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Final Report of the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft

December 2001

Members:

Senator Marge Kilkelly, Senate Chair
Senator Kenneth Gagnon
Senator Jill Goldthwait
Senator Richard Kneeland
Senator Christine Savage

Representative Joseph Clark, House Chair
Representative Bruce Bryant
Representative Richard Duncan
Representative Kenneth A. Honey
Representative Gary Wheeler
Penn Estabrook, Dept. of Marine Resources
Dawn Gallagher, Dept. of Conservation
Fred Hurley, Dept. of Inland Fisheries & Wildlife
Elmer Pelletier, Maine Revenue Service
Bruce Van Note, Dept. of Transportation

Staff:

Patrick Norton, Principal Analyst
Office of Policy and Legal Analysis
Maine Legislature
(207) 287-1670

Ad Hoc Members:

The Honorable Richard Ruhlin
The Honorable Judy Paradis
The Honorable Leo Kieffer

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

Over the last 2 years, the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft (the "Commission") held ten meetings in locations throughout the state to receive public input on issues relating to the equitable distribution of gasoline taxes for recreational snowmobiling, boating and all-terrain vehicle use and to study the statewide and regional needs related to those activities. In that time period, the Commission received a wide range of public comment, reviewed a consolidated plan for ensuring public access to Maine waters prepared by the Departments of Conservation, Inland Fisheries and Wildlife and Marine Resources and reviewed and updated a needs assessment for all-terrain vehicles and snowmobile access, maintenance and enforcement. The Commission also contracted with the Margaret Chase Smith Center for Public Policy at the University of Maine to conduct surveys to estimate the amount of gasoline consumed by snowmobiles, all-terrain vehicles and motorboats in Maine. By completing these surveys, Maine became one of only a few states that have used scientific, empirical methods to arrive at an estimate of the amount of gasoline consumed by those off-road recreational users. The Commission also completed a more informal survey of gasoline sales by more than 250 fresh and salt-water marinas throughout the state.

In its December 2000 report to the Legislature, the Commission concluded that snowmobiling, boating and ATV use have all increased significantly over recent years and now constitute a significant and important part of the economies of many regions of the State. Registration data in Maine indicates that snowmobile registrations have increased by 91% since 1971 (an average of 2.8% per year), that ATV's registrations have increased by 70% since 1985 (an average of 4.7% per year) and that watercraft registrations have increased by 10% since 1976 (an average of 0.28% per year).[1]

Because Maine has positioned itself well to be competitive with other states and Canada in these outdoor recreational opportunities, the Commission continues to feel that these opportunities offer a substantial economic development opportunity for Maine, particularly in the more rural parts of the State. The regional importance in the growth of these recreational activities, particularly snowmobiling, is substantial and very significant. In spite of their economic significance and the opportunities they offer to those regional economies, the Commission has found that State programs designed to develop and enhance those outdoor recreational opportunities are not meeting current needs and must be enhanced if the State is to improve its competitive position as a destination state for summer and winter outdoor recreational opportunities. Additional information collected by the Commission during its work this year reinforces the fact that revenues projected to be available for those programs in future years

[1] Rate of increase calculated by the Margaret Chase Smith Center for Public Policy based on historical registration data provided by the Department of Inland Fisheries and Wildlife.

will fall far short of what is needed for the State to maintain the existing physical infrastructure, acquire or construct new trails or access sites, provide critical safety education materials and provide adequate law enforcement. Passage in November of 2001 of a $2.9 million General Fund bond issue for bridge improvements related to snowmobile and fishing access improvements, initially recommended by this Committee, will help in a few high priority areas. However, all evidence indicates that without new sources of funding the financial needs of those programs will continue to exceed available funding.

The Commission presents the following unanimous, majority and minority findings and recommendations.[2] Legislation to implement these recommendations is attached as Appendix C.

FINDINGS

Unanimous Finding 1. The surveys conducted for the Commission by the Margaret Chase Smith Center for Public Policy show that gasoline use by recreational snowmobilers, all-terrain vehicle users and boaters is generating approximately $1.1 million per year more in gasoline tax revenues than is being allocated to the state agencies that support those outdoor recreational opportunities and that help protect the public safety and the state's natural resources by enforcing the laws regulating the use of those vehicles. The Commission stands squarely behind the statistical analysis used in these surveys, but wishes to emphasize the point that these survey estimates can be viewed as minimum estimates, since the availability of reliable data on gasoline consumption in Maine by out-of-state residents is limited.[3]

Unanimous Finding 2. The Commission unanimously finds that data collection efforts similar to the surveys undertaken during this study must be repeated on a periodic basis in order to better estimate the amount of gasoline consumed by off-road recreational vehicles, the trends in the use of those vehicles and to

[2] Members present and voting on these recommendations on December 17, 2001 were Senator Kilkelly, Senator Goldthwait, Senator Savage, Senator Kneeland, Representative Honey, Representative Bryant, Dawn Gallagher (DOC), Bruce Van Note (MDOT), Fred Hurley (DIFW), Penn Estabrook (DMR), Elmer Pelletier (MRS). Representative Clark attended most of the meeting, but was not present when the votes were taken. He subsequently indicated his support for the unanimous and majority findings and recommendations. Representative Duncan also subsequently indicated his support for the majority findings and recommendations. Members supporting the minority findings and recommendations are Senator Savage and Mr. Van Note.

[3] For example, the boating survey did not include any estimate of gasoline consumed by boats that are not registered in Maine, since there was no affordable way to collect that data, and the snowmobile survey did not include gasoline consumed by snowmobiles registered in NH and operating in Maine. The Commission received preliminary data from the Maine Department of Environmental Protection on the number of boats being trailered into Maine, but concluded that this data cannot be used in its current form as a basis for estimating gasoline use by out-of state boats.

provide for the subsequent reallocation of gasoline taxes accordingly in a manner that provides equity in the distribution of those gasoline taxes.[4]

Majority Finding 1. A majority of the Commission finds that the existing distribution of gas tax revenues for snowmobiles, all-terrain vehicles and motorboats represents an inequitable use of gasoline tax revenues.

Minority Finding 1. Regarding the question of equity, the minority respectfully finds as follows:

A. On a policy level, it is not inherently unfair to not allocate some of the gas tax revenues generated by off-road recreational vehicles to state off-road recreational programs given:

(1) The high priority consistently given to transportation funding by the Legislature, the Executive, and Maine's voters;

(2) The chronic inability of the Highway Fund alone to adequately fund Maine's transportation needs;

(3) The benefits that good highways and bridges generate to the off-road recreation industries; and

(4) The damage caused by some off-road recreational vehicles to transportation infrastructure including shoulders to roads and rail lines.

B. The minority agrees that the statistical analysis behind the surveys is valid and that the survey methodology was the best method of data collection practicable. However, the minority also finds that the nature of the surveys (phone surveys requesting recollection of the amount of gasoline used for recreation some time ago) inherently raises potential data quality concerns.

Minority Finding 2. Though the minority generally agrees with the concept of periodic study, the minority finds that the potential benefits of further study (more recent and better data) must be balanced against the cost of further study in terms of time and money. This 2-year study, for example, cost at least $82,000. in direct costs.[5] The minority also finds studies should be conducted by the affected agencies and that the trigger for further study should be tied to easily measurable increases in off-road vehicle use, as opposed to an inflexible rule that requires study every set number of years. The minority also finds that, upon

[4] The Department of Transportation supports this finding in concept, but address this issue more specifically in the minority findings and recommendations.

[5] The direct costs include the $72,515 cost of the Cooperative Agreement (see Appendix L) plus the $10,100 appropriated for the per diem and expenses of Commission members. Not included in this estimate are the indirect costs associated with this study, such as the time and travel expenses incurred by several departments over the course of the study.

the completion of future studies, the Legislature should reallocate gas tax revenues generated by off-road recreational vehicle use, and only after full evaluation of the survey results by all interested parties.

Minority Finding 3. The minority finds that the needs of off-road recreational vehicle programs, though real, must be evaluated in the context of the adequacy of funding for transportation from the Highway Fund. Historically, the Highway Fund revenues have been flat when compared to General Fund. In 1975, the Highway Fund constituted about 25% of state revenues; today it is a little over 10%. In fact, the Highway Fund has not even kept pace with inflation.

Insufficient Highway Fund revenues have caused an aging transportation infrastructure.

- Even with recent gains in highway reconstruction – realized largely with General Fund help - we are still rebuilding at only two thirds of 1970's levels.

- About ½ of the 3,488 miles of Major Collector highways are substandard, meaning no significant reconstruction effort has occurred for over 50 years. About ¾ of the 2,227 of Minor Collector highways are substandard. This means that at current program levels, it will take about 34 years to reconstruct the Major Collectors and about 67 years to reconstruct the Minor Collectors.

- Each year Maine DOT must post weight limits on roughly 2,000 miles of roads to prevent their destruction, hurting industries like forest products, manufactured housing and agriculture.

- Only 73 % of Maine's bridges meet sufficiency standards - a decline from 78 % a decade ago.

Looking forward, Highway Fund structural gaps will continue to be substantial. A December 14, 2001 report by the Legislature's Office of Fiscal and Program Review estimates the Highway Fund shortfall for FY 2004-05 at $70-90 Million. Given projected shortfalls in the General Fund, General Fund infusions for highways and bridges – a primary method of filling gaps in the 1990's - will be difficult to maintain. In sum, Highway Fund revenues must continue to be used for transportation to the maximum extent possible.

RECOMMENDATIONS

Unanimous recommendation 1*. The Commission unanimously recommends that the Department of Conservation and the Department of Inland Fisheries and Wildlife shall jointly update every five years the boating, ATV and snowmobile strategic plans and needs assessments included in the Commission's report to*

the Legislature in December 2000 and that those Departments jointly submit that report to the joint standing committees of the Legislature having jurisdiction over recreational boating, snowmobile, all-terrain vehicle programs and transportation matters.

***Unanimous recommendation 2**. The Commission unanimously recommends that the Department of Inland Fisheries and Wildlife shall ensure that their off-road vehicle registration processes include the electronic storage of all registration information collected, including telephone numbers, in a format that is easily retrievable for the purpose of facilitating survey procedures designed to estimate gasoline consumption by those vehicles.*

***Unanimous recommendation 3.** The Commission unanimously recommends that the Department of Inland Fisheries and Wildlife shall ensure that, beginning in calendar year 2003, the name, address and telephone number of each out-of-state motorboat owner is collected at the time that person, or that person's agent, purchases a "lake and river protection sticker" and that the information is stored in an electronic format that, among other uses, is easily retrievable for the purpose of facilitating survey procedures designed to estimate gasoline consumption by those vehicles.*

***Unanimous recommendation 4.** The Commission unanimously recommends that the Department of Transportation consider evaluating and quantifying the infrastructure maintenance and repair costs attributable to snowmobile or all-terrain vehicle use along roadsides and on rail-beds and report those costs whenever appropriate to the joint standing committees of the legislature having jurisdiction over inland fisheries and wildlife and transportation matters. In addition, the Commission recommends that the Department of Conservation consider evaluating and quantifying similar infrastructure cost issues raised by the use of those recreational vehicles on privately owned lands, including power lines and pipelines, and to report on any findings to the joint standing committee having jurisdiction over inland fisheries and wildlife whenever appropriate.*

***Majority recommendation 1**. A majority of the Commission recommends that the laws governing the distribution of gasoline taxes to snowmobile, all-terrain vehicle and boating programs be amended to:*[6]

> *A. Create a more equitable distribution of gas tax distributions by immediately including in those distributions 50% of the $1.1 million dollars per year which are being paid by those off-road recreational users but that are not currently being returned to those programs;*

[6] The specifics of how the dollars would be distributed under this recommendation are shown in Table 1 (page 25).

B. Provide a mechanism by which the remaining 50% of those unreturned gas taxes be returned to those users at a time when the Highway Fund experiences some additional growth in total revenues;

C. Repeal the annual $2 million "cap" on allocations of gasoline tax revenues to the Boating Facilities Fund for watercraft programs; and

D. Ensure that the process for distributing gasoline taxes result in those revenues being distributed equitably among the appropriate state agencies.

Majority recommendation 2. *A majority of the Commission recommends that the existing statute requiring the Department of Conservation to conduct a survey of fuel consumption by motorboats be repealed and replaced with a law requiring the Departments of Conservation, Transportation, Marine Resources and Inland Fisheries and Wildlife to jointly conduct surveys, beginning in 2004 and every three years thereafter, to determine the number of gallons of gasoline consumed in Maine by recreational users of snowmobiles, all-terrain vehicles and motorboats;*

Majority Recommendation 3. *A majority of the Commission recommends that the process for distributing gasoline taxes among the appropriate agencies for off-road recreational vehicle programs provide for continued equity over time by directing the State Controller to adjust those distributions based on the percentages of gasoline taxes paid by those users as determined by the surveys required under Majority Recommendation 2.*

Minority Recommendation 1. The minority recommends that any additional funding for off-road recreational programs from the Highway Fund be expressly conditioned upon the passage of legislation that raises new, substantial, on-going, and dedicated revenue to the Highway Fund [7]. In simplest terms, this condition is that the Highway Fund pie must grow on an on-going basis, not just the slice of it going towards off-road recreational programs. Once this condition is met, the minority recommends that the laws governing the distribution of gasoline taxes to motorboat, snowmobile, all-terrain vehicle and programs be amended as follows.

A. Increase gas tax funding for off-road recreational programs by 37% - an increase of about $ 1.1 million dollars per year – and provide statutory caps to funding as follows: [8]

[7] The minority does not intend to specify the nature of the legislation. Legislation meeting this condition is currently available to the 2nd Regular Session of the 120th Legislature. That legislation is LD 2020, An Act to Promote the Fiscal Sustainability of the Highway Fund, commonly known as fuel tax indexing. If passed in its current form, LD 2020's effective date would be July 1, 2003.

[8] More detail on how the dollars would be distributed under this recommendation are shown in Table 2 (page 26)

Vehicle Type	Dollar Increase	% Increase	Cap
Motorboats	$ 257,000	13%	$ 2,200,000
Snowmobiles	$ 642,000	67%	$ 1,600,000
ATV's:	$ 185,000	287%	$ 250,000
TOTALS	$1,084,000		$ 4,050,000

B. Dedicate at least half of all funds going to ATV programs to law enforcement aimed at reducing damage to roads, rail beds, utility corridors, and other private property. Otherwise, the minority defers to the majority to determine how to divide the funds allocated to each vehicle type between agencies and programs.

C. Increase the statutory "cap" on annual allocations of gasoline tax revenues for watercraft programs to $ 2.2 million, and place a cap on snowmobile funding of $ 1.6 million and a cap on ATV funding of $250,000.

Minority Recommendation 2. *The minority agrees with Majority Recommendation 2 in that the existing statute requiring the Department of Conservation to conduct a survey of fuel consumption by motorboats should be repealed. However, the minority recommends that it be replaced with a requirement that new surveys and related study be conducted on a vehicle type by vehicle type basis and only when on the number of that off-road recreational vehicle type registered in Maine increases by 20% over current levels, or within five years, whichever comes first. This means studies of all these vehicle types need not be conducted at the same time. Further, only agencies with affected programs need be involved in the study.*

Minority Recommendation 3. *The minority recommends that the Legislature should retain control of reallocation of gas tax revenues generated by off-road recreational vehicle use, and that any change in allocations or statutory caps be implemented through the legislative process.*

PURPOSE OF THE COMMISSION

The Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft was originally established by the 119th Legislature in Resolves of 1999, chapter 131, and was continued by the 120th Legislature in Resolves of 2001, chapter 68. A copy of Resolves of 2001, chapter 68 is attached as Appendix A. In both years, the Commission was comprised of five appointed members of the House of Representatives, five appointed members of the Senate and five Executive Branch appointees representing the departments of Transportation, Conservation, Inland Fisheries and Wildlife, Marine Resources and the Maine Revenue Service. Three Legislative appointees from the 119th Legislature did not return to Legislative service in the 120th Legislature, but were offered the opportunity to continue their service on the Commission as nonvoting ad hoc members.[9] A copy of the membership of the Commission in 2001 is attached as Appendix B.

The purpose and duties of the Commission as set forth in Resolves of 2001, chapter 68, were to:

1. *Oversee the surveys of gasoline consumption by all-terrain vehicles, snowmobiles and watercraft undertaken by the Margaret Chase Smith Center for Public Policy at the University of Maine pursuant to a cooperative agreement between the University and the Department of Conservation, the Department of Inland Fisheries and Wildlife, the Department of Marine Resources and the Department of Transportation as provided in a contract among those entities signed in November 2000. That oversight must include regular meetings during 2001 with the University and interested parties to assist in the development of the surveys and to review and discuss the results of each survey;*

2. *Seek input from the public; from organizations representing snowmobile, all-terrain vehicle and watercraft users, including the Maine Snowmobile Association, groups representing all-terrain vehicle users and the Maine Marine Trade Association; and from any other interested individuals or organizations. In seeking that input, the commission shall, within its budgeted resources, hold its meetings in geographically diverse locations throughout the State;*

[9] The Legislative members appointed by the 119th Legislature who did not return to Legislative service in the 120th Legislature were former Senator Richard Ruhlin, former Senator Leo Kieffer and former Senator Judy Paradis. Senator Kenneth Gagnon, Senator Richard Kneeland and Senator Christine Savage were appointed by the 120th Legislature to replace those members for the second year of the Commission's study. Resolves of 2001, chapter 68, extended to the three former Senators the opportunity to continue their service on the Commission during the 120th Legislature as nonvoting ad hoc members.

3. *Review and report on any updates or supplemental information prepared by the Department of Inland Fisheries and Wildlife, the Department of Conservation or the Department of Marine Resources pertaining to the strategic boating plan prepared by those agencies pursuant to Resolve 1999, chapter 131; and*

4. *Collect other data and make other recommendations the Commission considers appropriate on the issue of off-road fuel consumption or on any other matter pertaining to off-road recreational vehicle use.*

STUDY PROCESS; MEETINGS, SURVEY RESULTS AND UPDATES TO LAST YEAR'S REPORT

Meetings

The Commission's work during calendar year 2000 was presented to the First Regular Session of the 120th Legislature in its report dated December 2000.[10] This report summarizes the work of the Commission during calendar year 2001, the second year of its 2-year study process.

The Commission held five meetings in 2001; on April 9th, July 26th, August 23rd, November 20th and on December 17th. The purposes of those meetings were to provide policy guidance and general oversight of surveys that were undertaken on behalf of the Commission by the Margaret Chase Smith Center for Public Policy at the University of Maine on gasoline consumption by snowmobiles, all-terrain vehicles and motorboats and to develop policy recommendations for consideration by the Legislature on matters relating to equity in the distribution of gasoline taxes paid by those user groups. [11]

SURVEY RESULTS

In 2001, the Margaret Chase Smith Center for Public Policy completed surveys of all-terrain vehicle users, snowmobilers and boaters on behalf of the Commission for the purpose of estimating the annual gasoline consumed by those users while engaged in those activities.

Table 3 (page 27) presents historical data on allocations of gasoline tax revenue for snowmobile, boating and all-terrain vehicle programs and the estimates of gasoline taxes actually paid by the those user groups as estimated by the

[10] Final Report of the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft. Maine State Legislature. Office of Policy and Legal Analysis. December 2000.

[11] The surveys were undertaken by the Margaret Chase Smith Center for Public Policy at the University of Maine for the Commission pursuant to a state/university cooperative agreement approved by the State's contract review committee on November 19, 2000.

surveys conducted on behalf of the Commission. As can be seen from this table, data from those surveys indicates that gasoline use by recreational snowmobilers, all-terrain vehicle users and boaters is generating at least $1.1 million per year more in gasoline tax revenues than was allocated for those programs in Fiscal Year 2001.

