specifically for ATVs ?			
269	40.82%	YES	(GO TO Q49) 1
390	59.18%	NO .....	..... 2
		DK.....	(GO TO Q49) 8
		NA	(GO TO Q49) 9
48. Would you like to use trails specifically for ATVs?			
304	77.35%	YES.....	(GO TO Q51) 1
89	22.65%	NO	(GO TO Q54) 2
		DK.....	(GO TO Q54) 8
		NA.....	(GO TO Q54) 9
		INAP .....	..... 0
49. How far away from your home is the closest trail made specifically for ATVs that you ride?			
Is it...			
195	74.14%	20 miles or less, .....	..... 1
38	14.45%	21-50 miles, or .....	..... 2
30	11.41%	more than 50 miles? .....	..... 3
		DK .....	..... 8
		NA .....	..... 9
		INAP .....	..... 0
50. Thinking of the closest trail made for ATVs that you use , in general, how would you rate the trail and any facilities — would you call them excellent, good, fair, or poor ?			
62	23.40%	EXCELLENT .....	..... 1
110	41.51%	GOOD .....	..... 2
76	28.68%	FAIR .....	..... 3
17	6.42%	POOR .....	..... 4
		DK .....	..... 8
		NA .....	..... 9
		INAP .....	..... 0
51. How far would you be likely to travel to use a good trail — would you go at least 50 miles , or is that too far ?			
324	59.12%	WOULD GO AT LEAST 50 MILES .....	..... 1
224	40.88%	50 MILES IS TOO FAR .....	..... 2
		DK .....	..... 8
		NA .....	..... 9
		INAP .....	..... 0
52. In your opinion, how long does a trail system have to be to be adequate for ATV recreation ? <i>N=522, mean=50.67, median=25, mode=20, range=1-2000</i>			
		ENTER # MILES	_____
		DK .....	..... 9998
		NA .....	..... 9999
		INAP .....	..... 0000
53. If you could pick one thing that a good ATV trail or facility should have, what would that be?			
		DESCRIBE: <u>See next page for the frequency distribution</u>	_____
		DK .....	..... 98
		NA .....	..... 99
		INAP .....	..... 00

This page is inserted to display the univariate frequencies for open-ended question Q53. The answer categories were developed from an analysis of the verbatim responses, which were grouped according to their common themes.

56	10.79%	<i>Rest areas, picnic areas</i>
97	18.69%	<i>Signs, markers, directions</i>
28	5.39%	<i>Restrooms</i>
39	7.51%	<i>Smooth trails</i>
29	5.59%	<i>Gasoline</i>
1	0.19%	<i>Like snowmobile trails, maintained like snowmobile trails</i>
40	7.71%	<i>Scenery</i>
49	9.44%	<i>Well-maintained (branches trimmed, etc.)</i>
13	2.50%	<i>Easy access, parking</i>
28	5.39%	<i>Width, wide trails</i>
9	1.73%	<i>Snack bar</i>
3	0.58%	<i>Speed limit</i>
27	5.20%	<i>Different, varied terrain</i>
11	2.12%	<i>Bridges, bridge maintenance</i>
89	17.14%	<i>Other, not elsewhere classified</i>

54. And finally, just a few questions to make sure our sample is representative. How many people live in your household? <i>N=666, mean=3.05, range=1-10</i>		
ENTER #	.....	_____
DK	.....	98
NA	.....	99
55. How many of them are aged 18 and over ? <i>N=666, mean=2.18, range=1-5</i>		
ENTER #	.....	_____
DK	.....	98
NA	.....	99
56. In what year were you born ? <i>N=662, median=1955 (age 46), range=1911-1987</i>		
ENTER YEAR	.....	_____
DK	.....	9998
NA	.....	9999
57. Do you belong to an ATV club ?		
78	11.71% YES	1
588	88.29% NO	2
	DK	8
	NA	9

EXIT: Thank you. Those are all the questions I have. We really appreciate your taking the time to help us with this research project.

Recorded, but not asked of respondent:

Respondent's gender
582 86.74% Male
89 13.26% Female

APPENDIX 4: INTERVIEWER MANUAL

Survey of Gasoline Use among Users of ATVs, Snowmobiles, and Boats

Margaret Chase Smith Center for Public Policy
University of Maine

A study conducted for the
Maine State Legislature
Commission to Study Equity in the Distribution of Gas Tax Revenues
Attributable to Snowmobiles, All-Terrain Vehicles, and Watercraft

April 200

INTERVIEWER MANUAL
Survey of Gasoline Use among Users of ATVs, Snowmobiles, and Boats
Margaret Chase Smith Center for Public Policy
University of Maine
April 2001

Introduction to the study

Background and purpose of the study

This study is being conducted by the Margaret Chase Smith Center for Public Policy of the University of Maine at the request of the Maine Legislature's Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft. The Commission was created by the Legislature with a charge to collect and analyze information to determine an equitable distribution of gas tax revenues which are used in the enforcement and enhancement of programs supporting off-road vehicle use in Maine.

The tax on gasoline imposed by the State of Maine, \$.22 per gallon, is used to support transportation infrastructure (highways, roads, trails, marinas, etc.) in Maine. It is to be allocated fairly among on-road vehicles (cars, trucks), and off-road vehicles (ATVs, snowmobiles, and boats), according to the proportion of the tax that is paid by the operators of those vehicles. The State of Maine knows how much money is collected from the tax for all gasoline sales, but no one really knows how much of the tax is paid by the off-road operators. We are trying to find out. Starting with ATVs, we are conducting a study to estimate the total number of gallons of gasoline used by all the ATVs, snowmobiles, and boats in Maine.