Table 4 (page 28) shows more details about the distributions of gasoline tax revenues to the Departments of Conservation, Inland Fisheries and Wildlife and Marine Resources for All-terrain vehicle, snowmobile and boating programs.

Discussion of survey results

The complete reports for each of those surveys are attached as Appendix D (All-terrain vehicles), Appendix E (Snowmobiles) and Appendix F (motorboats). A summary of the findings in each of those reports is presented below.

In reviewing the results of the gasoline consumption surveys presented here, it is important to keep in mind that all the evidence available to the Commission indicates that off-road recreational vehicle use in Maine will continue to increase substantially in the future. Table 5 (page 29) shows that a basic forecast of the gasoline tax revenues from gasoline sold for off-road recreational use projects those annual revenues to increase by approximately $700,000 by the year 2010.

***All terrain vehicles*[12]**

The report on gasoline consumption by snowmobilers was based on a survey of 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. It is appropriate to use the mean for the calculation of gasoline use because of its statistical properties, however, to describe typical gasoline use the median is also useful. The median for this distribution is 25 gallons.

[12] Estimates for total gasoline consumption and total gasoline taxes paid by ATV users as a group are approximately 9% higher here than in the ATV report prepared by the University of Maine. The difference is a result of updating the number of registered ATVs to reflect the actual total number of ATV's registered in Maine between 7/1/00 and 6/30/01. Since the survey sample was drawn during the spring of 2001, the number of registered ATVs used by UM was based on the number of ATVs registered during only a portion of that program year, from July 2000 to January 2001(*39,643*). The total number of ATVs registered over the entire program year, however, was subsequently determined to be 45,796 ATVs. Updating these totals from 39,643 to 45,796 does not affect the estimate of average consumption per machine, but does proportionally increase the total consumption estimate for all ATVs.

Approximately 96% of all gasoline used in these ATVs was purchased in Maine. Since there were 45,796 registered ATV's between July 1, 2000 and June 30, 2001, this means that the total annual fuel consumed in Maine by Maine registered ATVs, adjusted for out-of-state purchases, was 1,922,841 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 $423,025 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 is 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 $378,422 to $467,687 with the expected (mean) value of $423,025. Total gas tax collections for fiscal year 2001 were $148,187,279 with $64,331 returned to the ATV Recreational Management Fund. Gas tax revenues attributable to Maine registered ATVs therefore represent 0.29% of all State gasoline excise tax receipts. At the same time, the revenues returned to the ATV Recreational Management Fund represent 15.2% of the estimated revenues collected from Maine registered ATVs.

Snowmobiles

The report on gasoline consumption by snowmobilers was based on a survey of snowmobile users whose snowmobiles were registered in the State of Maine during 2000. In June of 2001, telephone interviews were completed with 635 randomly selected Maine resident and nonresident snowmobile owners. The study had a cooperation rate of 82% among persons who were successfully contacted. The survey data show that the operators of registered snowmobiles purchased an average of 87.4 gallons (rounded to the nearest tenth) of gasoline during the most recent one-year period ending in June 2001. It is appropriate to use the mean for the calculation of gasoline use because of its statistical properties, however, to describe typical gasoline use the median is also useful. The median for this distribution is 55.5 gallons.

Since there were 95,334 (in-state and out-of-state) registered snowmobiles this means that the total quantity of fuel purchased in Maine in 2000 by Maine-registered snowmobiles was 8,336,275 gallons.[13] The excise tax on gasoline

[13] The number of registered snowmobiles used here may differ very slightly from the number in the InforMe database. The difference is attributable to cleaning up the data to eliminate duplicate records and to eliminate the seven snow groomers actually registered as snowmobiles.

imposed by the State of Maine is $0.22 per gallon. Therefore, the operator of a Maine-registered snowmobile pays on average $19.24 per year per snowmobile, and operators of all Maine-registered snowmobiles together pay $1,833,981 per year in Maine gasoline fuel excise taxes. This estimate does not include gasoline use by snow groomers, which are included in the snowmobile registration records. Since these data were gathered from a random sample rather than the entire population of all Maine registered snowmobiles, the quantity of average and total fuel purchased 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 of fuel purchases for the population of all resident and nonresident registered snowmobiles will be within the confidence interval. The confidence interval for average fuel purchased in Maine per registered snowmobile ranges from 80.1 to 94.8 gallons per year. The total quantity of tax paid to Maine by operators of Maine-registered snowmobiles falls within the range from $1,679,908 to $1,988,053 with the expected (mean) value of $1,833,981. Total gas tax collections for fiscal year 2001 were $148,187,249 with $886,339 returned to the Department of Conservation's snowmobile trail fund and $71,479 returned to the Department of Inland Fisheries and Wildlife to support snowmobile registration. Gas tax revenues attributable to Maine-registered snowmobiles therefore represent 1.24% of all State gasoline excise tax receipts. At the same time, the revenues returned to support snowmobile programs represent 52.2% of the estimated revenues collected from Maine-registered snowmobiles.

Motorboats

The report on gasoline consumption by boats is based on results of a survey of gasoline powered watercraft users whose watercraft were registered in the State of Maine during 2001. In October of 2001, telephone interviews were completed with 647 randomly selected owners of watercraft registered in Maine. The study had a cooperation rate of 82% among persons who were successfully contacted. The survey data show that the operators of registered watercraft purchased an average of 69.3 gallons of gasoline (rounded to the nearest tenth) in Maine during the most recent one-year period ending in October 2001. It is appropriate to use the mean for the calculation of gasoline use because of its statistical properties, however, to describe typical gasoline use the median is also useful. The median for this distribution is 20 gallons.

Since there were 117,021 watercraft registered in Maine in 2000, this means that the total quantity of gasoline purchased in Maine for Maine-registered watercraft was 8,105,728 gallons in the one-year season ending in October 2001.[14] The excise tax on gasoline imposed by the state of Maine is $0.22 per gallon. Therefore, the operator of a Maine-registered watercraft pays on average $15.24 per year, and operators of all Maine-registered watercraft pay $1,783,260 per

[14] Excludes state and municipally owned motorboats.

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 watercraft, the quantity of average and total fuel purchased 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 of fuel purchases for the population of all Maine-registered watercraft will be within the confidence interval. The confidence interval for average fuel purchased per Maine-registered watercraft ranges from 57.0 to 81.6 gallons per year. This translates into a 95% confidence interval for total gasoline purchased in Maine of 6,665,619 to 9,545,838 gallons per year in the year ending October 2001. The total quantity of gasoline excise sales tax by operators of Maine-registered watercraft ranges from $1,466,436 to $2,100,084 with the expected (mean) value of $1,783,260. Total gas tax collections for fiscal year 2001 were $148,187,249. Gas tax revenues attributable to Maine-registered watercraft therefore represent 1.2% of all State gasoline excise tax receipts. At the same time, the revenues returned to support watercraft programs represent 113.9% of the estimated revenues collected from Maine-registered gasoline powered watercraft. Additional gasoline excise taxes are paid by watercraft used in Maine but registered out-of-state or with the U.S. Coast Guard.

Commission questionnaire to marinas

In its planning for the survey of recreational boaters, the Commission concluded that there was no reasonable and affordable way to obtain a list of addresses for people who use their boat in Maine but who are not required by law to register their boat in Maine. Those boaters include out-of-state residents who keep their boats in Maine for fewer than 60 consecutive days per year and boats documented by the U.S. Coast Guard. The Commission was interested in including that population of recreational boaters in their survey, since anecdotal evidence suggests that a significant number of recreational boating in Maine involves non-residents.

Although there was no method available for the Commission to include those boaters in the survey, the Commission asked the Office of Policy and Legal Analysis to work with the Department of Inland Fisheries and Wildlife and the Department of Marine Resources to develop a list of marinas and to send those marinas a questionnaire inquiring about their gasoline sales to boats. The purpose of the questionnaire was to help the Commission better understand if recreational boats that operate in Maine but that are not registered in Maine are consuming a small, medium or large percent of the total amount of gasoline consumed in Maine by all recreational boaters.

The summary of the responses to that questionnaire, which was mailed to 239 marinas throughout the state, is attached as Appendix G. A brief summary of those responses is presented below.

- Fifty-four percent (130 out of 239) marinas responded to the questionnaire;

- The distribution of marinas (by volume of gasoline sold) is roughly similar for the fresh and salt-water marinas that responded to the survey, although a noticeably larger percentage of fresh-water marinas than salt-water marinas reported sales greater than 25,000 gallons;

- Similar patterns were reported between fresh-water and salt-water respondents with respect to the percentages of gasoline they sell to boats. In both cases, the large majority of the marinas reported selling more than 75% of their gasoline to boaters;

- Perhaps the most noticeable difference between the fresh-water and saltwater respondents, which showed that a large majority (77%) of the fresh-water respondents reported that they sold more than 75% of their gasoline to recreational boaters while a minority (29%) of the salt water respondents reported that more than 75% of their sales were to recreational boaters;

- A larger percentage of salt-water respondents (29%) reported selling more than 75% of their gas to commercial boats than did fresh-water respondents (8%);

- 38% of the fresh-water and 41% of the salt-water respondents reported selling less than 25% of their gasoline to out-of-state boaters;

- Most of the fresh-water and salt-water respondents report selling from 0-25% of their gasoline to documented vessels;

- A large majority of fresh and salt-water respondents reported having an "average" summer with respect to gasoline sales. More fresh-water marinas reported having an "above average" summer and more salt water marinas reported having a "below average" summer. Only one marina

Updates on recommendations from last year's report

Bond issue. In its report of December, 2000, the Commission recommended that the Legislature authorize a General Fund transportation bond issue in the amount of $2.9 million for bridge improvements to fund snowmobile crossing lanes at certain highway bridges and to fund high priority boating and fishing access projects at other bridges scheduled for replacement within the next two years. That recommendation was subsequently adopted by the Legislature and became part of a $61 million General Fund bond issue that was approved by a

majority of the voters in the November 6, 2001, election.[15] The $2.9 million includes $2 million to fund high priority snowmobile crossing projects on bridges in Forks, Bethel, Bingham, Canton and Ashland and $900,000 to fund high priority boating and fishing access opportunities that were identified jointly by an interagency task force comprised of the Departments of Transportation, Conservation, Inland Fisheries and Wildlife and Marine Resources. A list of those projects and their estimated costs, which the Commission endorsed in its December 2000 report, is attached as Appendix H.

Updates to last year's recreational vehicle plans

The Commission's December 2000 report to the Legislature included a comprehensive strategic plan on issues pertaining to public access to Maine waters.[16] This section of our report provides an update to that strategic plan with respect to the current status of the Boating Facilities Fund within the Department of Conservation and an action plan for the fund under various funding level options.

The Boating Facilities Fund

Revenues to the Boating Facilities Fund are derived from gas tax allocations to the Department of Conservation and are capped by law at not more than $2 million annually.[17] Over the past six fiscal years (FY 96 to FY 01) allocations to the boating facilities fund have averaged $1.55 million dollars per year.[18] Over that same time period, however, expenditures from the fund have increased. The fund has been able to continue operating without a deficit by drawing down on its unexpended balances. The cash balance at the beginning of FY 2002 was $1,596,925.[19]

Emerging Issues for the Boating Facilities Fund

- At projected funding levels, the Boating Facilities Fund cannot maintain and renovate existing public access sites and provide new access sites at the pace it has for the last six years, and may not be able to continue to meet the objectives set forth in the 1995 Strategic Plan.

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[15] The $2.9 million for snowmobile crossings and fishing access was part of a $61 million General Fund bond issue which was reported from the Joint Standing Committee on Appropriations and Financial Affairs as LD 1504 and enacted as P&S 2001, chapter 38. The bond referendum appeared as question #3 on the November 6, 2001 ballot and received the support of 74% of the voters in that election.

[16] See: Appendix E. Final Report of the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft. Maine State Legislature. Office of Policy and Legal Analysis. December 2000

[17] See MRSA, Title 36, section 2903-A.

[18] See Table 4 (page 28).

[19] Provided by the Department of Conservation

- Current staffing levels in both the DOC and DIF&W limit the amount of work that can be accomplished, how well the work is done, and how effectively program staff can address issues raised by local residents.

- Without additional funds, the new opportunity presented by the Land for Maine's Future Program's Public Access to Maine Waters Fund to acquire access sites, and access enhancements identified by the Maine Department of Transportation's Public and Recreational Access Committee, cannot be fully realized except at the expense of current activities.

The Department of Conservation projects that the Boating Facilities Fund's cash balance of $1,595,925 (6/30/01) will be reduced to less than $540,000 at the end of FY 2002, and less than $370,000 at the end of FY 2003. This is the minimum cash balance needed at the beginning of each fiscal year to ensure that outstanding encumbrances can be honored and the fixed costs of administering the Boating Facilities Program met while waiting for additional cash to become available through the monthly transfer of gas tax income. This level of cash balance does not provide a reserve for taking advantage of acquisition opportunities that may develop before funds are available, such as through the Lands for Maine's Future Water Access Fund. (The Commission believes that without an increase in funding, monies available for grants, the state acquisition and development of new sites, and the renovation of existing sites will be reduced to about $400,000 per year, a significant reduction from the recent years, when such expenditures exceeded $800,000 annually.

The department projects that, at current funding levels, State programs will continue to renovate, develop, and acquire sites for public access to Maine's waters as expeditiously as possible, guided by the policies of the 1995 strategic plan and assisted wherever possible by leveraged state or federal monies. Because the cash balance of the Boating Facilities Fund is projected to be drawn down, the rate of access enhancements achieved from 1995-2001 cannot be sustained. Further, despite strong public support for accelerated acquisition of sites, current funding will not allow agencies to take full advantage of new opportunities embodied in the Land for Maine's Future's Water Access Fund or identified by Maine Department of Transportations Public and Recreational Access at Water Crossings and Properties Adjacent to Water Committee.

Details on the department's update to the Boating Facilities Fund plan are attached as Appendix I.

Snowmobiles and all-terrain vehicle program updates

The Commission also received an update from the Department of Conservation on changes made to the snowmobile and ATV budget and program priorities since last year. The updated priorities and program funding details presented to

the Commission are attached as Appendix J. The changes noted by the department in those updates are:

- Moving division staffing and maintenance of bureau-owned facilities to the highest priority;

- Reducing the snowmobile capital equipment line due to legislation enacted during the 1st Regular Session of the 120th Legislature which increased resident and nonresident snowmobile registration fees and dedicated that increase towards programs contracted with the department to provide snowmobile trail grooming services; and [20]

- Adding a line item for ATV law enforcement grants to address the rapidly escalating ATV-related complaints about misuse and abuse of private land in Maine. The department is planning to create a grant program to assist local police or county sheriffs to acquire the tools and partially fund the cost of local law-enforcement within communities.

Enforcement updates for Boats, Snowmobiles and ATVs

The Commission's 2001 report contained recommendations for an expanded law enforcement program within the Department of Inland Fisheries and Wildlife, Maine Warden Service. Information obtained since that reports indicates that the 2001 recommendations for expanded programs did not adequately reflect the growing interest all-terrain vehicles and the public concerns associated with such growth. As a result, the Maine Warden Service has provided the Commission with revisions to its original recommendations for an expanded recreational vehicle enforcement program. Those revisions are attached as Appendix K.

In developing these updates, consideration has been made to the seasonal aspects of recreational vehicle use and the public concern associated with the rapid growth of interest in ATV riding. The revised program reflects a substantial increase for ATV enforcement where the current program is minimal and a sustentative increase is necessary to answer the growth and public concerns of the sport. Additional consideration is made to the potential for year round use of ATV's.

The revised program expansion for watercraft and snowmobile enforcement reflects smaller program increases as they are applied on a seasonal basis. The watercraft and snowmobile programs occur in opposite seasons allows for the increase in enforcement effort to be more focused.

In addition to the recommended increase in warden effort, an enforcement grant program for county and municipal law enforcement agencies should be explored.

[20] Public Law of 2001, chapter 254. Derived from LD 1294.

There are approximately 135 such enforcement agencies in the State of Maine. The potential for a subsidized and localized enforcement effort for recreational vehicles could relieve some of the burden for response by the Maine Warden Service.

Methodological issues and future research

Maine is one of few states that have attempted to use scientific, empirical methods to arrive at an estimate of the amount of gasoline used. Accordingly, Maine is in a position to be a model for other states that currently use estimates less quantitatively derived.

There were challenges however in implementing the surveys. In each of the three surveys — of ATV operators, snowmobilers, and boaters — there were different design and implementation issues. Those issues are outlined in this section, along with a discussion of how to anticipate and address in future research.

Research issues

Timing of availability of registration records for sampling

An optimal schedule for this research would have the different types of off-road vehicle registration files complete at the end of the usual operating season. We understand that the primary purpose of registration files is to document the receipt of registration fees and serve as a resource for mailing information to registrants. For those purposes, it is not currently necessary to have the records entered until it is time for registrations to be renewed. Entering the data from paper records is a considerable effort. It is hoped that an automated system will ease at least some of the burden of data entry and facilitate use of the records for research and information purposes. As public policy researchers, we often use data files for purposes for which they were not originally intended and for which they are not optimally designed, and we understand that data files are not designed and maintained for our convenience.

In the ATV study, it was determined only after the initial survey had been completed, data analyzed, and the report written and presented, that the State's provider of data files, *InforMe*, had not provided us a complete registration file from which to take the sample. It was clear to us that InforMe did not know how many records to expect, and did not know they did not have all the registrations on file. Because of our ensuing discussions with them and with state agencies it is now likely that all parties have a better understanding of that process of data entry and dissemination.

Although it was unlikely that the addition of the late-processed cases would alter the gasoline-use estimates, we drew an additional sample and conducted

interviews to be appended to the original database, reanalyzed the data, and rewrote the report. As expected, the results obtained with the addition of the late cases did not statistically differ from those in the original study. However, the additional sampling and interviewing required the unanticipated expenditure of resources.

Following that experience, the Department of Inland Fisheries and Wildlife worked very hard to assure that the snowmobile files were complete and ready for sampling before the snowmobile study was begun.

Completeness of the electronic registration record

Telephone numbers.

None of the registration files available during this survey included telephone numbers, even though that information is requested of registrants on the paper registration forms. It was therefore necessary to search for the numbers before the interviewing could begin. This unexpected effort was labor-intensive. There were many persons for whom we could not find telephone numbers, and many that appeared to have been found were later determined to be incorrect. The result was considerable inefficiency in the study implementation, as well as a lower completion rate than would otherwise have been possible. The Department of Inland Fisheries and Wildlife has assured the Commission that telephone numbers will be included in the digital records maintained on registrants after the new registration program is implemented. That improvement will make future surveys more efficient.

Descriptive information in snowmobile temporary registration files

In the snowmobile portion of the study, it was necessary to sample not only from the regular Maine registration files, but also from an auxiliary file of mostly out-of-state 3-day and 10-day nonresident season registrations. The information in these registration files was less complete than that in the Maine regular season registrations, and describes persons rather than sleds. In particular, it does not contain the make of the sled, horsepower, year of manufacture, or three- or ten-day or nonresident season registration type. For our purposes, the file should be based on vehicles, not on persons, because gasoline use projections are based on vehicles, not persons (who may have multiple vehicles). We were able to devise a random method for the 3- and 10-day list to select one sled to ask about once a household with multiple sleds had been contacted, but it is preferable not to introduce an additional sampling stage for some households and not for others. We also encountered many duplicate names in the temporary registration files. It appears that occasionally one person registers for his or her companions in a riding party. When that occurs there is no way to include the other party members' sleds in the sample.