We expect to interview snowmobile operators shortly after the ATV interviews are completed, and to interview boat operators at the end of the boating season in the fall.

Your role

Because we don't have the time or money to ask everyone, we have drawn a large random sample of registered ATVs from Department of Conservation records. You, as interviewers, will call the owners of those ATVs to interview them by telephone. You will use a structured questionnaire, called a survey instrument, to ask the questions and record the answers.

Sponsors

The study is a cooperative agreement among the University of Maine and the State of Maine Departments of Conservation, Inland Fisheries and Wildlife, Transportation, and Marine Resources. A cooperative agreement is a contract among the sponsors that recognizes that the University (in this case, the Margaret Chase Smith Center) and the state departments involved have a common interest in some research that will benefit them all. In this case, the state Departments and the Commission will use the results of the research to answer their public policy questions, and the Margaret Chase Smith Center will have an opportunity to participate with the Commission and learn more about transportation tax allocation policies and about gasoline consumption by those vehicles.

The Margaret Chase Smith Center for Public Policy

The Margaret Chase Smith Center for Public Policy (MCSC) is a neutral, nonpartisan research unit of the University of Maine, reporting to the Vice President for Research. It is supported by a combination of University funds, and research grants and contracts from government agencies,

foundations, and nonprofit organizations. It does research in the areas of environmental policy, health policy, economic and community development, and civic and community life. It publishes *The Maine Policy Review*, a peer-reviewed journal about critical public policy issues in Maine. The Center's mission is to improve the quality of public dialogue about state, regional, and national policy.

Your role as interviewer

The only acceptable role for an interviewer is that of a professional researcher. To depart from this role may introduce bias and compromise research objectives. You may not attempt to counsel a respondent or sell any goods or services to a respondent or enter into any but a professional interviewing relationship with a respondent. You must never ask for advice, counseling, or goods or services from a respondent or in any way exploit the research situation for personal advantage.

The careful respondent protection procedures observed by the Margaret Chase Smith Center for Public Policy will be undermined if you do not maintain professional ethical standards of confidentiality regarding what you learn from or about respondents. All information obtained during the course of the research that concerns respondents, their families, or the organizations they represent is privileged information, whether it relates to the interview itself or is extraneous information learned by interviewers during the performance of their work.

Because this is a random sample of public records, you may encounter persons whose names you recognize. You are to treat them as any respondent whom you do not know. You may not disclose the identity of the respondents with whom you speak.

You may discuss situations you encounter with other interviewers and with staff to help us all become better interviewers. When you have those discussions, be sure not to reveal details that would allow identification, or even speculation, about the identity of individual respondents. In processing the data, we will remove and destroy the identifying coversheets as soon as we are through with them.

You will be asked to sign a confidentiality agreement as a condition of your working as an interviewer. A copy of that agreement is included in your manual.

Confidentiality Agreement Statement of Professional Standards

The Margaret Chase Smith Center for Public Policy and the interviewers share the responsibility for maintaining high professional standards.

As professional researchers, all interviewers must agree:

4. Never to attempt to bias respondents' answers by introducing their own beliefs or opinions or by implying that any response is more acceptable than another;
5. To record respondents' responses clearly, accurately, and thoroughly;
3. Never to use the interview situation for personal advice, counseling, or commercial purposes;
4. To take all necessary precautions to keep information confidential;
5. Not to provide any referral, advice, or counseling to any respondents except as instructed in the study procedures and protocols;
6. To inform respondents honestly of the study purposes and of the voluntary nature of responding;
7. To refrain from discussing the information obtained, including information about individual respondents, and information about overall study findings;
8. To avoid any discussion of who has and who has not responded to a study;
9. To represent the Margaret Chase Smith Center for Public Policy and the University of Maine in a professional and responsible manner.

The research staff members of the Margaret Chase Smith Center for Public Policy in turn, must agree:

1. To maintain the confidentiality of all information given us by interviewers and respondents;
2. To protect the rights of human subjects in study design and implementation;
3. To report all data in a manner that prevents identification of individual respondents.
4. To include interviewers as full partners in our research efforts, and to provide them with the skills and information they need to conduct their interviews in a responsible and professional manner.

I, _____, as an interviewer with the Margaret Chase Smith Center for Public Policy agree to maintain, in accordance with all the provisions stated above, high professional standards and to protect the rights of human subjects in all work that I do with the Margaret Chase Smith Center for Public Policy.

I, _____, as a professional researcher with the Margaret Chase Smith Center for Public Policy, agree to maintain, in accordance with all the provisions stated above, high professional standards and to protect the rights of human subjects in all our research.