Gasoline use amounts asked on registration forms

At the time a motorboat is registered, the applicant is required to estimate the gallons of gasoline consumed by that boat. That information is not, however, entered into the electronic registration file. Even though there would be reservations about the accuracy of that information, it could be compared with survey results to see whether or not it is possible to develop a formula to adjust the registration reports to a more reliable figure. Otherwise, registrants not are asked to report information that will not be used.

Estimating gasoline use by out-of-state vehicles used in Maine

The issue of whether and how to include gasoline use in out-of-state vehicles was a factor in the discussions about the research design for each of the three types of off-road vehicles. The issues particular to each type of recreational vehicle are discussed below.

ATVs. In the ATV study we encountered a few out-of-state addresses, and interviewed those persons. However, it is likely that many more neighboring New Hampshire, Quebec, and New Brunswick ATV riders cross Maine's boundary to ride here, and they probably buy some gasoline here. A survey of bordering registration holders would yield this information.

Snowmobiles. Likewise, the snowmobile study presented some issues concerning nonresidents. Temporary permits or out-of-state season registrations are required for nonresidents riding in Maine, which makes it possible to sample from the out-of-state users. There are some limitations in the amount of information recorded about out-of-state vehicles, however, and these are described above.

Boats. The boat survey proved to be the most difficult with respect to obtaining any information on gasoline use by boats not registered in the state. Accounting for gasoline consumption by boats not registered in Maine was, and remains, problematic. No independently verified data is available on the number of boats trailered into Maine for recreational use. Even if that number were known, it is not known how much gas those boats consume while in Maine. The Maine Department of Environmental Protection has recently estimated however, based on data collected as part of its research on the threats of invasive aquatic species, that as many as 45-50,000 motorboats are trailered into Maine between July and September. If that number is accurate, the total number of recreational boats being used in Maine would be 35-40% higher than the number of boats registered in Maine which was used to estimate gasoline consumption by boats.

In the course of the project, various methods were suggested for ascertaining or estimating the number or proportion of boats from out-of-state that enter Maine. Even for that limited purpose, these methods proved inadequate.

- One proposed method of estimating boats entering the state was to determine the number of invasive plant information pamphlets handed out at tollbooths. However, there is apparently no way of obtaining an unduplicated count of the number of boaters based on the number of leaflets handed out (i.e., individuals may have received several copies at different locations). It is also likely that many of the leaflets were distributed in some other fashion. It is also not known how many of those boaters made repeat visits to Maine.

- Attempting to estimate the number of boats trailered in by counting the numbers of axles for which tolls were paid was discussed, however it does not appear to be able to provide reliable data since many items that are not boats are hauled in similar trailers.

- Harbormasters keep records of moorings, which are an indicator of only one type of out-of-state visitor: those who moor their boats in the rivers and harbors. Those boats, and their use, are likely to be atypical.

- While a crew of observers could stand on overpasses and other entry points and count boats entering the state at a sample of times of the day and days of the week, it would not be possible for them to accurately discern the horsepower of the motor, nor always to read the state of registration. Many of the boats would no doubt be Maine boats returning from use in other states. And, of course, they could not tell where the boater was going and what use was eventually to be made of the boat.

The "documented boat" issue

Federal law allows vessels of five tons or more to be documented by the U.S. Coast Guard rather than being registered in individual states. Although most of those vessels are powered by diesel engines, the Commission recognized that some gasoline consumption occurs within that group of vessels and investigated the options available for determining the owners of those vessels for survey purposes. The Coast Guard does maintain files of documented vessels that include the declared "home port" of the vessel and the Commission determined that that list included 5,940 records that have Maine in either or both the hailing port or the port of documentation fields. Although documented vessels with Maine hailing ports or ports of documentation could have been added to the list of Maine registered watercraft and included in the population from which the survey sample was be drawn, the Commission decided that the resources necessary to collect that data were not available at this time. It would be useful in future survey efforts if the Coast Guard were to include that information in their electronic records of documented vessels, since it would allow researchers to draw a random sample from documented vessels known to burn gasoline, rather than from the much larger population of all documented vessels.

The "marina" method of estimating gas purchases by nonresidents

A potentially useful method of determining gas purchased at marinas in Maine without knowing the number of out-of-state watercraft or having a list of them is to: (1) identify the total amount of gas sold at marinas/pumps along the coast, using a survey method with the goal of obtaining that information for all gas outlets (i.e., not for a sample); (2) use a stratified sample to conduct interviews with an adequate over sample of larger Maine-registered gasoline-using boats that operate in salt water, in order to be more confident in the amount of gasoline sold to that subset of boats; and take a conventional sample of boats of all sizes; (3) determine the amount of gas purchased at marinas by Maine registered boats through the planned phone survey (as well as the gas purchased elsewhere); (4) weight the resulting data so that the larger boats do not disproportionately contribute to the total gasoline sales figure; and (5) subtract that figure from the total amount of gasoline sold at marinas. The result would be the amount of gasoline sold to non-Maine registered watercraft at marinas. The Departments of Marine Resources and Inland Fisheries and Wildlife have provided a list of those marinas/pumps. The Office of Policy and Legal Analysis has conducted a pilot study by mail, and achieved a respectable return rate, which indicates that a more systematic study could be effectively conducted.

Gas sold at service stations and convenience stores

Absent a registration requirement for out-of-state short-term boaters (like that for snowmobilers) that would produce a list from which to sample and conduct interviews, it would be exceedingly difficult and expensive to conduct a study to ascertain the amount of gasoline purchased at service stations and convenience stores.

Issues to consider in future studies

The studies conducted this year represent only one point in time. Analysis of change and the factors that affect change to produce a predictive model of gasoline use can best be conducted from a longer-term research effort. That research can also serve other information purposes in addition to the estimation of gasoline use. In conducting future research, the Commission recommends:

- ***Examine existing data more thoroughly***. Conduct a longitudinal study of the information in the vehicle registration files and related data for past years. In the registration files, examine the limited number of factors that can reasonably be thought to affect change in the amount of gasoline usage. Most of these are the subjects of anecdotal discussion, and they bear further systematic examination. These factors include changes in the number of registrations, changes in engine size over time; changes in the

types of vehicles, changes in the geographic distribution of the vehicles, changes in the age of the vehicles, "retirement" of vehicles and the vehicle age at which that occurs and changes in the rate at which new and used vehicles enter the registration files. In addition, further study can be conducted on related information, such as demographic data, annual weather data, consumer-related economic data, gasoline prices, number of miles of trails and other facilities.

- ***Gather detailed information.*** To learn more about equipment, patterns of use and gasoline purchases, gather detailed information about engine use patterns and equipment. In addition, in the boat survey, over sample larger boats to increase confidence in their gas consumption figures, then weight the data to include them in proper proportion in the analysis.

  Future studies could be conducted as "omnibus" studies in which government agencies, and possibly interested parties with the consent of the agencies, could purchase time for questions of immediate interest, for purposes of planning or evaluation of related programs, facilities, or policies. The parties to the study could share at least part of the costs of questions held in common, such as machine and user characteristics. Those who purchase specific questions could receive customized sets of results and analysis.

- **Conduct a "journaling study."** In the next non-study year, agencies may wish to conduct a smaller-scale study in which randomly selected users of the vehicles are engaged in keeping a structured journal of their gasoline purchases and riding habits. Respondents would be contacted frequently for their gasoline use reports. The resulting data would help us understand more about the accuracy of recall, and about use patterns, particularly those related to engineering models of fuel use. The information would help shape the design and the analysis of any future studies, as well as provide gasoline use data in an interim year to bolster the analysis of the data in the baseline and two following surveys.

- **Survey marinas.** Pursue the "gas sold at marinas" approach to estimate out-of-state boat gas purchases, in combination with the biennial surveys of users.

TABLE 1

Actual FY '01 Gas Tax Allocations for Motorboat, Snowmobile and All-Terrain Vehicle Programs and Funding Levels Recommended by a Majority of the Gas Tax Equity Study Commission

Note: Actual Total FY 2001 Gas Tax Collections = $148 187 279 (source: OFPR)

						(Majority Recommendation) *Increase funding by $537,310 per year (50% of difference)*		***Funding Level if increased by $1,074,620 per year (100% of difference)***	
	Actual FY 01 Allocations from Gas Tax Revenues	Actual FY 01 Allocations as a Percent of Total FY'01 Gas Tax Collections	Survey Estimate of Gas Taxes Paid by Each user Group	Survey Estimate as a Percent of Total FY 01 Allocations	Difference between survey estimate and actual FY 01 Allocation	Majority Recommendation for Allocations from Gas Tax Revenues	Percent of Total FY 01 Collections if funded at 50% difference between actual and survey levels	Allocations if funded at 100% of Survey Findings	Percent of Total FY 01 Collections if funded at 100% difference between actual and survey levels
Motorboats [1]									
Total Share for Boats	**$1,943,497**	**1.312%**	**$1,783,260**	**1.203%**	**($160,237)**	**$2,137,847**	**1.443%**	**$2,137,847**	**1.443%**
DMR s Share for Boats	*$388,699*	*20.00%*	*n/a*	*n/a*	*n/a*	*$583,049* [5]	*27.27%*	*$583,049* [5]	*27.27%*
DOC s Share for Boats	*$1,554,798*	*80.00%*	*n/a*	*n/a*	*n/a*	*$1,554,798* [6]	*72.73%*	*$1,554,798* [6]	*72.73%*
Snowmobiles [2]									
Total Share for Snowmobiles	**$957,818**	**0.646%**	**$1,833,981**	**1.238%**	**$876,163**	**$1,109,250** [8]	**0.749%**	**$1,545,854**	**1.043%**
IFW s Share for Snowmobiles	*$71,479*	*7.46%*	*n/a*	*n/a*	*n/a*	*$165,611* [7]	*14.93%*	*$230,796*	*14.93%*
DOC s Share for Snomwobiles	*$886,339*	*92.54%*	*n/a*	*n/a*	*n/a*	*$943,639* [7]	*85.07%*	*$1,315,058*	*85.07%*
ATV's [3]									
Total Share For ATV's	**$64,331**	**0.043%**	**$423,025** [4]	**0.285%**	**$358,694**	**$255,859**	**0.173%**	**$356,566**	**0.241%**
DOC s Share for ATV s	*$64,331*	*100.00%*	*n/a*	*n/a*	*n/a*	*$127,930* [9]	*50.00%*	*$178,283*	*50.00%*
IFW s Share for ATV s	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*	*$127,930* [10]	*50.00%*	*$178,283*	*50.00%*
TOTAL	**$2,965,646**	**2.001%**	**$4,040,266**	**2.726%**	**$1,074,620**	**$3,502,956** [11]	**2.364%**	**$4,040,266**	**2.726%**

1. *Current law (36 MRSA, §2903-A) distributes 2% of total gas tax collections for motorboat programs, not to exceed $2,000,000 in any one year. Commercial rebates are deducted from that amount and the remainder split between DMR (20%) and DOC (80%).*
2. *Current law (36 MRSA, §2903-B) distributes 0.67% of total gas tax collections for snowmobile programs. (0.05% of total collections to IF&W and .62% of total collections to DOC):*
3. *Current law (36 MRSA, §2903-C) distributes 0.045% of total gas tax collections for ATV s to DOC.*
4. *Calculated as the average annual ATV tax payment ($9.237/year) times the total ATV registrations from 7/1/00 to 6/30/01 (45,796).*
5. *This represents the actual FY 01 motorboat allocation to DMR plus an additional 10% of the total allocation for motorboats ($388,699 + $1,943,497/10 = $583,049).*
6. *This keeps the allocation to DOC the same as the actual FY 01 allocation to avoid reducing gasoline tax allocations to that department for boating programs.*
7. *The current statutory formula provides IFW with 7.46 cents of each dollar allocated for snowmobiles. The Commission s recommendation was to double IFW s share, which increases it to 14.93 cents for every dollar allocated.*
8. *Total snowmobile gas tax distributions under these recommendations is 0.749%.*
9. *ATV program allocations are split 50/50 between DOC and IFW.*
10. *ATV program allocations are split 50/50 between DOC and IFW.*
11. *Calculated as the Actual FY 01 Allocation plus one half difference between the actual allocation and the survey estimate total ($1,074,620/2 = $537,310).*

TABLE 2

SUMMARY OF GAS TAX EQUITY COMMISSION STUDY FINDINGS
GASOLINE CONSUMPTION BY OFF-ROAD RECREATIONAL VEHICLES

A Vehicle Type	B Number Registered	C Median Gallons Used	D Average Gallons Used	E Total Gallons Used (B x D)	F Tot. Gas Tax Paid (E x 0.22)	G FY '01 Program Funding from Gas Tax	H Difference Funding - Tax Pd (G-F)
Motorboats	117,021	20.0	69.3	8.1 M	$ 1,783,260	$ 1,943,497	$ 160,237
Snowmobiles	95,334	55.5	87.4	8.3 M	$ 1,833,981	$ 957,818	$ (876,163)
ATV	45,796	25.0	43.6	2.0 M	$ 423,025	$ 64,331	$ (358,694)
			TOTAL	18.4 gal.	$4.04 M	$2.97 M	**-$1.07 M**

Total Gas Tax Collections for FY 01: $ 148,187,279.

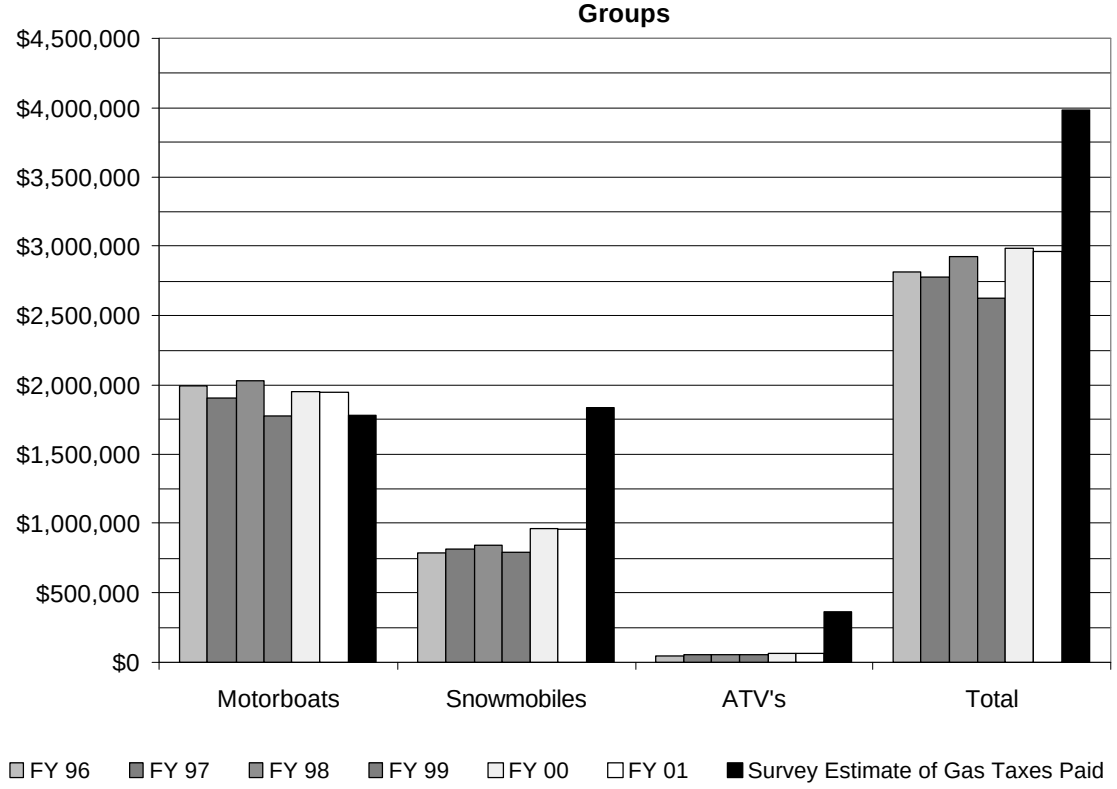
MINORITY RECOMMENDATIONS FOR GAS TAX FUNDING FOR OFF-ROAD RECREATIONAL VEHICLES
CONTINGENT UPON NEW HIGHWAY FUND REVENUE & CAPS
12/27/01

A Vehicle Type	B Number Registered in Maine	C Est. Total Gas Tax Paid by Veh. Type	D FY '01 Program Funding from Gas Tax	E Proposed Statutory Funding Funding Cap	F $ Increase in Funding	G % Increase in Funding	H Proposed Statutory Finding re: %*
Motorboats	117,021	$ 1,783,260	$ 1,943,497	$ 2,200,000	$ 256,503	13%	1.485%
Snowmobiles	95,334	$ 1,833,981	$ 957,818	$ 1,600,000	$ 642,182	67%	1.080%
ATV	45,796	$ 423,155	$ 64,331	$ 250,000	$ 185,669	287%	0.169%
		$ 4,040,396	$ 2,965,646	$ 4,050,000	$ 1,084,354	37%	2.734%

* Calculated by dividing proposed caps in column E by the total gas tax collections for FY '01, being $ 148,187,279.

TABLE 3

Actual Gas Tax Allocations for Off-Road Recreational Vehicle (FY 96-FY 01) Compared to Estimates of Annual Maine Gas Taxes Paid by those User Groups



	Actual Allocations						Average Actual Compared to Survey Estimates		
	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	Mean Actual	Survey Estimate of Gas Taxes Paid	Survey Estimate minus Actual FY 01
Motorboats	$1,988,968	$1,907,559	$2,029,570	$1,775,004	$1,954,496	$1,943,497	$1,933,182	$1,783,260	($160,237)
Snowmobiles	$785,279	$816,688	$839,974	$793,676	$966,379	$957,818	$859,969	$1,833,981	$876,163
ATV's	$44 464	$54 882	$56 416	$53 307	$64 948	$64 631	$56 441	$423 025	$358,394
Total	$2,818,711	$2,779,129	$2,925,960	$2,621,987	$2,985,823	$2,965,946	$2,849,593	$4,040,266	$1,074,320

Source: Actual data from the Office of Fiscal and Program Review. Survey estimates from the Margeret Chase Smith Center for Public Policy at the University of Maine
Data compiled by the Office of Policy and Legal Analysis

Table 4.

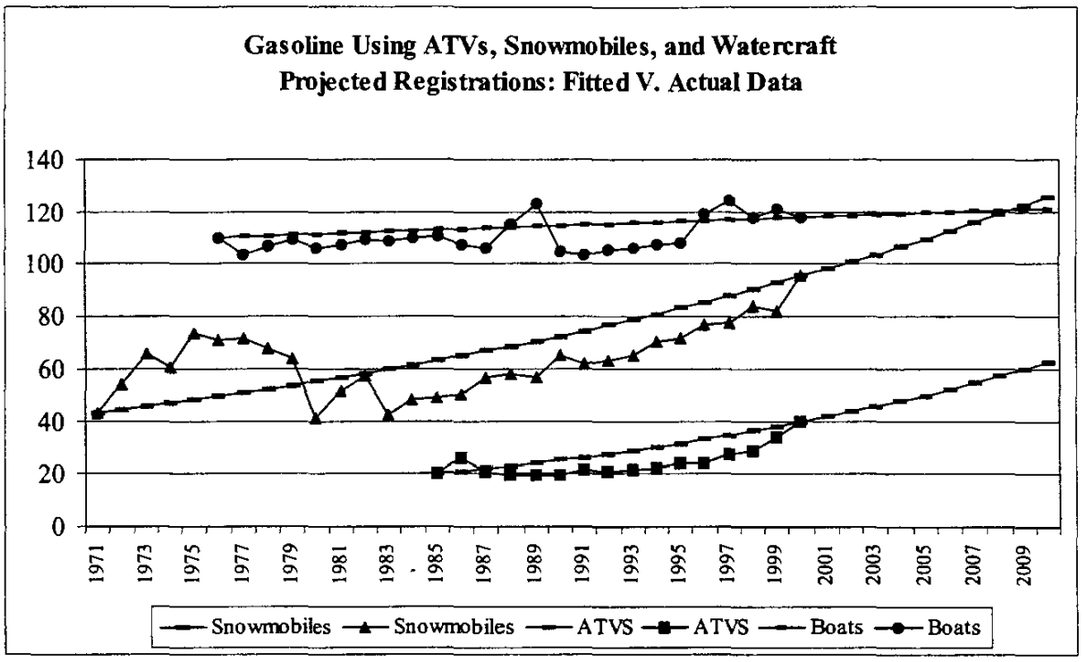
Historical and average annual distributions of gasoline tax revenues to off-road recreational programs

Fund	Department/Program	Actuals FY 96	Actuals FY 97	Actuals FY 98	Actuals FY 99	Actuals FY00	Actuals FY01	Average Annual
Total Gas Tax Collections:								
Total Gas Tax Collections		**$120,592,654**	**$121,350,421**	**$124,471,080**	**$136,268,424**	**$146,190,243**	**$148,187,279**	
Highway Fund (All collections not otherwise designated - see below)								
HF	**Highway Fund**	**$117,680,092**	**$118,471,766**	**$121,456,100**	**$133,571,324**	**$143,128,178**	**$145,147,979**	
Motorboats (36 MRSA, §2903-A) - 2% of total excise tax, not to exceed $2,000,000 (split after refunds to commercial motorboats - 20% to Marine Resources and 80% to Boating Facilties Fund):								
	Commercial Motorboat Refunds	$93,850	$99,526	$89,022	$75,115	$76,243	$73,654	$84,568
OSR	Marine Resources	$397,794	$370,576	$405,914	$355,001	$390,899	$388,699	$329,840
OSR	Conservation - Boating Facilities Fund	$1,591,174	$1,536,983	$1,623,656	$1,420,003	$1,563,597	$1,554,798	$1,327,173
	Subtotal - §2903-A	**$2,082,818**	**$2,007,085**	**$2,118,591**	**$1,850,119**	**$2,030,738**	**$2,017,151**	**$1,729,500**
Snowmobiles (36 MRSA, §2903-B) - 0.67% of total excise tax (0.05% to IF&W and .62% to Snowmobile Trail Fund):								
GF	Inland Fisheries and Wildlife	$61,730	$60,534	$62,685	$59,230	$71,537	$71,479	$55,314
OSR	Conservation - Snowmobile Trail Fund	$723,549	$756,154	$777,289	$734,446	$894,842	$886,339	$681,803
	Subtotal - §2903-B	**$785,280**	**$816,688**	**$839,973**	**$793,675**	**$966,379**	**$957,818**	**$859,969**
ATV's (36 MRSA, §2903-C) - 0.045% of total excise tax to ATV Recreational Mgmt. Fund:								
OSR	Conservation - ATV Rec. Mgmt. Fund	$44,464	$54,882	$56,416	$53,307	$64,948	$64,331	$48,335
	Subtotal - §2903-C	**$44,464**	**$54,882**	**$56,416**	**$53,307**	**$64,948**	**$64,331**	**$48,335**

Source: Maine State Legislature. Office of Policy and Legal Analysis. Averages calculated by OPLA.

TABLE 5

Forecast (Simple) of Gasoline Using ATVs, Snowmobiles, and Watercraft: Registrations and Gasoline Tax Revenues[1]



Forecasted Gasoline Tax Revenues from ATVs, Snowmobiles, and Watercraft

Year	Snowmobiles (million)	ATVS (million)	Watercraft (million)	Total (million)
2002	1.94	0.42	1.81	4.16
2003	2.00	0.44	1.81	4.24
2004	2.05	0.46	1.82	4.32
2005	2.11	0.48	1.82	4.41
2006	2.17	0.50	1.83	4.49
2007	2.23	0.52	1.83	4.58
2008	2.29	0.55	1.84	4.68
2009	2.36	0.57	1.84	4.77
2010	2.42	0.60	1.85	4.87

Assumptions: Annual growth rates for Snowmobiles, ATVS, and Boats: 2.798%, 4.6697%, 0.276%, excise tax @ $0.22, registrations (in 1000s) for snowmobiles, ATVS, and watercraft in 2000: 95.57, 39.64, 117.88 (watercraft registrations adjusted for non-gasoline powered vehicles); average annual fuel use for snowmobiles, ATVs and watercraft: 87.4, 43.6, 69.27.

[1]This forecast is naive in that no effort is made to take future demographic, economic or other important trends into account. It is based only on historic growth rates in registrations and average fuel use by vehicle type.

Gasoline Consumption Attributable to Gasoline Powered ATVs, Snowmobiles, and Watercraft Use in Maine
Margaret Chase Smith Center for Public Policy, University of Maine, November 2001

APPENDIX A

CHAPTER 68

H.P. 28 - L.D. 28

Resolve, to Extend the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft

Emergency preamble. Whereas, Acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

Whereas, the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft was created by Resolve 1999, chapter 131, with a final reporting date of December 6, 2000; and

Whereas, that commission was authorized to undertake research as necessary to collect and update information on the amount and type of fuel purchased for and consumed within this State by snowmobiles, all-terrain vehicles and motorboats and information on the amount and type of fuel purchased in this State for those vehicles and consumed outside the jurisdiction of this State; and

Whereas, that commission has authorized surveys to determine the amount of gasoline consumed by snowmobiles, all-terrain vehicles and watercraft; and

Whereas, the information obtained through those surveys is essential for the commission to fulfill its charge of determining the equitable distribution of gas tax revenues generated by snowmobiles, all-terrain vehicles and motorboats; and

Whereas, it is critical to the validity of the survey results that adequate time be allowed to develop the survey methodology and the survey questionnaire, to select the random

sample of survey participants, to administer the survey and to analyze the survey results; and

Whereas, the successful completion of that work requires that the commission be extended until December 5, 2001, for the purpose of providing policy oversight of those survey efforts and to submit its findings and recommendations to the Second Regular Session of the 120th Legislature; and

Whereas, in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore, be it

Sec. 1. Commission established. Resolved: That the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft, referred to in this resolve as the "commission," is established; and be it further

Sec. 2. Commission membership; appointed and ex officio members. Resolved: That the commission consists of 15 appointed members and up to 3 ad hoc members as follows.

1. Legislative members reappointed. The legislative members who were appointed pursuant to Resolve 1999, chapter 131, who are members of the 120th Legislature are members of this commission.

2. Filling of legislative vacancies. The President of the Senate shall appoint 3 members of the Senate to replace the members of the Senate appointed pursuant to Resolve 1999, chapter 131, who are not members of the 120th Legislature. When making those appointments, the President of the Senate shall give preference to members from the joint standing committees of the Legislature having jurisdiction over inland fisheries and wildlife matters, transportation matters and taxation matters.

3. Ex officio members. The following persons are ex officio voting members:

A. The Commissioner of Conservation or the commissioner's designee;

B. The Commissioner of Marine Resources or the commissioner's designee;

C. The Commissioner of Inland Fisheries and Wildlife or the commissioner's designee;

D. The Commissioner of Transportation or the commissioner's designee; and

E. The Director of the Bureau of Revenue Services within the Department of Administrative and Financial Services or the director's designee.

4. Ad hoc members. Persons who were appointed by the President of the Senate or the Speaker of the House pursuant to Resolve 1999, chapter 131, who are not elected members of the 120th Legislature may serve as nonvoting ad hoc members of the commission; and be it further

Sec. 3. Appointments; meetings. Resolved: That all appointments must be made no later than 30 days after the effective date of this resolve. The appointing authorities shall notify the Executive Director of the Legislative Council once the appointments have been made. The Executive Director of the Legislative Council shall notify the chairs when all appointments have been made. The chairs of the commission shall call and convene the first meeting of the commission not later than August 15, 2001; and be it further

Sec. 4. Duties. Resolved: That the commission shall fulfill all the duties required by Resolve 1999, chapter 131 and shall:

1. Oversee contracts. Oversee the surveys of gasoline consumption by all-terrain vehicles, snowmobiles and watercraft undertaken by the Margaret Chase Smith Center for Public Policy at the University of Maine pursuant to a cooperative agreement between the university and the Department of Conservation, the Department of Inland Fisheries and Wildlife, the Department of Marine Resources and the Department of Transportation as provided in a contract among those entities signed in November 2000. That oversight must include regular meetings during 2001 with the university and interested parties to assist in the development of the surveys and to review and discuss the results of each survey;

2. Seek input. Seek input from the public; from organizations representing snowmobile, all-terrain vehicle and watercraft users, including the Maine Snowmobile Association, groups representing all-terrain vehicle users and the Maine Marine Trade Association; and from any other interested individuals or organizations. In seeking that input, the commission shall, within its budgeted resources, hold its meetings in geographically diverse locations throughout the State;

3. Strategic boating plan. Review and report on any updates or supplemental information prepared by the Department of Inland Fisheries and Wildlife, the Department of Conservation or the Department of Marine Resources pertaining to the strategic boating plan prepared by those agencies pursuant to Resolve 1999, chapter 131; and

4. Collect other data. Collect other data and make other recommendations the commission considers appropriate on the issue of off-road fuel consumption or on any other matter pertaining to off-road recreational vehicle use; and be it further

Sec. 5. Report. Resolved: That the commission shall submit its report, together with any recommended implementing legislation, to the Second Regular Session of the 120th Legislature no later than December 5, 2001. If the commission requires a limited extension of time to make its report, it may apply to the Legislative Council, which may grant the extension; and be it further

Sec. 6. Staff assistance. Resolved: That, upon approval of the Legislative Council, the Office of Policy and Legal Analysis shall provide staffing assistance to the commission. The Office of Fiscal and Program Review and the Department of Transportation, the Department of Marine Resources, the Department of Inland Fisheries and Wildlife, the Department of Conservation and the Department of Administrative and Financial Services, Bureau of Revenue Services shall also provide assistance as requested by the chairs of the commission; and be it further

Sec. 7. Compensation. Resolved: That the members of the commission who are Legislators are entitled to receive the legislative per diem, as defined in the Maine Revised Statutes, Title 3, section 2, and reimbursement for travel and other necessary expenses related to their attendance at authorized meetings of the commission. Other members of the commission, including ad hoc members, who are not otherwise compensated by their employers or other entities that they represent are entitled to receive reimbursement for travel and other necessary expenses related to their attendance at authorized meetings; and be it further

Sec. 8. Budget. Resolved: That the chairs of the commission, with assistance from the commission staff, shall administer the commission's budget. The commission may not incur expenses exceeding its approved budget. Upon request from the commission, the Executive Director of the Legislative Council shall promptly provide the commission and its staff with a status report on the commission's budget, expenditures incurred and remaining available funds; and be it further

Sec. 9. Appropriations carried over. Resolved: That funds appropriated to the commission by Resolve 1999, chapter 131 that are unexpended are carried forward to fiscal year 2001-02 to be used for the purposes specified in that resolve and in this resolve. The

commission may not expend more money than carried forward to fiscal year 2001-02 pursuant to this section.

Emergency clause. In view of the emergency cited in the preamble, this resolve takes effect when approved.

Effective June 28, 2001.

APPENDIX B

MEMBERS – Gas Tax Equity Study

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Bruce Van Note
Department of Transportation
#16 State House Station
Phone: 7-2551
FAX: 7-8300
E-mail: bruce.vannote@state.me.us

Fred Hurley, Deputy Commissioner
Dept. of Inland Fisheries & Wildlife
#41 State House Station
Phone: 7-5202
FAX: 7-6395
E-mail: Fred.Hurley@state.me.us

Dawn Gallagher, Ass't. Commissioner
Department of Conservation
Harlow Bldg., AMHI Complex
#22 State House Station
Phone: 7-4901
FAX: 7-2400
E-mail: Dawn.Gallagher@state.me.us

Penn Estabrook
Department of Marine Resources
#21 State House Station
Phone: 624-6553
FAX: 624-6024
E-mail: Penn.Estabrook@state.me.us

Elmer Pelletier
Maine Revenue Service
#24 State House Station
Phone: 624-9748
FAX: 287-6628
E-mail: Elmer.Pelletier@state.me.us

Sen. Jill M. Goldthwait
22 Albert Meadow
Bar Harbor, ME 04609
Phone: 288-5461
FAX: None
E-mail: SenJill.Goldthwait@.state.me.us

Sen. Richard Kneeland
153 West Ridge Road
Easton, ME 04740-4212
Phone: 488-5311
FAX: 488-5311
E-mail: Kneeland@mfx.net

Sen. Marge L. Kilkelly
West Alna Road
P.O. Box 180
Wiscasset, ME 04578
Phone: 882-5410
FAX: None
E-mail: kilkelly@wiscasset.net

Sen. Kenneth T. Gagnon
1 Clearview Avenue
Waterville, ME 04901
Phone: 872-2338
FAX: None
E-mail: kgagnon@colby.edu

Sen. Christine R. Savage
504 Barrett Hill Rd.
Union, ME 04862
Phone: 785-4632
FAX: 785-4240
E-mail: csavage@midcoast.com

AD HOC Members:

Sen. R. Leo Kieffer
12 Harvest Road
Caribou, ME 04736
Phone: 493-3190
FAX: 493-7894
E-mail: None

Rep. Joseph E. Clark
299 Katahdin Avenue
Millinocket, ME 04462
Phone: 723-5746
FAX: 723-5746
E-mail: jeclark8@ime.net

Rep. Bruce S. Bryant
2470 Canton Point Road
Dixfield, ME 04224
Phone: 562-8224
FAX: None
E-mail: house67@exploremaine.com

Rep. Richard H. Duncan
26 Third Street
Presque Isle, ME 04769
Phone: 764-4100
FAX: 762-3555
E-mail: rhd@mfx.net

Rep. Kenneth A. Honey
Chapel Street
P.O. Box 6
Boothbay, ME 04537
Phone: 633-5560
FAX: 633-5092
E-mail: None

Rep. Gary J. Wheeler
46 Rollingwood Road
Eliot, ME 03903-1508
Phone: 439-2082
FAX: None
E-mail: RepGaryW3@aol.com

Sen. Richard P. Ruhlin
115 Elm Street
Brewer, ME 04412
Phone: 989-7333
Bus: 989-4607
FAX: 989-4228
E-mail: None

Sen. Judy A. Paradis
40 US Route 1
Frenchville, ME 04745
Phone: 728-4854
FAX: 728-6374
E-mail: rody@nbnet.nb.ca

APPENDIX C

APPENDIX C-1

Legislation to Implement the Majority Recommendations

An Act to Implement the Unanimous and the Majority Recommendations of the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft

Be it enacted by the People of Maine to read:

Sec. 1. 12 MRSA, §7020 is enacted to read:

7020. Joint effort to determine gasoline use by nonhighway recreational vehicles

During calendar year 2004, and during every third calendar year thereafter, the Commissioner of Inland Fisheries and Wildlife, the Commissioner of Conservation, the Commissioner of Marine Resources and the Commissioner of Transportation shall jointly undertake a survey or surveys to determine the amount of gasoline purchased or used by snowmobiles, all-terrain vehicles and motorboats in Maine. The surveys must be conducted using a randomly selected sample from a known population and must use scientific and statistical methods capable of producing an estimate of the mean total quantity of gasoline used and mean total dollars of gasoline taxes paid by each user group. To the extent possible, those estimates must include gasoline purchased or used in Maine by snowmobiles, all-terrain vehicles and motorboats not required to be registered in Maine.

Not later than December 15, 2004, and not later than every third December 15th thereafter, those Commissioners shall jointly report in writing on the results of those surveys to the State Controller and the joint standing committees of the legislature having jurisdiction over transportation, inland fisheries and wildlife, conservation and marine resource matters. Each report must include, but is not limited to, the survey estimate of the mean total gallons of gasoline purchased or used in Maine by each of those user groups and a specific recommendation for the percentage of total gasoline tax revenues to be distributed to the Departments of Conservation, Inland Fisheries and Wildlife and Marine Resources for snowmobile, all-terrain vehicle and motorboat programs.

Sec. 2. 12 MRSA, §7034, sub-§13 is enacted to read:

13. Electronic storage of registration data. The Commissioner shall store and maintain all information required or included on registration forms for snowmobiles, watercraft and all-terrain vehicles, including the telephone number of the registrant, in an electronic database format that allows that information to be retrievable and used, among other lawful purposes determined appropriate by

the Commissioner, to facilitate survey procedures designed to estimate gasoline consumption by those vehicles.

Sec. 3. 12 MRSA, §7794-D is enacted to read:

§7794-D. Information on owners of unregistered motorboats operating on inland waters

Beginning on January 1, 2003, the Commissioner shall ensure that the name, address and telephone number of the owner of any motorboat that is not required to be registered in the state but that operates on the inland waters of the state is collected at the time that person, or that person's agent, purchases a lake and river protection sticker. The Commissioner shall store and maintain the information collected under this section in accordance with section 7034, subsection 13.

Sec. 4. 36 MRSA, §§ 2903-A, 2903-B and 2903-C are repealed.

Sec. 5. 36 MRSA, §§ 2903-D and 2903-E are enacted to read:

§2903-D. Distribution of gasoline taxes for nonhighway recreational vehicle programs

The Maine Constitution, Article IX, section 19, requires that taxes on fuels used for the propulsion of vehicles on public highways must be used for certain costs associated with highways. Taxes collected on fuels used for other purposes are not required to be so used. It is the purpose of this section to establish the percentage of gasoline taxes that are attributable to three segments of the nonhighway snowmobiles, all-terrain vehicles and motorboats and to equitably distribute those taxes among the appropriate state agencies for the administration of programs and the enforcement of laws relating to the use of those recreational vehicles. For the purposes of this section, the term "total gasoline tax revenues" means the total excise tax on internal combustion engine fuel sold or used within the State, but not including internal combustion fuel sold for use in the propulsion of aircraft.

1. Motorboats. The Legislature finds that the percentage of gasoline taxes attributable to motorboats is not less than 1.443% of total gasoline tax revenues collected in fiscal year 2001, after subtracting all refunds for commercial motorboats. Based on that legislative finding, that percentage of total gasoline tax revenues is distributed among the following agencies in the following manner:

A. 27.27% of that amount is distributed to the Commissioner of Marine Resources for research, development and propagation activities of the department. In expending these funds, it is the responsibility of the

Commissioner of Marine Resources to select activities and projects that will be most beneficial to the commercial fisheries of the State as well as the development of sports fisheries activities in the State; and

B. 72.73% of that amount is credited to the Boating Facilities Fund, established under Title 12, section 1896, within the Maine State Bureau of Parks and Lands.

2. Snowmobiles. The Legislature finds that the percentage of gasoline taxes attributable to snowmobiles is not less than 0.749% of total gasoline tax revenues collected in fiscal year 2001. Based on that legislative finding, that percentage of total gasoline tax revenues is distributed among the following agencies in the following manner:

A. 14.93% of that amount is distributed to the Commissioner of Inland Fisheries and Wildlife and used by the Commissioner for the purposes set forth in Title 12, section 7824; and

B. 85.07% of that amount is credited to the Snowmobile Trail Fund of the Bureau of Parks and Lands, established under Title 12, section 7824.