Interviewer

Date

Project staff member

Date

Off-road Vehicle Gasoline Use Study Staff

At the Margaret Chase Smith Center for Public Policy

Jonathan Rubin, Ph.D., Principal Investigator, 1-1528

Suzanne Hart, Research Associate, 1-1631

Charlie Morris, Research Associate, 1-4135

Chris Boynton, Project Assistant, 1-1648

Eva McLaughlin, Administrative Associate, 1-1646

At the Maine Legislature's Office of Policy and Legal Analysis

Patrick Norton, Project liaison, 287-1670

Interviewers ATV and Snowmobile Surveys

<i>Name</i>	<i>Telephone</i>	<i>E-mail</i>	<i>Interviewer #</i>
XXX	XXX	XXX	1
XXX	XXX	XXX	2
XXX	XXX	XXX	3
XXX	XXX	XXX	4
XXX	XXX	XXX	5
XXX	XXX	XXX	6
XXX	XXX		7
XXX	XXX	XXX	8
XXX	XXX		9
XXX	XXX	XXX	10
XXX	XXX	XXX	11
XXX	XXX	XXX	12
XXX	XXX	XXX	13
XXX	XXX	XXX	14

Emergency numbers at the University of Maine

You are in **Coburn Hall**.

Public Safety

EMERGENCY ONLY 911

Other business, Dispatcher 1-4040 or 311

Survey project supervisor, based in Room 22 (“the library”), Coburn Hall, x 1-3661.

Using the ATV Gasoline Use survey instrument

Reading the questions. Read the questions in the **numerical order** in which they are written, unless a **GO TO** instruction is associated with the particular answer given by the respondent. When there is a **GO TO** associated with the answer the respondent gave you, record the response and follow the instruction by skipping to the question indicated.

Read to the respondent the question text material in **regular upper and lower case** as it is written. Text in **UPPER CASE** is for your use as the interviewer, and it is not to be read to the respondent. It provides instructions, information, and summaries of expected possible answers.

Emphasize words in **bold** when you read the questions. The placing of emphasis helps to make administration of the questions uniform among all the interviewers.

Another section of this manual describes good interviewing techniques for reading the questions and dealing with respondents' questions of you.

Recording the answers. There are two columns on each page of the survey instrument. The questions and instructions are contained in the larger, left column. The right column is the **coding strip**, where you will record most of the answers by circling a code number or entering the digits of a numerical response. In some questions, you will record the respondent's answers in cells in a **table**. In those cases, the vertical line separating the coding strip and the body of the questionnaire is discontinued in the area of the table. When we enter the data into the computer, we will read it from the coding strip and the tables.

Some common abbreviations and terms used throughout the survey instrument

R = Respondent.

IW = Interview.

IWER = You. (Interviewer.)

DK = Don't Know. This means that the respondent says s/he doesn't know, even after you read the question again, and probe in a neutral fashion for an answer.

NA = Not Ascertained. This usually means that the respondent refused to give an answer, even though s/he may know what the answer should be. This response is rarely used. It is distinctly different from "Don't know." Respondents always have the right to decline to answer any questions they do not want to answer. NA is also used in the rare instances in which data are missing because of error in administration of the instrument or in processing.

INAP = Inappropriate. This means that the GO TO instructions have directed you to skip this question, based on a response or responses to earlier question(s). It does NOT mean that you or the respondent thought the question didn't apply. When you skip just one or two questions because of a GO TO, you can circle the code for INAP in the coding strip in the questions you skipped, or you can leave that for the editor/coder to do later. The editor will check for appropriate use of INAP codes.

VOL = An answer that we anticipate may be given by a few respondents, but which is not among the responses to be read to R.

EX = Example.

CODE = The number that you circle associated with the given response.

Q = Question.

ID = A unique number assigned to each sample member (respondents and nonrespondents).

General interviewing skills

Your job as an interviewer is to:

1. Be neutral.
2. Be accurate.
3. Help the respondent be accurate.
4. Be efficient.

How to be a good interviewer

Be accurate: Asking the questions

- Read the questions exactly as they are written.
- Read the entire question, and the answer choices if they are in upper/lower case.
- Ask the questions without explanation unless the respondent asks. If you need to clarify, do these, in order:
 - Restate for clarification.
 - Use emphasis to clarify.
 - Use the information in the QxQs.
 - Tell R “Whatever it means to you.”
- Use a steady pace.
- Speak clearly. Do not chew gum or eat while you are interviewing.

Be accurate: Recording the answers

- Circle the number of the response neatly and completely in the coding strip or table.
- Do not allow your circles to run over onto other adjacent codes.
- Write numbers and letters neatly.
- Make any numbers you write clear and simple: remember your First Grade teacher.
- If you abbreviate, use commonly accepted abbreviations, not your own inventions.
- In calculating gallons, be sure to show all your work in the spaces provided.
- Use your calculator carefully. Make sure your answers make sense.

Be neutral

- By your professional manner you will reinforce the neutral nature of this research project.
- A professional manner will reassure R that answers are kept confidential.
- Do not interject your own opinions and reactions, verbally or non-verbally.
- Give appropriate feedback and reinforcement for the task, not the content of the answers.
- Do not volunteer too much information about the study or about any particular question.
- Reinforce the respondent’s responding, not the responses themselves.
- Record most answers without comment. See the page with good and bad feedback for examples.

Help the respondent be accurate

- “I don’t know” is usually just a time-filler. Out wait it.
- Don’t take DK for an answer without an attempt to probe for a response.
- If you think R didn’t understand the question, read it again.
- For numbers, if R gives a range and you need one number, probe: “Which is closest?” “What’s your best estimate?” It’s OK to say “I can’t put a range here — what’s your best estimate?”
- Silence on your part is a great probe. It’s perfectly neutral. It lets R think, and R will feel compelled to fill the void.
- In calculating the amount of gasoline used, it’s OK to start with one method of calculating and abandon it to start another.