5. All-terrain vehicles. The Legislature finds that the percentage of gasoline taxes attributable to all-terrain vehicles is not less than 0.173% of total gasoline tax revenues collected in fiscal year 2001. Based on that legislative finding, that percentage of total gasoline tax revenues is distributed among the following agencies in the following manner:

A. 50.00% of that amount is distributed to the Commissioner of Inland Fisheries and Wildlife and used by the Commissioner for expenses associated with the enforcement of state laws regulating the recreational use of all-terrain vehicles; and

B. 50.00% of that amount is credited to ATV Recreational Management Fund established in Title 12, section 7854, subsection 4, paragraph B.

The State Tax Assessor shall certify to the State Controller by the 15th day of each month the amounts to be distributed and credited under this section as of the close of the State Controller's records for the previous month.

§2903-E. Certification of gas tax distributions for nonhighway recreational vehicle use by State Controller

Beginning in January of 2005, and every third January thereafter, the State Controller shall review the survey results reported pursuant to Title 12, section 7020 and shall, based on those survey results, certify to the State Tax Assessor the specific percentages of total gasoline tax revenues attributable to

snowmobiles, motorboats and all-terrain vehicles. Not withstanding section 2903-D, the percentages certified by the State Controller under this section are the percentages of total gasoline tax revenues that are to be distributed to the Departments of Conservation, Inland Fisheries and Wildlife and Marine Resources for snowmobile, motorboat and all-terrain vehicle programs. The percentages certified by the State Controller take effect on July 1st of the year in which the State Controller certifies those percentages and remain in effect until July 1st of the year in which the State Controller subsequently certifies new percentages based on updated survey results. The State Tax Assessor shall certify to the State Controller by the 15th day of each month the amounts to be credited under this section as of the close of the State Controller's records for the previous month.

Sec. 6. Updates to the Public Access to Maine Waters Strategic Plan. Beginning in 2005 and every 5 years thereafter, the Department of Conservation, the Department of Inland Fisheries and Wildlife and the Department of Marine Resources shall jointly prepare comprehensive written updates to the report titled "Public Access to Maine Waters Strategic Plan" that was originally prepared by those departments in 1995 and updated in 2000. Those reports must include an update to the boating access improvements completed since the prior report, a summary of the current funding and expenditure patterns for each of those departments on boating access matter, a summary of public access needs and funding, a summary of boating enforcement and education programs and needs and any actions proposed by those departments in those areas anticipated over the subsequent 5 year period. Those reports must be submitted jointly to the joint standing committees of the legislature having jurisdiction over inland fisheries and wildlife matters and marine resource matters beginning in January of 2005, and every 5 years thereafter.

Sec. 7. Snowmobile and All-terrain vehicles needs assessments. Beginning in 2005 and every 5 years thereafter, the Department of Conservation and the Department of Inland Fisheries and Wildlife shall jointly prepare an assessment of needs within the snowmobile and all-terrain vehicle programs, including a summary of the current funding and expenditure patterns for each of those departments on snowmobile and all-terrain vehicle matters, a summary of public access needs and funding, a summary of snowmobile and all-terrain vehicle enforcement and education programs and needs, an assessment of the capital needs for equipment or facilities for maintenance of trails or access to land or water and any actions proposed by those departments in those areas anticipated over the subsequent 5 year period. Those reports must be submitted jointly to the joint standing committees of the legislature having jurisdiction over inland fisheries and wildlife matters and public recreation matters beginning in January of 2005, and every 5 years thereafter.

SUMMARY

This bill implements the unanimous and the majority recommendations of the Commission to Study Equity in the Distribution of Gasoline Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft and is report pursuant to Resolves of 2001, chapter 68.

Surveys conducted for the Commission show that gasoline use by recreational snowmobilers, all-terrain vehicle users and boaters is generating approximately $1.1 million per year more in gasoline tax revenues than is being allocated to the state agencies that support those outdoor recreational opportunities and that help protect the public safety and the state's natural resources by enforcing the laws regulating the use of those vehicles. This bill creates greater equity in the distribution of gasoline tax revenues by immediately increasing annual gasoline tax allocations to those agencies by 50% of that amount in fiscal years 2003, 2004 and 2005, while ensuring full equity over the longer term by establishing a process that will result in the allocation of 100% of the gasoline taxes paid by those users back to the programs that support those activities beginning in fiscal year 2006.

The process established to ensure equity in the distribution of gasoline tax revenues attributable to snowmobiles, all-terrain vehicles and watercraft requires that the Departments of Transportation, Conservation, Inland Fisheries and Wildlife and Marine Resources jointly conduct surveys every 3 years to determine the amount of gasoline consumed by each of those user groups. After reviewing those results, the State Controller certifies to the State Tax Assessor the specific percentage of total gasoline tax revenues that is to be allocated to the agencies administering those programs.

The bill also requires the Commissioner of Inland Fisheries and Wildlife to maintain snowmobiles, watercraft and all-terrain vehicles registration data, including the telephone number of the registrant, in an electronic database format that can be used for future surveys designed to estimate gasoline consumption by those vehicles and requires the Commissioner, beginning in January of 2003, to obtain the name, address and phone number of nonresident boaters who operate motorboats on inland waters and purchase a lake and river protection sticker.

The bill also requires the Departments of Conservation, Inland Fisheries and Wildlife and Marine Resources to update, every 5 years, their "Public Access to Maine Waters Strategic Plan" and their snowmobile and ATV needs assessment. Those reports would be submitted jointly to the joint standing committees of the legislature having jurisdiction over inland fisheries and wildlife matters and public recreation matters beginning in January of 2005, and every 5 years thereafter.

APPENDIX C-2

LEGISLATION IMPLEMENTING THE MINORITY RECOMMENDATIONS

CONTINGENT UPON PASSAGE OF LEGISATION THAT RAISES NEW, SUBSTANTIAL, ON-GOING AND DEDICATED REVENUE TO THE HIGHWAY FUND

Sec. 1. **Titles 36, §§2903-A, 2903-B and 2903-C** are repealed.

Sec. 2. **Titles 36, §§2903-D, 2903-E, and 2903-F** are enacted to read.

§2903-D. Finding of fact regarding motorboats

The Legislature makes a finding of fact that the percentage of the total gasoline tax revenue equitably attributable to motorboat use is approximately 1.485%. Based on this legislative finding of fact, there is set aside $ 2,200,000 per year of the total excise tax on internal combustion engine fuel sold or used within the State, but not including internal combustion engine fuel sold for use in the propulsion of aircraft. From this allocation is deducted the refunds paid out under section 2908 to purchasers and users of internal combustion engine fuel for commercial motorboats; 20% of the balance after paying out such refunds must be paid to the Treasurer of State to be made available to the Commissioner of Marine Resources for the purpose of conducting research, development and propagation activities by the department, and it is the responsibility of the Commissioner of Marine Resources to select activities and projects that will be most beneficial to the commercial fisheries of the State as well as the development of sports fisheries activities in the State; the remaining 80% of the balance must be credited to the Boating Facilities Fund, established under Title 12, section 1896, within the Maine State Bureau of Parks and Lands. The State Controller each month shall credit to the appropriate agency one twelfth of the amounts allocated in this paragraph above. When refunds paid to purchasers and users of internal combustion engine fuel for commercial motorboats in any month exceed $183,333, such excess must be carried forward in computing amounts to be credited to the Department of Marine Resources and to the Boating Facilities Fund under this section for the succeeding month or months. Funds credited to the Department of Marine Resources must be allocated by the joint standing committee of the Legislature having jurisdiction over appropriations and financial affairs.

Once the number of motor boats registered in Maine exceeds 140,000, or by February 1, 2007, whichever occurs first, the Department of Conservation shall issue to the joint standing committees of the Legislature having jurisdiction over inland fisheries and wildlife, marine resources, transportation, and taxation matters a report prepared in coordination with the Department of Marine Resources, the Department of Inland Fisheries and Wildlife and the Department of Transportation on the amount of gasoline equitably attributable to motorboat

use and whether those uses are for pleasure or commerce and for salt or freshwater boating. Funds allocated pursuant to this section must be used to fund the costs of this report.

§2903-E. Finding of fact regarding snowmobiles

The Legislature makes a finding of fact that the percentage of the total gasoline tax revenue equitably attributable to snowmobile use is approximately 1.080%. Based on this legislative finding of fact, there is set aside $ 1,600,000 per year of the total excise tax on internal combustion engine fuel sold or used within the State, but not including internal combustion engine fuel sold for use in the propulsion of aircraft. From this allocation, 10% shall be paid to the Treasurer of State to be made available to the Department of Inland Fisheries and Wildlife; this money to be expended for the purpose set forth in Title 12, section 7824. The remaining 90% shall be credited to the Snowmobile Trail Fund of the Bureau of Parks and Lands, established under Title 12, section 7824. The State Controller each month shall credit to the appropriate agency one twelfth of the amounts allocated in this paragraph above.

Once the number of snowmobiles registered in Maine exceeds 115,000, or by February 1, 2007, whichever occurs first, the Department of Conservation shall issue to the joint standing committees of the Legislature having jurisdiction over inland fisheries and wildlife, transportation, and taxation matters a report prepared in coordination with the Department of Inland Fisheries and Wildlife and the Department of Transportation on the amount of gasoline equitably attributable to snowmobile use. Funds allocated pursuant to this section must be used to fund the costs of this report.

§2903-F. Finding of fact regarding all-terrain vehicles

The Legislature makes a finding of fact that the percentage of the total gasoline tax revenue equitably attributable to all-terrain vehicle use is approximately 0.169%. Based on this legislative finding of fact, there is set aside $250,000 per year of the total excise tax on internal combustion engine fuel sold or used within the State, but not including internal combustion engine fuel sold for use in the propulsion of aircraft. This allocation must be principally expended for law enforcement purposes. In any event, the allocation must be expended as required by Title 12, section 7854, subsection 4, paragraph B. The State Controller each month shall credit to the Department of Conservation one twelfth of the amount set forth under the previous sentence.
One half of the amounts allocated by this section shall be used for law enforcement aimed at reducing damage to roads, rail beds, utility corridors, and other private property.

Once the number of all-terrain vehicles registered in Maine exceeds 55,000, or by February 1, 2007, whichever occurs first, the Department of Conservation shall issue to the joint standing committees of the Legislature having jurisdiction over inland fisheries and wildlife, transportation, and taxation matters a report prepared in coordination with the Department of Inland Fisheries and Wildlife and the Department of Transportation on the amount of gasoline equitably attributable to all-terrain vehicle use. This activity shall be funded from the allocation provided in this section.

SUMMARY

This bill increases and sets funding for off-road recreational programs from gas tax revenues at $2,200,000 for motorboats, $1,600,000 for snowmobiles, and $ 250,000 for all-terrain vehicles (ATV's). The bill also requires that one half the funding for ATV's be used for law enforcement activities. The bill also requires further study on gas consumption by each off-road recreational vehicle type when the number of that type of vehicle registered in Maine grows by 20%, or by February 1, 2007, whichever comes first.

APPENDIX D

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

Margaret Chase Smith Center for Public Policy
The University of Maine

Jonathan Rubin
Suzanne K. Hart
Charles Morris

Orono, Maine
June, 2001

A Member of the University of Maine System

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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 Kilkelly, 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.

[1]Geocodes 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

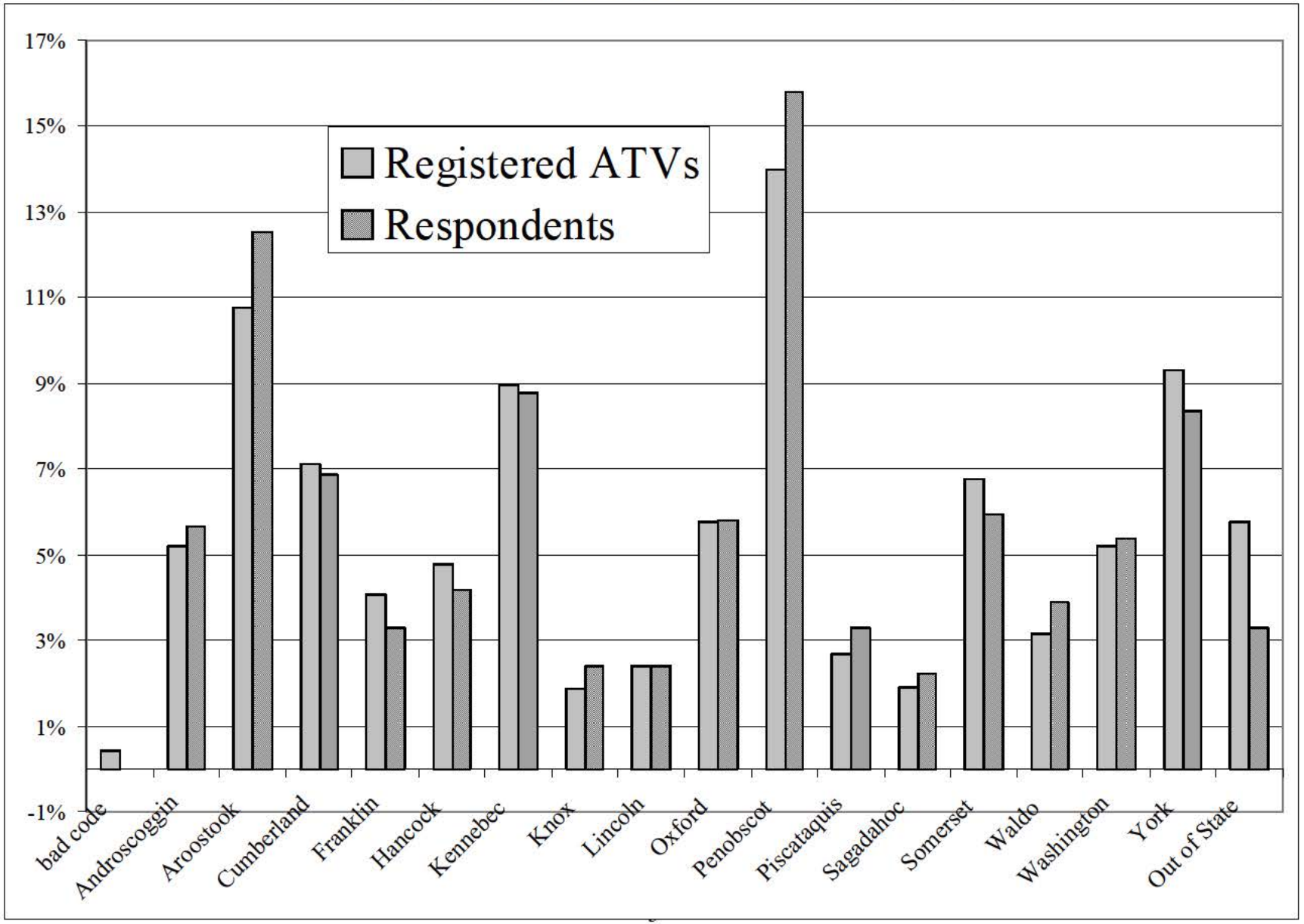
Geographic distribution of ATVs

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



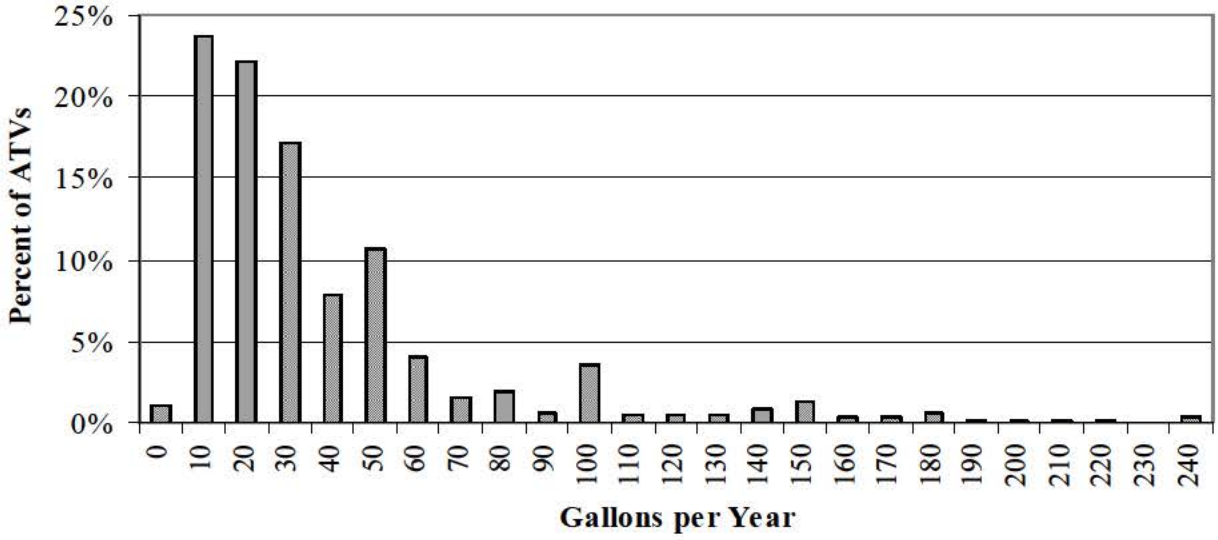
Gasoline use by ATVs

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.

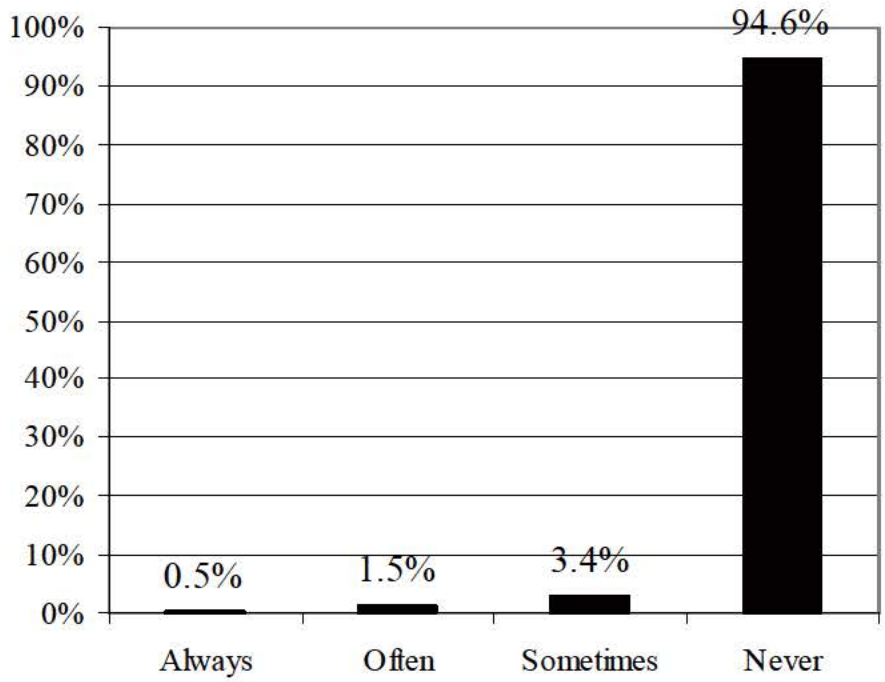
The distribution of annual gasoline use in ATVs in Maine is shown in Figure 2. The average number of gallons used is 44, and it is clear that the average (or mean) reflects a large number of vehicles that use fewer than 44 gallons, and a very small number that use far more. It is appropriate to use the 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.

UNIVERSITY OF MAINE

Land Grant University
Sea Grant College

MARGARET
CHASE SMITH
C·E·N·T·E·R
for Public Policy

5715 Coburn Hall
Orono, ME 04469-5715
207-581-1646
Fax: 207-581-1266

Year: XX Make: XXXXX Reg# XXXXXX

Firstname Lastname

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 fforms 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?