Be efficient

- Know the interview script well.
- As you dial the phone, be ready to do the interview
- Focus on the interview and the business at hand. Model good interview performance for the respondent.
- Be pleasant, but not overly friendly or familiar.
- Provide appropriate feedback that rewards Rs for staying on task. Say thank you, emphasize the usefulness of the information.
- Discourage digression and long-winded or argumentative, hair-splitting answers: “I don’t want to take up too much of your time tonight.” Or, “Let me make a note of that.” OR simply don’t comment. Wait one second, enough to show that you are not going to comment, and then read the next question.
- Record the call disposition and fill in the interviewer’s record quickly and accurately right after you finish the call.
- Move quickly and smoothly from one call to another.

Feedback Phrases for Acceptable Respondent Behavior

Good Feedback.....Use this!

Short

I see....
Uh-huh/Um-hmm.
Uh-huh/Um-hmm, I see.
Thank you.
Thanks.

Long

That's useful/helpful information.
It's useful to get your ideas/report/recollection on this.
Thanks, it's important to get your ideas/report/recollection on that.
I see, that's helpful to know.
It's important to find out what people say about this.
That's useful for our research.

Iwer task-related comments

Let me get that down.
I need to get that all down.
I want to make sure I have that right: (REPEAT ANSWER).
We may have touched on this before, but I need to ask every question in the order that it appears on the questionnaire.

Bad feedback. DO NOT USE!

Great!	I don't like that, either.
Okay.	Good.
Right.	Excellent.
Right on.	Cool.
Me too.	Way cool.
I'll say.	Ain't it the truth.
You bet.	Awesome!!
I know.	
Good for you/him/her.	
I hear you.	
Oh, yeah.	
No way.	
You're kidding.	
You don't say.	
I know where you're coming from.	
I gotcha.	
I like that, too.	

All-Terrain Vehicle Gasoline Use

Question-by-question explanations and instructions

QxQs

Introduction

Read the introduction as closely as possible to the way it is written. You must include in your introduction:

- Whom you represent—the Margaret Chase Smith Center for Public Policy at the University of Maine
- For whom the study is being done — the Maine Legislature’s Gas Tax Equity Commission, and the Departments of Conservation, Inland Fisheries and Wildlife, Transportation, and Marine Resources. It’s OK to use this shortened form of the Commission name.
- That R’s participation is entirely voluntary.
- That the information from any individual is confidential. No one’s name will be used, and they will not be identified in any way.
- The question: May we proceed?

Do not ask “Is this a good time?” It makes you sound tentative. That gives the respondent a perfect excuse for putting you off, and you or someone else will have to call him/her back later. However, you should be ready to accept reasonable requests for scheduling a call-back (“I’m on my way out the door...” “We’re eating dinner.”) Say — “I see it’s a bad time. I can call you back in about forty-five minutes.” Suggest a definite time for a call back: a time when you know that interviewing will be taking place. You can schedule a call back for another shift even if you won’t be working that shift.

Make sure you get the person to do the interview who knows the most about the ATV. If you need to speak with someone who is not home, find out when he/she will be home and schedule an interview. The person who is actually going to answer the questions must hear the whole introduction.

It is quite likely that some of the people you interview will be teenagers. That’s appropriate if the teenager is the one who knows the most about the vehicle.

What is an ATV?

According to Maine law, an “All-terrain vehicle” is “a motor-driven, off-road, recreational vehicle capable of cross country travel on land, snow, ice, marsh, swampland, or other natural terrain. It includes, but is not limited to, a multi-track, multi-wheel or low-pressure tire vehicle; a motorcycle or related 2-wheel, 3-wheel, or belt-driven vehicle; an amphibious machine; or other means of transportation deriving motive power from a source other than muscle or wind. [It] ... does not include an automobile or motor truck ...; a snowmobile; an airmobile; a construction or logging vehicle used in performance of its common functions; a farm vehicle used for farming purposes; a vehicle used exclusively for emergency, military, law enforcement or fire control

purposes.”

Question-by-question through the instrument

Q1. Enter the time. Use leading zeros if necessary (07:30). Don't worry about a.m./p.m. We'll know that from the ending time you'll enter later.

Q2. We have used current registration lists, but it is possible that the ATV has been sold. If R isn't the literal owner, but is the one who knows the most about the ATV, record the answer with reference to the owner. For example, suppose the registration is in the name of a teenager's father, and the teenager is the one who knows the most about the ATV's gas use. If the ATV is still owned by the father, record 1 for YES and interview the teenager.

Q3. Conduct the interview if the ATV was operated by this R during at least some part of the year.

Q4. Count all ATVs that are reasonably operational and are owned by the household, even if some of them are not currently functioning. Be sure to count the one that you're going to be asking about.

Count both registered and unregistered ATVs.

Count only those ATVs that are currently owned.

Enter the number of ATVs in the blanks in the coding strip.

Q5. Count as people in the household those who live there at least some part of the year. For example, a college student who lives in a dorm most of the year, but who is home for vacations and summers is a member of the household. If R is in doubt about whether to count someone as a member of the household, you should say: "Do you want me to count him?"

We want to know the ages of persons who use ATVs to better understand the characteristics of people who use ATVs, and to help in planning recreational facilities.

In the table, enter the ages of the persons in the household who use the ATVs in the household. Make sure that R knows you don't want or need names.

Q6. If anyone else — outside R's household — uses any of the ATVs, record how many of those people there are. Anyone who doesn't spend some portion of the year living in R's house is not in R's household.

Q7. Count only gasoline-powered boats, not diesel, wind, or muscle-powered. Enter 00 if no one in the household has any gasoline-powered boats.

Q8. Count any reasonably operable snowmobiles. Enter 00 if there are none.

Q9. This question refers to R alone, not to other members of the household. If the answer is exactly a half year — 8 and a half, say — then round to the nearest even year, in this case, 8.

Enter with a leading 0 as 08. If R has been riding exactly one half year, round to the nearest even, and enter 00. If the fraction of a year is less than half, round down; more than half, round up.

If R gives a range, tell him/her you can enter only one number, and ask how many years you should “put down here.”

Q10. From this point, you will be asking about the selected ATV only, until after you get past the gasoline use questions. Read the registration tag number from the label in the blank in the question.

ATVs usually have four wheels if they’re modern ones. Some older ones have three. There are ATVs with six wheels, and modified ones may have treads or tracks instead of wheels. By far, the responses will be three or four. If it has two wheels, it is probably a motorcycle or dirt bike. Record the response and continue with the interview. Note that the response code begin with “2.” We don’t think there are any unicycles out there.

Q11. Read the make from the label and circle the code on the list. If it is a make not on the list, circle the code for “other” and write in the make. If the make differs from the label, use the make that R says the vehicle is. If a vehicle has been modified to include parts of several makes, ask R which make to record.

Q12. Ask for the model and write that in the blank.

Q13. Engine size is measured in cc’s. Engine sizes range from about 90 to 500cc, and are usually in the 240-450cc range. Smaller ones from under 70cc to 90cc are usually meant for children.

Q14. The year is the model year, not the year R acquired it.

Q15. Enter the number of years R has owned the ATV. If R has owned it less than a year, enter the number of months in 15a.

Q16. A 2-stroke engine burns the lubricating oil and gas together. In older machines, you mix the gas and oil by pouring them together in the gas tank. In newer ones, an oil injection system mixes them.

A 4-stroke engine is more like a car. The lubricating oil and the gas are kept separate. Two-stroke engines emit more pollutants than 4-stroke engines.

Q17. Two-wheel-drive has only two wheels that propel the vehicle. Four-wheel drive has all four wheels able to move the vehicle when the driver switches it to 4-wheel drive for more power over rough terrain. Full-time 4-wheel drive is one that is permanently in 4-wheel drive: you can’t use it as a two-wheel drive vehicle.

Q18. An odometer is a mileage meter, as in a car. Note that if there is one and it doesn’t function, circle the VOL response code 7.

Q19. Check the response to Q4 before you ask this one. As you get used to the questionnaire, you'll be alert for the multiple-ATV household and the need to recall the one-vs.-multi-ATV situation. Ask this question only if the household has more than one ATV. If the household has only one ATV, select INAP (INAPPLICABLE) because there are no other ATVs in the household to compare with. In this question we want to know how much this ATV is used relative to others in the household. We may have selected the ATV that is used the least, which will be puzzling to some Rs. Explain that we took a random sample, and that to make the results useful, we really do need to know about that particular machine.

Q20. In Q20 we want to know the ways in which the selected ATV is used. If the ATV is used ONLY for a specific purpose, the other purposes must logically be NEVER. Make sure you read all the type-of-use categories before you accept ONLY as a response. As you read the categories, R may be reminded of some use that s/he didn't think of before. These categories are not mutually exclusive. One could use the ATV in one's job (a), and if one were a farmer, would also indicate a frequency of use in (c).

Q21. The categories are not mutually exclusive. Most people probably ride in more than one type of location.

Designated ATV trails are those that are established exclusively for ATVs, at least in some seasons of the year. They are marked and maintained for use by ATV riders.

Utility and abandoned railroad corridors are popular because they present fairly clear pathways with varying terrain. If the corridors are also designated trails, then both (a) and (b) should contain a frequency of use (OFTEN, SOMETIMES, NEVER).

Public lands owned by the state or town include many types of land that may or may not be marked for ATV use, and may or may not have designated trails.

Private land that is yours or your family's means one's own land — fields and woods, farmland, or one's own backyard.

Private land belonging to someone else is land that may be owned by a neighbor, a paper company, or any other individual or commercial interest. It is not generally illegal to ride on land that belongs to someone else, unless it is posted or you have asked to ride there and been told you cannot.

Q22. Many people take their ATVs on trailers or in the back of pickup trucks to ride them somewhere away from where they are stored. Even taking them a short distance in a truck or on a trailer counts as something other than NEVER.

Q23. From this point until Q41, we will be asking some very specific questions that will help us find out about gasoline usage. Make sure that R is talking about the ATV we selected. Ask all the questions carefully. The answers are crucial to our ability to estimate the overall amount, in gallons, of gasoline used by all the ATVs that we selected for this survey.

In Q23, we want to help R start thinking about buying gasoline. An easy way to do this is to think about the places s/he buys gas.