No. of cases 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 IWER 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) *N=29, mean=6.59* ___ ___

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 ÷ A = GALLONS

IWER: B÷A=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÷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 ÷ A = GALLONS

IWER: B÷A=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÷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 x B=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.

PINK PAGE

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

IWER: 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.

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 or D) ÷ E = 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.

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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

Number		
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**? *N=522, mean=50.67, median=25, mode=20, range=1-2000*

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

54. And finally, just a few questions to make sure our sample is representative. How many **people** live in your household? *N=666, mean=3.05, range=1-10*

ENTER #	___ ___
DK	98
NA	99

55. How many of them are aged **18 and over**? *N=666, mean=2.18, range=1-5*

ENTER #	___ ___
DK	98
NA	99

56. In what **year were you born**? *N=662, median=1955 (age 46), range=1911-1987*

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.

Margaret Chase Smith Center for Public Policy
University of Maine

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

Name	*Telephone*	*E-mail*	*Interviewer #*
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!
Okay.
Right.
Right on.
Me too.
I'll say.
You bet.
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.
I don't like that, either.
Good.
Excellent.
Cool.
Way cool.
Ain't it the truth.
Awesome!!

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 to75 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.

Sample Cover Sheet

ATV

ID: 03978 GEOCODE: 03300

Logged_____
_
Edited_____
Coded_____
Entered_____
Verified_____

Merry Atvrider
151 Happy Trails Road Houlton, ME 04730
Year: 96 Make: HONDA Reg# A3705

Maine Legislature
Commission to Study Equity in the Distribution of Gas Tax Revenues

Call Slot	Day of week	Date	Time, with am/pm	Notes	Disp. code	Iwer #
				Phone #		

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 tome), 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.

APPENDIX E

Gasoline Consumption Attributable to Snowmobile Use 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

Margaret Chase Smith Center for Public Policy
The University of Maine

Jonathan Rubin
Suzanne K. Hart
Charles Morris

Orono, Maine
July 16, 2001

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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 Kilkelly, and Representative Joseph Clark, and Patrick Norton, Office of Policy and Legal Analysis, for their invaluable assistance. We also are grateful to the snowmobile owners and operators who took the time to give thoughtful responses to the survey.

Gasoline Use Attributable to Snowmobiles in Maine
Executive Summary

Prepared for the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft by the Margaret Chase Smith Center for Public Policy, University of Maine, July 2001

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 second of three, presents the results of a survey of snowmobile users whose snowmobiles were registered in the State of Maine during 2000. In June of 2001, telephone interviews were completed with 635 randomly selected Maine resident and nonresident snowmobile owners. The study had a cooperation rate of 82% among persons who were successfully contacted. The survey data show that the operators of registered snowmobiles purchased an average of 87.4 gallons (rounded to the nearest tenth) of gasoline during the most recent one-year period ending in June 2001. Since there were 95,334 (in-state and out-of-state) registered snowmobiles this means that the total quantity of fuel purchased in Maine in 2000 by Maine-registered snowmobiles was 8,336,275 gallons. The excise tax on gasoline imposed by the State of Maine is $0.22 per gallon. Therefore, the operator of a Maine-registered snowmobile pays *on average* $19.24 per year per snowmobile, and operators of all Maine-registered snowmobiles together pay $1,833,981 per year in Maine gasoline fuel excise taxes. This estimate does not include gasoline use by snow groomers which are included in the snowmobile registration records.

Since these data were gathered from a random sample rather than the entire population of all Maine-registered snowmobiles, the quantity of average and total fuel purchased 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 of fuel purchases for the population of all resident and nonresident registered snowmobiles will be within the confidence interval. The confidence interval for average fuel purchased in Maine per registered snowmobile ranges from 80.1 to 94.8 gallons per year. The total quantity of tax paid to Maine by operators of Maine-registered snowmobiles falls within the range from $1,679,908 to $1,988,053 with the expected (mean) value of $1,833,981.

Total gas tax collections for fiscal year 2000 were $146,190,243 with $894,842 returned to the Department of Conservation's snowmobile trail fund and $71,537 returned to the Department of Inland Fisheries and Wildlife to support snowmobile registration (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine-registered snowmobiles represent 1.3% of all State gasoline excise tax receipts. At the same time, the revenues returned to support snowmobile programs represent 52.7% of the estimated revenues collected from Maine-registered snowmobiles.

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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 all-terrain vehicle 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 purchases for Maine-registered snowmobiles was determined through telephone survey interviews with the owners or operators of a random sample of snowmobiles registered in Maine. The snowmobiles whose owners would be interviewed were selected randomly by the Margaret Chase Smith Center for Public Policy, using the file of vehicles with registrations for the immediate past snowmobile season. That file was provided by InforMe, a company that maintains the records for the State of Maine. 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 snowmobiles in all geographic areas of the state as well as those with nonresident season and three and ten-day registrations had a chance of selection directly proportional to the number of snowmobiles in their area. The interviews took place from June 4 through June 26, 2001.

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 April 9, 2001 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.

Survey implementation

From the State's list of registered snowmobiles, a random sample of registered snowmobiles was drawn, including those with Maine resident registration, nonresident season registration, and

[1]Geocodes 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.

three- and ten-day nonresident registration, proportional to their numbers on the registration lists. Unregistered 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 snowmobiles). 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 data were double entered to check for input accuracy. Extreme values of fuel use were also checked by hand.[2] 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; 5 responses (representing 0.8% of total responses) of no fuel use were verified. All very large values of fuel use (650 gallons per year or more) were hand-checked for accuracy and internal consistency.

The highest reported amount of gasoline used was 1,600 gallons per year. An additional telephone call to the respondent verified that the vehicle in question is a snow groomer, and that it uses gasoline, not diesel fuel. Additional examination of the snowmobile registrations identified 35 snow groomers, seven of which use diesel fuel. The diesel powered groomers were then purged from our registration lists, reducing the number of registered vehicles by seven.

[2]In particular, the data were key entered using a data entry program that forces consistency in following skip instructions in critical portions of the questionnaire (so that gasoline use cannot be inadvertently double-counted), and disallows out-of-range codes (e.g., a code 5, when only codes 1, 2, or 3 are possible).

Survey Disposition and Response Rate

From InforMe, the Margaret Chase Smith Center for Public Policy obtained the Department of Inland Fisheries and Wildlife lists of 80,467 resident, and 15,098 nonresident season and three and ten day snowmobile registrations for the past year, from June 2000 to the end of the snowmobile season in the spring of 2001. From those lists, 196 nonresident duplicate records were identified and removed, and 87 records with Maine addresses in the nonresident file were removed and seven records of known diesel powered snow groomers were removed. From those lists, a random sample of 1,663 registered snowmobiles was drawn. The lists contain no telephone numbers. Although they are collected on the registration application form, they are not key-entered. From the 1,663 in the sample, possible phone numbers were identified for 1,153 individuals from a search using at least two different Internet search engines. Attempts to contact sample members were made between 5:00 and 9:00 p.m. weekday evenings, from 9:00 a.m. to 1:00 p.m. Saturdays, and from 5:00 to 9:00 p.m. Sundays. Some sample members asked to be contacted during the daytime and contact attempts were made when specified. A total of 4,242 contact attempts were made during the survey, which was conducted from June 4 through June 26, 2001. Nearly three-quarters of the completed interviews were conducted within the first three call attempts. An average of 8.1 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	635	38.2 %
No phone # available	510	30.7 %
Unable to contact	167	10.0 %
Refused	136	8.2 %
Wrong number	96	5.8 %
Ineligible	78	4.7 %
Disconnected, not in service	32	1.9 %
Complete, not entered	2	.1 %
Terminated by respondent	7	.4 %
Total in sample	1663	100. %

During the course of attempting to contact sample members, 78 were determined to be ineligible for participation in the survey primarily because they did not own the selected snowmobile during the period covered by the survey or because they would not be available for an interview during the interview period. Thirty-two phone numbers were either not in service or were disconnected and 96 were wrong numbers. An additional 167 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 780 eligible individuals. Of those, 136 refused to participate in the survey, seven were terminated at respondents' request before completing the interview, and two interviews were completed after compilation of the final data file and were

not included in the analysis. Interviews were completed with 635 individuals resulting in a survey cooperation rate of 82%. See Table 2 for details.

Table 2: Outcome when Eligible Respondent was Contacted

Outcome	Number	Percent of Those Contacted
Completed an interview	635	81.6%
Refused	136	17.5%
Terminated by respondent	7	.9%
Complete, not entered	2	.3%
Total contacted	780	100.0%

Results from the Survey

Geographic distribution of all Maine-registered snowmobiles

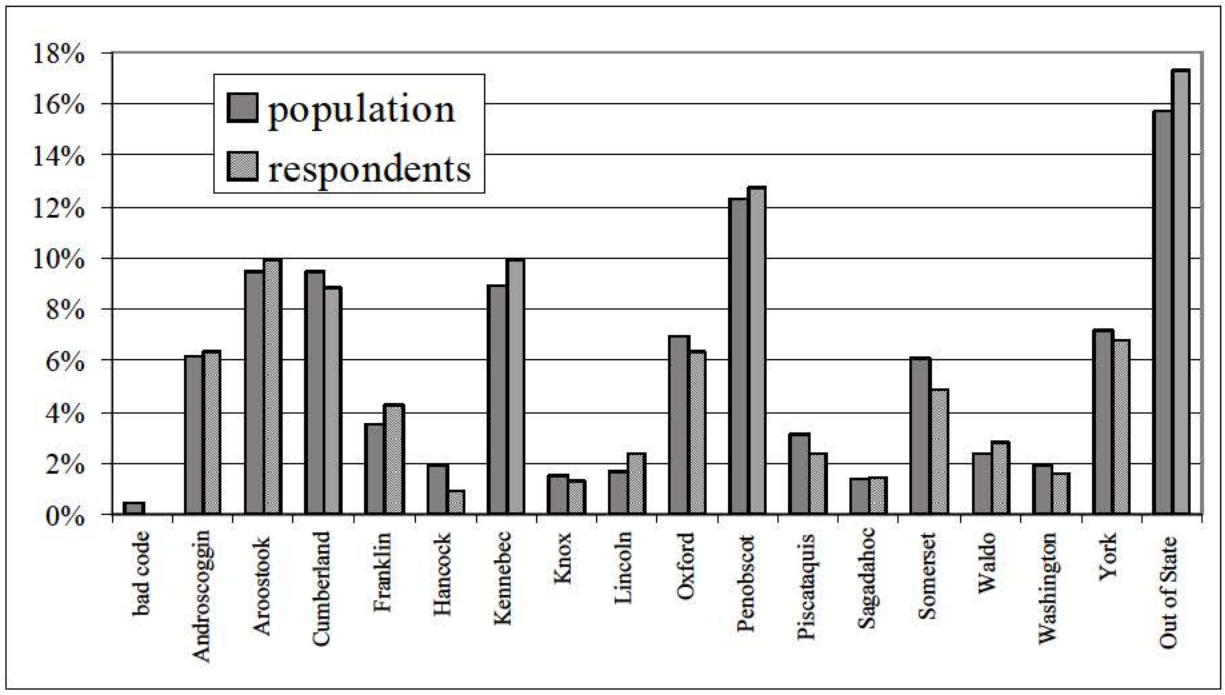
The geographic distribution of the owner-operators of all Maine-registered snowmobiles includes all 16 Maine counties as well as 6% from out of state. As is seen in Table 3 and Figure 1, this same geographic distribution is represented very well in the sample of 635 individuals who completed interviews. This means that our results represent the geographic diversity of snowmobile owners.

Table 3: Geographic Location of Registered snowmobiles and Survey Respondents

County	Population		Respondents	
	number	percent	number	percent
bad code	448	0.47%	0	0.00%
Androscoggin	5,906	6.19%	40	6.30%
Aroostook	8,995	9.43%	63	9.92%
Cumberland	8,989	9.43%	56	8.82%
Franklin	3,335	3.50%	27	4.25%
Hancock	1,837	1.93%	6	0.94%
Kennebec	8,519	8.93%	63	9.92%
Knox	1,441	1.51%	8	1.26%
Lincoln	1,630	1.71%	15	2.36%
Oxford	6,605	6.93%	40	6.30%
Penobscot	11,717	12.29%	81	12.76%
Piscataquis	2,973	3.12%	15	2.36%
Sagadahoc	1,340	1.41%	9	1.42%
Somerset	5,797	6.08%	31	4.88%
Waldo	2,236	2.34%	18	2.83%
Washington	1,834	1.92%	10	1.57%
York	6,813	7.14%	43	6.77%
Out of state	14,954	15.68%	110	17.32%
Total	95,369*	100.	635	100

* includes 7 known diesel powered snow groomers

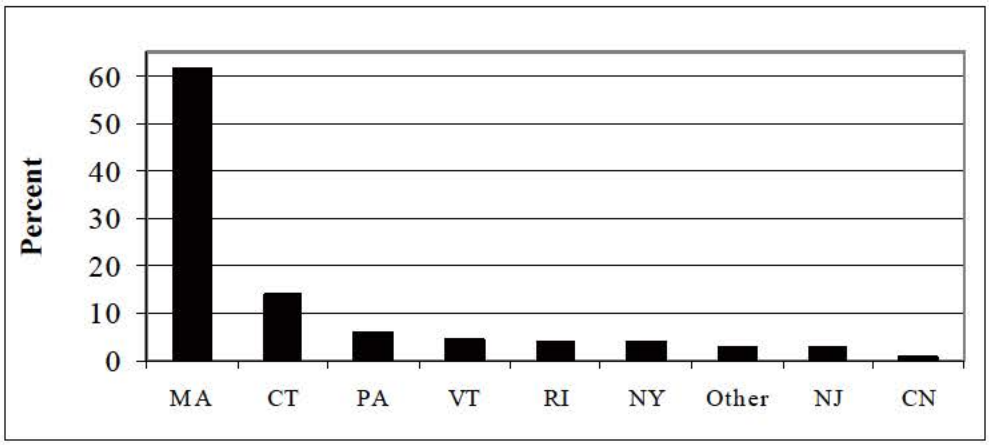
Figure 1: Geographic Location of Registered Snowmobiles and Survey Respondents



Geographic distribution of out-of-state, Maine-registered snowmobiles

As is shown in Figure 2, 61% of all out-of-state snowmobiles that are registered in Maine are from Massachusetts. Nonetheless, there are at least one or more snowmobiles registered in Maine from 29 states and Canada. The absence of a substantial number of registered snowmobiles from New Hampshire reflects the existing reciprocity agreement. It is likely that operators of New Hampshire sleds purchase some gas in Maine as they ride Maine trails. However, it was determined by the Commission that conducting a parallel survey of New Hampshire snowmobile riders was beyond the scope of this study.

Figure 2: Distribution of Out-of-State Maine-Registered Snowmobiles



Gasoline use by snowmobiles

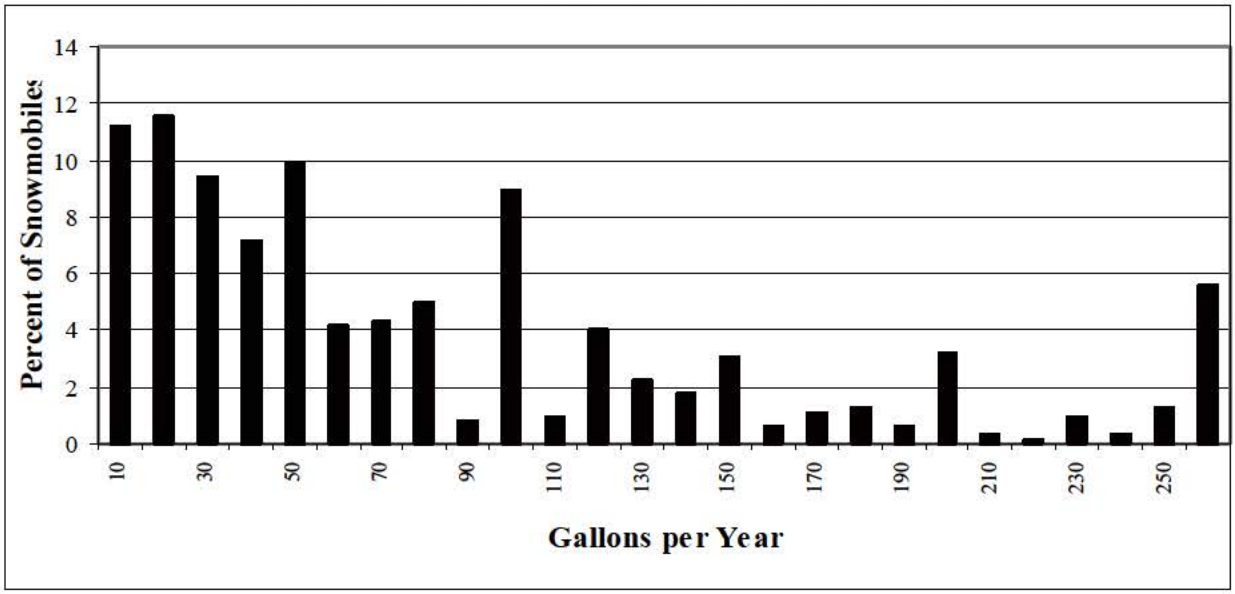
In our sample, the operator of an average registered snowmobile purchased 87.4 gallons of gasoline (rounded to the nearest tenth) in Maine during the most recent one-year period ending in June 2001. Since our sample is a random sample of the population of all registered snowmobiles in the State of Maine, we can estimate the total quantity of gasoline purchased in Maine for use in registered snowmobiles based on our sample. Given that there are 95,334 registered snowmobiles (resident and nonresident registrations), this means that the total quantity of fuel purchased in Maine for Maine-registered snowmobiles was 8,336,275 gallons in the one-year snowmobile season ending in June of 2001.

Since these data were gathered from a random sample rather than from the entire population of all Maine-registered snowmobiles, the quantity of average and total fuel purchased 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 of fuel purchased for the population of all snowmobiles will be within the confidence interval. See Appendix 1 for additional details on statistical accuracy. The confidence interval for average fuel purchased per registered snowmobile ranges from 80.1 to 94.8 gallons per year. This translates into a 95% confidence interval for total gasoline purchased in Maine of 7,635,946 to 9,036,602 gallons per year in the year ending June 2001.

In addition to what are commonly thought of as snowmobiles, the registration files include snow groomers. The random sample included one of these vehicles, and an interview was conducted with its operator, who reported that it used 1,600 gallons of Maine-purchased gasoline in the past season. In order to avoid giving the fuel used in that vehicle undue weight in the study, an inventory of the likely groomer manufacturers represented in the entire file of registered vehicles was performed, and information was sought from a groomer distributor. As a result, 28 groomers that are likely to use gasoline, not diesel fuel, were identified, and seven known diesel groomers were removed from the base from which total fuel use is calculated. If all 28 gasoline powered groomers used 1,600 gallons on average, then Maine-registered snow groomers would have consumed 44,800 gallons of gasoline during the last season. We do not know whether the randomly selected groomer's gasoline consumption is typical of all groomers. We, therefore, have not included this vehicle in the calculations of gasoline used and revenue generated from the gasoline, except as noted here.