Q24. We want to be able to compare the gallons of gas bought in-state with those bought out-

of-state. Therefore, we want to know how often the gas for this ATV is bought out-of-state, if ever.

Q25. In this question you explain clearly to R what we want to do in the study. You will be using this language to explain where you're going with the questions. That will help R follow along with you in the interview.

There is a crucial component to Q 25. It is the point at which you ask R if s/he knows how many gallons of gas s/he has used in this ATV in the past year. Because ATVers are often hobbyists who are proud of their machines and enjoy keeping records about them and comparing notes with other hobbyists, it is quite possible that R already knows the number of gallons of gas s/he has used. Many apparently keep a gasoline log. Because R has been alerted to the purpose of the survey by the advance letter, you may be pleasantly surprised by a clear and definitive answer to that question at this point. If so, you may skip all the "calculation" questions on the colored pages, and go directly to Q33 where you will record your impression of the readiness with which R answered the question about the amount of gas used.

If R doesn't know, use the language below "NO OR DK" to assure R that you and s/he will work together to arrive at an estimate. Do not let R go on about having "no idea" because s/he will just reinforce to him/herself that the task is too difficult.

Q26. Respondents do best when we can use their own way of thinking to do tasks that require recall. You will use this question text, and you may have to discuss the task with R by describing the ways he/she can help you do the calculations. It's OK to start with a method and see how far you get, and try something else. Tell R that you will work with him/her to arrive at an answer that sounds right to him/her. If R is unwilling to try to calculate gas use (R actually refuses) then thank R and exit the interview. Make notes on this page about why R doesn't think s/he could arrive at an answer.

Q27-Q32. There are the "calculation" questions. They are the most important part of the interview from the Commission's perspective. It is extremely important that these questions are asked carefully and that the responses are as close as we can possibly come to R's gas use during the past year. In these questions you will help R be as accurate as possible.

The instructions are contained on the pages with the questions. Practice following them until you are very comfortable doing all variations of the calculation.

There are some techniques you can use to help R think carefully and accurately.

--Silence on your part is a very effective probe.

--Letting R get a pencil and paper may help.

--Letting R tell a story out loud about the number of trips taken, or the number of miles ridden may help jog R's memory. While we don't need a travelogue here, some of that apparent digression is actually R thinking out loud. Listen for cues, and try to make the cues concrete. "You usually ride around the neighbor's field on weekends? How often do you have to get gas — every weekend, or less often?" "How far out on a trip can you go before you know that you

need to stop for gas?” “About how many miles is that?”

--If R responds with a range, help him/her arrive at an answer that is one number that you can put in the answer blank in the coding strip. You can say “I need to put just one number here. Do you think it was closer to 50 or to 75, or somewhere in the middle?” If R says “closer to 50,” you can ask “Was it between 50 and 60?” and so forth until you both agree on a number. Do not just enter “50” as the final answer until you have made sure that R has settled on that number.

Make this a puzzle the two of you can solve.

It is very important that you enter the numbers you use in calculations in the blanks. Don’t do all the work of arriving at an estimate and then forget to write it down.

When R agrees that an amount “sounds right,” circle the code 1 in the coding strip and enter in the blanks the number of gallons that represents R’s “final answer.”

For your information — but not to be revealed to R — other studies have shown gas usage around 50 to 75 gallons a year, with some as high as 100 gallons or more for dedicated hobbyists. Riding time often varies from 9 to 12 days per month, and travel may average 500 to 1,000 miles per year for those who ride fairly regularly. Annual driving time in California was around 250 hours, and it is clear that some riders put in many more hours than that. Other studies using various methods have come to quite different conclusions about gas use.

Q33. Be sure to thank R for working through the numbers to get a solution. Remember not to say “Great!” or “Excellent!” or anything that rewards the answer content. Reward the effort and the contribution to the study.

Indicate *in your judgment* how certain R was about the final answer chosen, using the scale of 1 (very certain) to 4 (very uncertain). Do not read this question to R or comment upon it.

In the “comments” space, write any notes that you think will help us analyze the data for this respondent. The notes could include mention that R consulted a log of gas use, or that he asked someone else in the household to help estimate (that’s OK), or that this year was a really unusual one for his ATV riding. It is not required that you put any notes here.

If you recorded the number of miles ridden in Q27b in calculating the gasoline use, and if that method was the one that actually resulted in R’s final answer about gas use, skip to Q36.

Q34. The question is for those who have not already told you how many miles the selected vehicle was ridden in the past year. Use the techniques described above to help R arrive at one figure for an answer. If R really can’t estimate the number of miles, even with some help, continue to Q35 for some ranges that will give an approximation.

Q35. This question format lets you arrive at a range by a method of successive approximations. Follow the arrows. When you come to a dotted line that ends in a code number, circle it, and you’re done.

Q36. In this question, we want to know how far this ATV is ridden at an outing. An outing is a ride from where you start riding the ATV until you return at the end of the trip or arrive at a destination. Do not count the miles that the ATV is tailored to a starting point. A trip of several days may have several outings. We're looking for an average here—that is, an estimate, the usual distance.

Q37. In this question we want to know on how many days this ATV was ridden, whether for a short trip or a long one. Riding around in the yard counts as a ride. Moving it from one side of the garage to make room for the snowblower doesn't count.

Q38. On a single outing (a round trip from the start of the ride to the end), we want to know how many hours at a time it is ridden. An outing is a trip with a beginning point where the ATV ride starts and a destination. Don't count intermediate pit stops as destinations.

Q39. We know that the year and the ATV we are asking about is not necessarily typical of the riding that has been done on this ATV in prior years.

Q40. ATVs can be used year-round, and riding patterns vary greatly. Make sure you and R are talking about the selected ATV. Winter, spring, summer, and fall have common-sense definitions tailored to Maine. Winter starts when the snow comes (late November), and lasts until the snow goes (around the end of March except, apparently, this year). Spring starts when the snow leaves, and ends around Memorial Day. Summer lasts until Labor Day. Fall starts at Labor Day and lasts until the snow arrives.

Q41-58. Starting with Q41, through to the end of the survey instrument, you will be asking about any and all ATV riding that R does on *any* ATV. Heretofore, the emphasis in all the questions was about the *selected* ATV. From here to the end, it's about the Respondent. Be sure you read the lead-in to Q41, and in the questions make sure R understands that now you're talking about any ATV riding that R does.

Q41. "Riding alone" means without a passenger, and without any other riders on their ATVs going along with R as a group. Count all riding that R does, including any commercial purposes, such as R's job.

Q42. R can be the passenger or the driver. The ATV may or may not be equipped for passengers.

Q43. "Night" means during hours of darkness, which shifts with the seasons.

Q44. Helmets are required for ATV riders under 18 years of age.

Q45. We want to know the extent of travel for the primary purpose of riding ATVs. The trips referred to here are longer than day trips. They include at least one overnight stay, which could be camping out, staying in a motel, visiting someone, etc.

Q46. This question contains a list to be read to R. Make sure you read the whole list before you accept a final choice of the one that R would like best. If R picks an answer before you finish the list, you can say “There are a couple more items on the list....,” and continue reading. Make sure you prompt R to pick only the **one** that s/he would like **best**. (You can’t like two things best!) Some R’s will say they don’t care about any facilities. They may use their ATV in their work. Before you accept the DON’T LIKE ANY FACILITIES response, you should probe: “Well, if you had to choose, which would it be?”

Q47. Trails made specifically for ATVs are marked, often mapped, and may have facilities along the trail. Some trails may be maintained by ATV club members. Other kinds of less formal trails may be maintained by ATV enthusiasts who keep them groomed for their own use. Some of the trails may be maintained for mixed use, such as snowmobiles, skiing, hiking, dog walking, etc. Mixed-use trails qualify as those made specifically for ATV use, as long as ATV riding is one of the intended uses.

Note that if R uses ATV trails, you are to skip to Q49.

Q48. Ask this question of Rs who do not use ATV trails.

Q49. Not that the question asks for the distance to an ATV trail **that R rides**, not necessarily the closest trail. Trails can be hundreds of miles long. The question refers to the point of the trail where R usually begins riding.

Q50. If R asks for a definition of the rating terms (“excellent,” etc.), you can say “Whatever it means to you.” Sometimes “in general” also seems to clarify those terms for Rs.

Q51. The travel can include trailering or trucking the ATV, or riding it to a point where R could join a trail. If R says “It depends (on the trail, the facilities, the time R has, etc.),” then the probes “In general,” or “All other things being equal” may clarify for R.

Q52. The probes “In general,” “What do you think?,” “There’s no right or wrong answer here, just let me know what you think” will often clarify the question.

Q53. This is an open-ended question. Encourage R to pick **one thing**, not several. If R begins a long description, you can say “I have just enough space here to write down a couple of words. If you could pick **one thing**, what would it be?” Record the response in the blank provided. We will code the responses later.

Q54-Q58.

These questions are about R. We ask them to make sure that our sample represents all the ATV riders in the state. If necessary, assure R again that we won’t identify him/her in any way. We will put all the answers together from all the people who took part in the survey, and will report only the pooled statistics.

Q54. Count as household members all the people who regularly live there or who call it “home.”

The latter includes for many families (but not all) college students who are away, people in the military, people who are in hospitals or nursing homes. If R has a question about who to include, let R decide who lives there. Note that the question is **not** how many people use ATVs.

Q55. We will use the ages only to get a profile of ATV-owning families. Note that we ask for the number of adults, not the number of children.

Q56. We ask R's year of birth. That is a reliable way to obtain R's age.

Q57. ATV clubs are formal membership organizations formed for the purpose of promoting and enjoying ATV riding. Groups of riders are not clubs unless they have actually formed a formal organization.

THANK YOU. Be sure to tell R when the interview is over, and thank R for taking the time to speak with you.

Do not ask R if s/he wants a copy of the results. However, some may spontaneously mention wanting a copy. You can say that copies of the report can later be obtained from the Legislature's Office of Legal and Policy Analysis when the Commission issues the report. If R wants, you can take down his/her name and address on another piece of paper, not on the coversheet, and we will mail a copy or see that it is mailed by someone else.

The interviewer record

After you finish the interview, fill in the information required on the last page of the survey instrument.

QA. The length of the interview in minutes can be determined from the starting and ending time of the interview, which you should have recorded as you started and ended the interview.

QB. Enter the ID number from the upper left corner of the label on the coversheet.

QC. Enter the three-digit exchange (the first three digits of the local telephone number; e.g., 581) at which the interview was conducted.