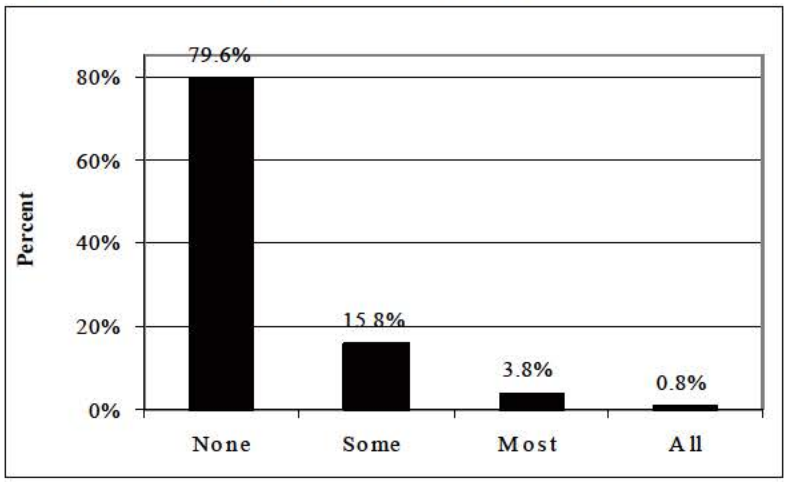
The distribution of Maine annual gasoline purchases in snowmobiles is shown in Figure 3. The average number of gallons purchased is 87.4, and it is clear that the average (or mean) reflects a large number of vehicles that use fewer than 87.4 gallons of gas bought in Maine. A very small number use far more. Employing the mean for the calculation of gasoline purchases and confidence intervals is appropriate because of its statistical properties. To describe typical gasoline use by snowmobiles, the median is also helpful. The median for this distribution is 55.5 gallons. That means that half the vehicles use more than 55.5 gallons of Maine-purchased gasoline, and half use less.

Figure 3: Snowmobile Gasoline Purchased in Maine



Most of the gasoline consumed by Maine resident and nonresident registered snowmobiles was purchased in Maine; 80% of respondents stated that they bought none of their gasoline out of state (see Figure 4).

Figure 4: Snowmobile 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 snowmobile contributes *on average* $19.24 (rounded to the nearest cent) per year, and all Maine resident and nonresident registered snowmobiles, excluding known groomers, contribute $1,833,981 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 snowmobiles ranges from $1,679,908 to $1,988,053 with the expected value of $1,833,981.

Total gas tax collections for fiscal year 2000 were $146,190,243 with $894,842 returned to the Department of Conservation's snowmobile trail fund and $71,537 returned to the Department of Inland Fisheries and Wildlife to support snowmobile registration (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine-registered snowmobiles, excluding groomers, represent 1.3% of all State gasoline excise tax receipts. At the same time, the revenues returned to support snowmobile programs represent 52.7% of the estimated revenues collected from Maine-registered snowmobiles.

Characteristics of snowmobile-owning households

The sampling procedure used in this study targeted individual vehicles, not owners, households, or businesses. Therefore, questions about the household, the snowmobile riders, and other vehicles owned by persons in the household were included to provide a more complete picture of snowmobile ownership, ridership, and use in Maine. Forty-four of the 635 study snowmobiles are used at least occasionally for commercial purposes, and only one is reserved exclusively for commercial use. Because so few of the snowmobiles are used for anything other than home-based activities, we refer here to snowmobile-owning "households."

Seventy-three percent of the households in this study have more than one snowmobile. The number of snowmobiles in the households ranges from zero (the selected sled was sold during the past season) to a high of twenty-five, with an average (mean) of 2.3 snowmobiles per snowmobile-owning household. In at least two instances (the household with twenty-five sleds and one with twenty) the owners are collectors of antique and older snowmobiles. When the two collector households are excluded, the mean number of snowmobiles per household is slightly lower, but it still rounds to 2.3 per household. Snowmobiles are used by an average of 2.4 persons per household, and by persons outside the household in 21% of the cases.

The average age of snowmobile riders in the snowmobile-owning households is 34 years, ranging from infants to age 88. 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. They have been riding snowmobiles for an average of 19 years, ranging from new riders with less than one year of experience to a veteran of sixty-eight years. Almost half (46%) belong to a snowmobile club.

Slightly less than half (48%) of the snowmobile-owning households own one or more gasoline-powered boats, and 39% own one or more all-terrain vehicles (ATVs).

Characteristics of the selected snowmobiles

The predominant manufacturers are Arctic Cat (25%), Polaris (32%), Ski Doo (29%), and Yamaha (13%). Fewer than 1% of the sleds are made by other manufacturers. The snowmobile make is recorded in the files maintained by InforMe only for vehicles with regular Maine resident registration, not for nonresident registrations. The nonresident manufacturer information is obtained from the respondents' interviews. The percentages of vehicle makes among respondents to the study correspond closely to the percentages of manufacturers represented in the file of Maine resident registrations as transmitted by InforMe.

Half the vehicles in the survey were manufactured in 1995 or later. Their owners have had them for an average of four and a half years. Most (90%) are two-stroke vehicles. Most (92%) have an odometer.

The most common engine size is 500 cc (16% of the snowmobiles in the study), and 95% of the machines have 700 cc engines or smaller. One in ten is a small machine with an engine size of 340 cc or less.

How the snowmobiles are used

In 34% of the households with more than one snowmobile, the selected snowmobile is used more than the other(s); in 43% it is used about the same; and in 23% 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 snowmobiles are used *less* than the other snowmobiles 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. Many of the vehicles are clearly used for multiple purposes. Almost all (97%) of the sleds are at least sometimes used in recreation (defined in the question as "riding for fun"), and 36% are used exclusively for that purpose. Only 7% of the vehicles are ever used for commercial purposes in a job or business. Less than half (43%) are used at least sometimes for hunting, ice fishing, or trapping (not as part of a job), and 15% are used often or only for that purpose. Few (14%) are ever used in land management. More than one-quarter are used in trail maintenance and grooming: one vehicle is used exclusively for that purpose, 5% are often used, and 21% are sometimes used in grooming work.

Most snowmobile use is clearly recreational. Half the owners (51%) say they often ride the vehicles for fun, and another 36% use them for that purpose exclusively. Nine percent say they only "sometimes" ride the selected snowmobile for fun, and only 3% of the vehicles are never used for recreation.

Where the snowmobiles are ridden

Just as the snowmobiles are used for multiple purposes, their owners ride them in multiple types of venues. Much snowmobile riding is done on the owner's private land, or that of others: 43% ride often on their own land or that of their family, and an additional 32% say they do so sometimes. Three-quarters (75%) ride at least sometimes on public lands. Most (92%) ride on private land that belongs to others. Almost all (93%) ride on designated snowmobile trails.

Most riders (85%) at least sometimes trailer their snowmobiles to a place to ride them, and 20% always do so.

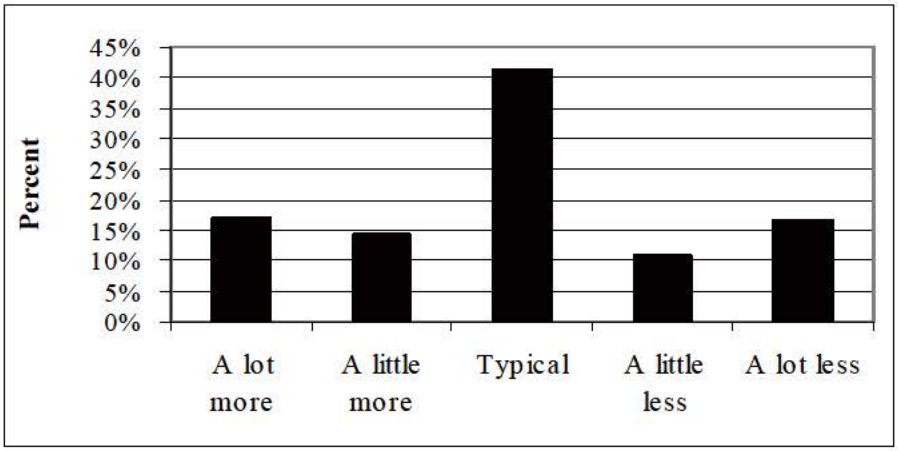
Most of the operators (80%) buy all of their gas for the selected sled in Maine. Among the remainder, 16% buy some gas outside Maine, and 4% buy most of their gas outside Maine. When only the operators of sleds with regular Maine resident registrations are considered, 89% say they buy all their gas within Maine. The low frequency of out-of-state-gas purchases means that most of the gasoline used by the snowmobiles in this study produces gasoline tax revenues in Maine. Snowmobilers are mobile: only one-third (33%) generally buy gas at the same place each time.

The analysis of gasoline purchases in Maine, described in detail elsewhere in this report, is based on questions that emphasize purchase and use *in Maine*. Therefore, while many of those with nonresident registrations may operate their sleds in states besides Maine, they were asked to report only their purchase and use of Maine gasoline in this study.

Riding patterns: outings and trips

Snowmobile riders travel an average of 73 miles at an outing, with trips ranging from less than a mile to 700 miles. Half the trips are fifty miles long or more. On average, the snowmobiles were ridden on an average 23 days in the 2000-2001 season. Use varied from none to a reported 218 days.

Figure 5: Riding This Year Compared to Other Years



Riding patterns: was 2000-2001 a typical year?

The past winter, 2000-2001, is often described as producing much more snow, for a longer period of time, in a more extensive geographic area, than other recent winters. There has been speculation that there may have been more snowmobile riding in the past year than in less snowy years. These data do not show an overall increase in riding by those who have ridden these particular sleds more than a year: 17% said they rode this sled a lot more this past year than other years, 14% said they rode a little more, 41% said their riding was typical, 11% said they rode a little less, and 17% said they rode a lot less, see Figure 5.

Riding habits: safety

Most (84%) snowmobilers more often ride in a group, rather than alone. Half (51%) carry a passenger at least sometimes.

Many (85%) at least sometimes ride their sleds at night.

More than nine in ten (92%) snowmobile riders wear a helmet all the time. A small percentage (3%) never wear one.

When asked which of four options is the best way to ensure that trails are safe for everyone, the operators selected education (39%) most often, followed by trail design (29%), presence of law enforcement officers (14%), and rules and regulations (10%). Some operators were unable to select among the offered choices and volunteered other responses or insisted that all of the choices were equally important. Some mentioned specific rules, such as speed limits and tougher OUI laws; others suggested better or more signs.

Riding habits: long trips

Snowmobilers are fairly evenly divided among those who like best to ride near home (42%), or far away (44%). The remaining 14% volunteered that the distance from home does not matter to them.

Slightly more than half (53%) took a weekend or longer trip primarily for snowmobile riding during the past season. Almost two-thirds (63%) of those who took the trips stayed in commercial lodging (the remainder probably stayed with relatives or friends). The average stay in commercial lodging was 6.4 nights, ranging from 1 to 90 nights. Half the stays were of 4 nights duration or more. In all, the 207 respondents in this study who occupied commercial lodging spent a total of 1,333 person-nights in those accommodations while they were on trips for snowmobiling. A simple extrapolation from these figures indicates that an estimated 201,774 nights of commercial lodging were attributable to snowmobiling in the past season.

Riding preferences: trail riding and preferred facilities

Most (93%) snowmobilers ride on trails specifically designated and groomed for snowmobiles. Half (51%) of the few who do not currently ride designated trails would like to do so. Among those who use designated trails, there is considerable support for both major and local trails: when asked to choose, 60% prefer the major trails such as the Interconnected Trail System, and 40% prefer smaller local club trails.

Those who ride on trails made specifically for snowmobiles say that the closest such trail to their home is 20 miles or less (82%); 21 to 50 miles (4%); or more than 50 miles (14%). Those who ride the trails made specifically for snowmobiles rate the trail and facilities of the closest trail they ride (which may not be their favorite or the one they frequent the most) as excellent (31%), good (44%), fair (18%), or poor (7%). They rate the safety of that trail as excellent (27%), good (53%), fair (16%), or poor (5%).

Among snowmobile riders who use trails made specifically for snowmobiles or who would like to use such trails, two-thirds (67%) 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 ten thousand or more miles. The average (mean) length suggested is 218 miles (the mean is affected by the few respondents who want trails thousands of miles long), and half the riders say that 80 miles or fewer (the median) would be adequate. The most frequently mentioned length is 100 miles (the mode). Ninety percent of the respondents said trails of 225 miles or fewer would be adequate.

Respondents were asked to describe one characteristic that a good snowmobile 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 respondent. The most frequently mentioned characteristics are signs, markers, and directions (30%); followed by smooth, well-groomed surface (21%); restrooms, rest areas, and picnic areas (10%); gasoline pumps (7%); and wide trails (7%). Other desirable characteristics include snack bars, scenery, easy access and parking, warming huts, bridges, and presence or absence of speed limits. One person, appropriately enough, named snow as the most important feature.

Plans for future snowmobile purchases

Nearly two-thirds (63.7%) of the operators thought they would buy another snowmobile in the next few years. There is an increasing research emphasis on emissions and noise pollution, and some sleds are being marketed as cleaner and quieter machines. Almost four in ten (39%) of those who thought they would be buying new sleds described themselves as very likely to look specifically for one of the cleaner and quieter sleds, and another 32% said it was somewhat likely

they would do so. The remaining 28% thought it was somewhat unlikely (7%) or not very likely (22%) that they would be looking for the cleaner, quieter machines.

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, snowmobile 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 snowmobile 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 snowmobile 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 635 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 snowmobile 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.

UNIVERSITY OF MAINE
Land Grant University
Sea Grant College

MARGARET CHASE SMITH C·E·N·T·E·R for Public Policy
5715 Coburn Hall
Orono, ME 04469-5715
207-581-1646
Fax: 207-581-1266

Year: XX Make: XXXXX Reg# XXXX

Firstname Lastname
Street, Town, State

May, 2001

Dear Snowmobile owner:

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 snowmobiles, ATVs, and boats in Maine. We have completed a survey of ATV owners and we are now calling the owners of a random sample of snowmobiles. **A snowmobile 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 Fish 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 snowmobile
- what kind of riding you like
- how much gasoline you bought in Maine for this sled in the past season.

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 snowmobile 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.

Yours truly,

Jonathan Rubin, Study Director

(Non-Resident Registration)

UNIVERSITY OF MAINE

Land Grant University
Sea Grant College

MARGARET CHASE SMITH C•E•N•T•E•R for Public Policy

5715 Coburn Hall
Orono, ME 04469-5715
207-581-1646
Fax: 207-581-1266

June, 2001

Dear snowmobile owner:

The records of the State of Maine Department of Inland Fish and Wildlife indicate that you registered one or more snowmobiles for use in Maine during the past season. 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 snowmobiles, ATVs, and boats in Maine, including those used by visitors to our State. **A snowmobile registered to you is in our sample of vehicles.** 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 Fish 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 snowmobile
- what kind of riding you like
- how much gasoline you bought in Maine for this sled in the past season.

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 bought in Maine and the number of miles you rode in Maine during the past season.**

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 enjoyed your stay in Maine and 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.

Yours truly,

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 — Snowmobile Gasoline Use

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 snowmobile owners to see how much gasoline they use in their snowmobiles. 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 Fish 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. We've already done a survey of people who operate an ATV. Later on, we'll be interviewing people who own boats. Right now we're talking with people who have registered snowmobiles in Maine.

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?

No. of cases 603	*94.96%*	YES. . . . . .(GO TO Q4)	1
32	*5.04%*	NO	2

3. (IF DOES NOT OWN NOW) Did you have it at any time during this past snowmobiling season?
("SEASON" = NOVEMBER '00 TO APRIL '01)

33	*94.29%*	YES. . . . . .(GO TO Q4)	1
2	*5.71%*	NO	2

IF NO: FIND OUT WHAT HAPPENED:

- **IF R HAD THE SNOWMOBILE DURING SOME PART OF THE SEASON, CONTINUE THE IW, EVEN IF IT WASN'T USED.**
- IF R **DID NOT** HAVE THE SNOWMOBILE DURING ANY PART OF THE YEAR, MAKE IWER NOTE AND TERMINATE:
  "Thank you, but we're only talking with people who had registered snowmobiles this past year. I'll make a note here." EXIT

INAP (CODED 1 IN Q2) 0

4. **Counting this sled with Registration #_____, how many snowmobiles** do you have in your household? *N=631; mean=2.32; range=0-25*

ENTER NUMBER. . . . . (IF 0 OR 1 GO TO Q6)	___ ___
DK	98
NA	99

5. (ASK ONLY IF THERE ARE OTHER SNOWMOBILES IN THE HOUSEHOLD: Q4 IS MORE THAN ONE) Does this snowmobile **get used more**, about the **same**, or **less** than the other sleds in your household?

158	*34.13%*	THIS ONE USED MORE	1
200	*43.20%*	THIS ONE ABOUT THE SAME	2
105	*22.68*	THIS ONE USED LESS	3
		DK	8
		NA	9
		INAP (NO OTHER SNOWMOBILES IN HOUSEHOLD)	0

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

N=633; mean=2.4; range=0-12	ENTER NUMBER:	___ ___
	DK	98
	NA	99

6a. 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 SNOWMOBILE

N=1,522 persons; mean=34.32; range=1-88

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

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

497	*78.52%*	NO, NONE	0
56	*8.85%*	ONE	1
42	*6.64%*	TWO	2
38	*6.00%*	THREE OR MORE	3
		DK	8
		NA	9

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

N=631; mean=0.72; range=0-7

ENTER # OF BOATS	___ ___
NONE	00
DK	98
NA	99

9. Does anyone in your household own any **ATV's -- all-terrain vehicles**? (IF YES: How many ATVs?)

N=633; mean=0.56; range=0-4

ENTER # OF ATVs	___ ___
NONE	00
DK	98
NA	99

10. How many years have you yourself been **riding snowmobiles**?

N=628; mean=19.39; range=<1-68

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

11. Thank you. Now, let's **go back to that snowmobile that we randomly selected**. That's the one with registration tag (READ TAG NUMBER)_____.
That's a **(MAKE/BRAND NAME)**, right? Let me get that down here...

159	*25.04%*	ARCTIC CAT	1
1	*0.16%*	BOMBARDIER	2
205	*32.28%*	POLARIS	3
185	*29.13%*	SKI DOO	4
81	*12.76%*	YAMAHA	5
4	*0.63%*	OTHER (ENTER BRAND NAME_____)	7
		DK	8
		NA	9

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

ENTER MODEL_____ AND CIRCLE "1" 1
DK 8
NA 9

13. What is its **engine size in cc's**? *N=580; mean=515; median=500; mode=600, range=*80-1000

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

14. Is it a **2-stroke or a 4-stroke** engine?

554	*90.38%*	2-STROKE	1
54	*8.81%*	4-STROKE	2
5	*0.82%*	SOMETHING ELSE (VOL.) (What is it?_____)	7
		DK	8
		NA	9

15. This sled is a (**YEAR**), right? *N=635; median=1995; mode=1998; range=1969-2001*

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

16. For **how many years** have you owned it? *N=631; mean=4.4; median=3.0; range=0-27*

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

16a. IF LESS THAN A YEAR, # OF MONTHS . . . . . ___ ___
(LESS THAN 1 MONTH, ENTER 01)
DK 98
NA 99
INAP, ENTERED YEARS 00

17. Does it have an **odometer**? (mileage meter)

578	*92.19%*	YES	1
43	6.86%	NO	2
6	*0.96%*	YES, BUT IT DOESN'T WORK (VOL.)	7
		DK	8
		NA	9

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

	ONLY*	OFTEN	SOME-TIMES	NEVER
a. Commercial use in your job or business	*1 0.16%*	*6 0.95%*	*37 5.85%*	*589 93.05%*
b. Hunting, icefishing, trapping — but not as part of a job	*7 1.11%*	*88 13.90%*	*176 27.80%*	*362 57.19%*
c. Land management on your land	*0 0.00%*	*13 2.06%*	*74 11.71%*	*545 86.23%*
d. Trail grooming, trail maintenance	*1 0.16%*	*33 5.22%*	*131 20.73%*	*467 73.89%*
e. Recreation — riding for fun	*229 36.23%*	*323 51.11%*	*60 9.49%*	*20 3.16%*
f. (UNLESS ONE ABOVE IS "ONLY") Anything else? (What?)_____	*3 0.49%*	*9 1.48%*	*5 0.82%*	*593 97.21%*

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

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

	OFTEN	SOME TIMES	NEVER
a. Public lands owned by the state or the town. (EXPLAIN: That includes State Parks, game management areas, public reserved areas)	*215 34.13%*	*258 40.95%*	*157 24.92%*
b. Private land that is yours or your family's	*272 42.97%*	*205 32.39%*	*156 24.64%*
c. Private land belonging to someone else	*395 62.50%*	*184 29.11%*	*53 8.39%*

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

124	*19.65%*	ALWAYS	1
125	*19.81%*	OFTEN	2
286	*45.32%*	SOMETIMES	3
96	*15.21%*	NEVER	4
		DK	8
		NA	9

21. 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 snowmobile**.