QD. The respondent's gender. Note that this is not necessarily the same person whose name appears on the label. For example, the ATV might have been registered to the husband in a family, but the person who knows the most about its gas use is his wife who is the primary rider of the vehicle.

QE. From the coversheet, count the number of times that the phone was dialed to obtain this interview, including the call you just concluded.

QF. Record the number of the month in which the interview was done (April = 04).

QG. Record the date on which the interview was done (April 5th = 05).

QH. Enter your interviewer number.

Don't forget to put a "C" for "Completed" in the Disposition column of the coversheet.

Using the Cover Sheet

The coversheet is a log of all the attempts that have been made to contact and interview each person in the sample. It is also a record of notes that will help you or another interviewer to complete and interview with the person who knows the most about the selected ATV.

Keep the coversheet separate from the rest of the instrument until after you have completed the interview. **When you have finished an interview, staple the coversheet** to the completed instrument, and complete the entries on the coversheet and the interviewer record at the end of the instrument. The supervisor will pick up the completed instruments from you as you finish, or you can take them to the supervisor's desk if you accumulate a pile of them.

Parts of the Coversheet

Information about the respondent. The coversheet has a label in the upper-left corner which has the name of the person you are to contact, his or her address, the make and year of the ATV, the registration (plate) number, a "geocode" which is a standard code for Maine geographic locations, and a randomly-generated identification (ID) number that we will use to keep track of the records in this study. There is also a hand-written telephone number that represents our best attempt to find contact information for this respondent.

If someone has already tried to contact this R, you will find notes made by the interviewer(s) about those attempts, perhaps including good times to call, definite appointments for calls, new phone numbers, and so forth.

Information about the call attempts. Log each call attempt as described below. Use as many lines as you need on the sheet.

Call slot. Call slots are the times at which calls are attempted. By distributing call attempts across varying times of the day and days of the week we maximize the chances of finding someone at home to be interviewed. The supervisor will use the slots to identify work to be done for each shift. The slots are numbered as follows:

- #1. Early evening on a weekday, 5:00-7:00 p.m.
- #2. Late evening on a weekday, 7:00-9:00 p.m.
- #3. Saturday, 9:00 a.m.-1:00 p.m.
- #4. Saturday, 1:00-5:00 p.m.
- #5. Sunday, 1:00-5:00 p.m.
- #6. Sunday, 5:00-9:00 p.m.
- #7. Monday--Friday, daytime (before 5:00 p.m.)
- #8. Additional call in any time slot (used only at direction of supervisor).

Day of the week. Enter the abbreviation of the day of the week on which the call was dialed.

Date. Enter the month and day: 4/5 for April 5th.

Time. Enter the time of day that the call was made. Indicate a.m. or p.m.

Notes. Use this field to make notes about anything that will allow you, another interviewer, and the supervisors to know when and how to reach R. If R says “call back at 7:30,” then write that in the notes. Other kinds of notes may be “Saturdays are not good,” or “R very interested, hard to catch. Works nights.”

If R refuses, write why in the notes.

Ignore the “Phone #” note on the first line. The initial phone numbers are written at the top of the page.

Disposition (Disp.) code. These codes tell what the outcome (“disposition”) was for each call attempted. Use the codes described below, and make notes to explain further if that will clarify the situation for the next interviewer.

- C** A completed interview. The best!
- Ref** A final refusal. Not to be confused with a situation in which R is busy right now, and we will call back later. In the notes, explain why R refused.
- NA** No answer. (Let telephone ring 10 or more times.)
- CB** Respondent says Call Back at a specific time, or is busy now and will probably do the interview later. Try to arrange a specific time to call back. In your notes, indicate the appointment time (“Call back at 7:30 Thursday”; “Try later this evening (Monday)”; “Call next Sunday after 3:00 p.m.”).
- BZ** Phone line (not the respondent!) is busy. Try again in about fifteen minutes. Someone’s home, and that’s a good chance to get a “C.”
- Mach** Answering machine. The first time you reach a machine or voice mail, do not leave a message. Try again later. After the first time, leave a message: “This is (IWER FIRST NAME) calling from the University of Maine to do a research interview about gas use in your ATV. Sorry we missed you. We’ll try again later.”
- DISC** Got a recorded phone company message. Try again in a day or so. If a new number is given, record it in the notes and try that number.
- NIS** Not in service. May mean that there is trouble in the phone line. Try again that day or the next.
- WR#** Wrong number. Try to get the correct one or any clues to it, if you can. Make sure you dialed correctly. In some cases, you will get a recording that the number has been changed to a new number, which the recording then gives you. If you get a Fax machine (long piercing tone), note that and try again soon. A one-line phone may have been switched to the Fax position.
- DA** Dead air. Nothing happens. Try again right off, and then in a few minutes.

Iwer #. Put your interviewer number on the log.

Information about processing the data. At the top of the page are some items that indicate steps in data processing. As an interviewer, you don't need to pay attention to these. However, we may ask some of you to help with these tasks. "Logged" means that the case has been checked of as having a final disposition in the project master log. "Edited" means that someone has checked the completed instrument for completeness and clarity of the information as it was recorded by the interviewer, the INAP codes have been checked, and that the arithmetic in the gas use section has been checked. "Coded" means that any open-ended ("write-in") answers have been assigned codes. "Entered" means that the data have been entered into the computer, and "Verified" means that the data have been entered twice to assure accuracy.