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

210	*33.23%*	USUALLY SAME PLACE	1
422	*66.77%*	DIFFERENT PLACES	2
		DK	8
		NA	9

22a. How much gas do you buy for this sled **outside of Maine**: **none** of it, **some**, **most**, or **all** of it from **outside** of Maine?

503	*79.59%*	NONE FROM OUTSIDE	1
100	*15.82%*	SOME	2
24	*3.80%*	MOST	3
5	*0.79%*	ALL	4
5	*	BOUGHT NO GAS AT ALL, IN OR OUT OF MAINE (VOL.)	7
		DK	8
**not incl. in percentages*		NA	9

22b. What kind of snowmobile registration did you have for this sled this past season: was it...

523	*83.02%*	a regular Maine resident registration,	1
76	*12.06%*	a nonresident season registration, or	2
31	*4.92%*	nonresident 3 or 10 day pass(es)?	3
		DK	8
		NA	9

23. Now we are coming to some questions about **how much gas you bought in Maine for this snowmobile 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.

IWER NOTE: WE WANT REPORTS OF ONLY **MAINE-BOUGHT** GAS. IF R HAS A **NON-RESIDENT** REGISTRATION OR SHORT-TERM PASS (Q22b), BOUGHT AT LEAST SOME GAS OUT OF STATE (Q22a), OR HAS AN OUT-OF-STATE ADDRESS, SAY "We are interested only in the gas you bought in Maine — not gas bought outside of Maine."

Before I go any further — do you happen to **know how many gallons of gas** you bought for this snowmobile in the past year (in Maine)?

YES (How many is that?) ENTER#, GO TO Q31 (NEXT WHITE PAGE) . . .	___ , ___ ___ ___
NO OR DK	 9998

===>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.

24. 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 Q25 (BLUE)	 1
HOURS OF RIDING TIME. . . . . ===>GO TO Q26 (GREEN)	 2
GALLONS ALONE. . . . . ==>GOTO Q29 (PINK)	 3
AMOUNT OF MONEY. . . . . .===> GOTO Q30 (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 Q23)	 0

The data from the questions concerning gasoline use were extracted from the responses given to questions Q23 to Q30. While there are several methods by which respondents could arrive at their estimates of the amount of gasoline they bought in Maine, only one estimate was obtained from each respondent. A summary of the derived measures is presented below.

Gasoline bought in Maine by snowmobile operators

The mean number of gallons of gas bought in the 2000-2001 season by the operators of non-groomer snowmobiles in the study is 87.4 gallons, with a range of 0 to 800 gallons. The gas usage calculations are based on 621 cases. One gasoline-using snow groomer was identified among the responses. Including its Maine-purchased gasoline in the data yields an average gasoline-purchase figure of 89.9 gallons.

Miles the snowmobiles were ridden

Respondents indicated the number of miles they rode in Q25b if they used miles per gallon to calculate their gas use, as 93 respondents did. If respondents did not use that method to calculate their gas use, they were asked the number of miles they rode in Q32; 466 respondents provided a number of miles in response to that question. If a respondent was not able to give a number of miles, and approximation was obtained in Q33; those frequencies are reported at Q33 in this presentation.

The sum of miles ridden by the 559 respondents in Q25b and Q32 combined is 533,353; the mean is 954.1 miles, and the range is 0 to 7,300.

BLUE PAGE

*****MAINE GAS ONLY******

25. IF MILES PER GALLON(CODED 1 IN Q24):

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

ENTER # OF MILES PER GALLON **(A)** . . . . . ___ ___ ___ • ___

b. And about how many **miles** did you drive (in Maine)?

ENTER # OF MILES **(B)** . . . . . ___ ___ , ___ ___ ___

B ÷ A = GALLONS

IWER: B÷A=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÷A) _____** gallons of gas over the past year (in Maine). **Does that sound right?**

YES. . . ====>CIRCLE CODE 1 1
====>ENTER # OF GALLONS R SAYS
"SOUNDS RIGHT" . . . . . ___, ___ ___ ___
====>GO TO Q31.

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.

*****MAINE GAS ONLY*******

IF HOURS OF RIDING TIME (CODED 2 IN Q24):
26. Would that be **hours of riding per gallon**, or **gallons per hour of riding**?

HOURS PER GALLON	1
GALLONS PER HOUR----> GO TO Q28	2
DK--TRY ANOTHER METHOD	8
NA--TRY ANOTHER METHOD	9

27. IF HOURS PER GALLON (CODED 1 IN Q26)

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

ENTER # OF HOURS PER GALLON **(A)** . . . ___ ___ ___ • ___

b. And about how many **hours did you ride** (in Maine)?

ENTER # OF HOURS **(B)** . . . ___ , ___ ___ ___

B ÷ A = GALLONS

IWER: B÷A=GALS. CALCULATE: NUMBER OF HOURS **(B)** DIVIDED BY THE NUMBER OF HOURS PER GALLON **(A)**. ENTER THE RESULT IN THE BLANK IN Q27c, BELOW:

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

YES. . •CIRCLE CODE -------->	1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT"	___, ___ ___ ___
•GO TO Q31.	

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.

****MAINE GAS ONLY*****

28. IF GALLONS PER HOUR (CODED 2 IN Q26)

This means that you use more than one gallon per hour, right?

a. Approximately how many **gallons per hour**, on average, did you use in your snowmobile in the last year?
ENTER # OF GALLONS PER HOUR **(A)** . . . . . ___ ___ ___ • ___

b. And about how many **hours did you ride**(in Maine)?
ENTER # OF HOURS **(B)** . . . . . ___ , ___ ___ ___

A x B = GALLONS

IWER: A x B=GALS. CALCULATE: NUMBER OF GALLONS PER HOUR **(A)** TIMES THE NUMBER OF HOURS **(B)**. ENTER THE RESULT IN THE BLANK IN Q28c, 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 (in Maine). **Does that sound right**?

YES. . •CIRCLE CODE --------> 1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ___, ___ ___ ___
•GO TO Q31.

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.

PINK PAGE

*****MAINE GAS ONLY*****

29. GALLONS (CODED 3 IN Q24)

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

FILL snowmobile TANK DIRECTLY FROM PUMP	1
FILL snowmobile 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 (in Maine)?

ENTER # OF TIMES **(C)** . . . . . ___ ___ ___

B x C = GALLONS

IWER: MULTIPLY THE # OF GALLONS **(B)** BY THE # OF TIMES **(C)**, AND ENTER THE RESULT IN THE BLANK IN **Q29d** BELOW:

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

YES. . •CIRCLE CODE -------->	1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT"	___, ___, ___, ___
•GO TO Q31.	

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
*****MAINE GAS ONLY*****

30. AMOUNT OF MONEY (CODED 4 in Q24)

a. Do you know **how much you spent** on gas for this vehicle over the past year (in Maine)? (What was that?) (ROUND CENTS TO NEAREST $)

ENTER DOLLAR AMOUNT **(A)** -------->GO TO Q30e . . . . . $___ ___ ___ ___
DK YEAR'S $ AMOUNT 9998

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 (in Maine)?

ENTER # TIMES **(C)** . . . . . ___ ___ ___

IWER: MULTIPLY THE $ AMOUNT **(B)** BY THE # OF TIMES **(C)**, AND ENTER IN BLANK IN **Q30d** BELOW:

d. My calculations show that you spent about $_____ on gas for this vehicle last year (in Maine). **Does that sound right**?

YES: ENTER $ **(D)** . . . . . $ ___ , ___ ___ ___
NO: GO BACK AND RE-FIGURE

e. The average price of gas in Maine was $1.52 per gallon last year. I'm going to do some arithmetic here — **should I use $1.52** per gallon, or should it be **higher** or **lower** to be close to the average you paid **where you fill up** (in Maine)? (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 or D) ÷ E = GALLONS

IWER: DIVIDE $ SPENT **(A) or (D)** BY THE PRICE PER GALLON **(E)**. ENTER IN BLANK IN **Q30f** BELOW:

f. My calculation shows that you bought about _____ gallons of gas for that vehicle last year (in Maine). **Does that sound right**?

YES. . •CIRCLE CODE --------> 1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ____, ____ ____ ___
•GO TO Q31.

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. ☞ 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?

345	*54.33%*	1--VERY CERTAIN	1
226	*35.59%*	2--	2
47	*7.40%*	3--	3
17	*2.68%*	4--VERY UNCERTAIN	4

IWER COMMENTS:

_____

_____

_____

****

32. **IF R HAS ALREADY GIVEN YOU MILES RIDDEN IN Q25b, GO TO Q33**.

Do you know about **how many miles** this vehicle was ridden **in Maine** in the past year? (How many?) *N=466; mean=857.77; range=0-7,300*

ENTER. # OF MILES. . . . . .=====>.(GO TO Q34)	___ ___ ,___ ___ ___
DK.	99998
NA. . . . =====>(GO TO Q34)	99999
INAP (MILES GIVEN IN Q25b)	00000

33. IF R DK NUMBER OF MILES: I have some **ranges** here. Would you say it was 1,000 miles or more, or less than that?

====> MORE THAN 1,000: Was it 1,500 or more, or less than that?

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

====>LESS THAN 1,000: Was it 500 or more, or less than that?

500 OR MORE	3
LESS THAN THAT:	
===>Was it 250 or more, or less than that?	
250 OR MORE	2
LESS THAN THAT	1

DK	8
NA	9
INAP (MILES REPORTED IN RESPONSE TO Q25b or Q32)	0

Number		
18	*27.27%*	*<250 miles*
12	*18.18%*	*250-499 miles*
17	*25.76%*	*500-999 miles*
8	*12.12%*	*1,000-1,249 miles*
1	*1.52%*	*1,250-1,549 miles*
10	*15.15%*	*1,500 miles or more*

34. Was the time you spent and the distance **this snowmobile** was ridden in Maine this year **typical** of other years that this snowmobile was ridden, or was it ridden more this year, or less this year than other years?

		--RIDDEN **MORE** THIS YEAR. ASK: **A lot** more, or a **little** more?	
96	*16.90%*	A LOT MORE THIS YEAR	1
82	*14.44%*	A LITTLE MORE THIS YEAR	2
234	*41.20%*	--**TYPICAL** USE THIS YEAR	3
		--RIDDEN **LESS** THIS YEAR, ASK: **A lot** less, or a **little** less?	
62	*10.92%*	A LITTLE LESS THIS YEAR	4
94	*16.55%*	A LOT LESS THIS YEAR	5
		HAD IT ONLY A YEAR/LESS (VOL.)	7
		DK	8
		NA	9

35. On about how many **days of the past year** did someone ride this snowmobile in Maine?
IWER: IF NECESSARY, HELP R ARRIVE AT A NUMBER OF DAYS THROUGH FINDING OUT PATTERNS OF USE (WEEKENDS IN DECEMBER, VACATION, ETC.)
N=610; mean=23.47; median=16; range=0-218 days

ENTER # OF DAYS	. ___ ___ ___
DK	998
NA	999

36. When you (or someone else) ride(s) this snowmobile, what is the average number of **miles** that it is ridden **at an outing**? *N=606; mean=73.00; median=50; range=0-700*

ENTER # OF MILES	. ___ ___ ___
DK	998
NA	999

37. In this past season, did you travel for a **weekend or longer trip** in Maine, primarily for the purpose of riding your snowmobile?

334	*53.02%*	YES	1
296	*46.98%*	NO. (GO TO Q39)	2
		DK (GO TO Q39)	8
		NA (GO TO Q39)	9

38. Did you pay for any nights in **a motel or other lodging** in Maine on those snowmobiling trips? (IF YES: How many nights?)

ENTER NUMBER OF NIGHTS	. ___ ___ ___
DK	998
NA	999
INAP (CODED 2, 8, OR 9 IN Q37)	997

Number of respondents with long trips but no nights in paid lodging: 127
For those with nights in paid lodging: N=207; mean=6.44; median=4; mode=2; range=1-90.

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

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

102	*16.29%*	MORE OFTEN ALONE	1
524	*83.71%*	MORE OFTEN IN A GROUP	2
		DK	8
		NA	9

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

21	*3.33%*	ALWAYS	1
55	*8.72%*	USUALLY	2
243	*38.51%*	SOMETIMES	3
312	*49.45%*	NEVER	4
		DK	8
		NA	9

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

16	*2.54%*	ALWAYS	1
86	*13.63%*	USUALLY	2
433	*68.62*	SOMETIMES	3
96	*15.21%*	EVER	4
		DK	8
		NA	9

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

581	*91.79%*	ALWAYS	1
16	*2.53%*	USUALLY	2
16	*2.53%*	SOMETIMES	3
20	*3.16%*	NEVER	4
		DK	8
		NA	9

43. Which do you like better: riding near your home, or far away?

265	*41.93%*	NEAR	1
281	*44.46%*	FAR	2
86	*13.61%*	DOESN'T MATTER (VOL.)	3
		DK	8
		NA	9

44. Do you ride on **trails** that are **specifically designated and groomed for snowmobiles**?

589	*93.05%*	YES. . . . . (GO TO Q46)	1
44	*6.95%*	NO	2
		DK. . . . . .(GO TO Q46)	8
		NA. . . . . .(GO TO Q46)	9

45. (IF R DOESN'T USE TRAILS)Would you **like** to use trails made specifically for snowmobiles?

23	*51.11%*	YES . . . . . .(GO TO Q50)	1
22	*48.89%*	NO. . . . . (GO TO Q54)	2
		DK. . . . . (GO TO Q54)	8
		NA. . . . . (GO TO Q54)	9
		INAP (CODED 1, 8, OR 9 IN Q44)	0

46. Which kind of trail do you like **better** — **major designated trails** like the I.T.S., or **smaller local or club trails**? (NOTE: I.T.S. = INTERCONNECTED TRAIL SYSTEM)

326	*60.48%*	MAJOR TRAILS	1
213	*39.52%*	SMALLER LOCAL OR CLUB TRAILS	2
		DK	8
		NA	9
		INAP (CODED 1, 2, 8 or 9 IN Q45)	0

47. **How far away** from your home is the closest trail made specifically for snowmobiles that you ride? Is it...

483	*81.59%*	20 miles or less, ...	1
24	*4.05%*	21-50 miles, or	2
85	*14.36%*	more than 50 miles?	3
		DK	8
		NA	9
		INAP (CODED 1, 2, 8 or 9 IN Q45)	0

48. Thinking of the **closest trail** made for snowmobiles that **you use**, in general, how would you **rate** the trail and any facilities — would you call them **excellent, good, fair, or poor**?

185	*31.36%*	EXCELLENT	1
260	*44.07%*	GOOD	2
106	*17.97%*	FAIR	3
39	*6.61%*	POOR	4
		DK	8
		NA	9
		INAP (CODED 1, 2, 8 or 9 IN Q45)	0

49. On the trail you use that is **closest to you**, how would you rate the **safety** of riding on that trail: excellent, good, fair, or poor?

156	*26.40%*	EXCELLENT	1
311	*52.62%*	GOOD	2
96	*16.24%*	FAIR	3
28	*4.74%*	POOR	4
		DK	8
		NA	9
		INAP (CODED 1, 2, 8 or 9 IN Q45)	0

50. 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**?

408	*67.22%*	WOULD GO AT LEAST 50 MILES	1
199	*32.78%*	50 MILES IS TOO FAR	2
		DK	8
		NA	9
		INAP (CODED 2, 8 or 9 IN Q45)	0

51. In your opinion, **how long** should a **trail system** be to be **adequate for snowmobile recreation**? *N=479; mean=218.15; median=80; mode=100; range=2-10,000 or more*

ENTER # MILES	___ ___ ___ ___
DK	9998
NA	9999
INAP (CODED 2, 8 or 9 IN Q45)	0000

52. If you could pick **one thing** that a good snowmobile trail or facility should have, what would that be?

DESCRIBE_____ *See next page for the frequency distribution*	___ ___
DK	98
NA	99
INAP (CODED 2, 8 or 9 IN Q45)	00

53. What do you think is the **best** way to make sure that trails are safe for everyone (START AT RED STAR). *The "red star" was randomly assigned to rotate the order in which the list was asked.*

174	*28.67%*	trail design	1
63	*10.38%*	rules and regulations	2
83	*13.67%*	law enforcement officers	3
239	*39.37%*	education?	4
48	*7.91%*	OTHER (SPECIFY)_____	5
		DK	8
		NA	9
		INAP (CODED 2, 8 or 9 IN Q45)	0

54. (FOR ALL Rs) Do you belong to a **snowmobile club**?

293	*46.43%*	YES	1
338	*53.57%*	NO	2
		DK	8
		NA	9

55. Do you think you will buy another snowmobile **in the next few years?**

401	*63.65%*	YES	1
166	*26.35%*	NO .....(GO TO Q57)	2
63	*10.0%*	MAYBE (VOL.)	3
		DK .....(GO TO Q57)	8
		NA .....(GO TO Q57)	9

56. (IF YES OR MAYBE BUY NEW SNOWMOBILE) Some of the newest snowmobiles are said to be **quieter and run cleaner**. How likely is it that you would be looking **specifically** for one of those sleds — very likely, somewhat likely, somewhat unlikely, or not very likely?

181	*39.43*	VERY LIKELY	1
148	*32.24%*	SOMEWHAT LIKELY	2
30	*6.54%*	SOMEWHAT UNLIKELY	3
100	*21.79%*	NOT VERY LIKELY	4
		DK	8
		NA	9
		INAP (CODED 2, 8, OR 9 IN Q55)	0

This page is inserted to display the univariate frequencies for open-ended question Q52, "If you could pick one thing that a good snowmobile trail or facility should have, what would that be?" The answer categories were developed from an analysis of the verbatim responses, which were grouped according to their common themes.

24	*4.12%*	*Rest areas, picnic areas*
176	*30.19%*	*Signs, markers, directions*
33	*5.66%*	*Restrooms*
137	*23.49%*	*Smooth trails, good riding surface, grooming*
43	*7.38%*	*Gasoline*
7	*1.20%*	*Scenery*
12	*2.06%*	*Well-maintained (branches trimmed, etc.)*
2	*0.34%*	*Easy access, parking*
40	*6.86%*	*Width, wide trails*
22	*3.77%*	*Snack bar*
7	*1.20%*	*Speed limit*
7	*1.20%*	*Bridges, bridge maintenance*
74	*12.67%*	*Other, not elsewhere classified*

57. And finally, in what **year were you born**? *N=633; median=1958 (age 43); range=1912-1984.*

ENTER YEAR . . . . . ___ ___ ___ ___
DK 9998
NA 9999

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

Enter time now ___ ___ : ___ ___ Circle: a.m. p.m.

DON'T FORGET TO COMPLETE THE IWER RECORD!

****

INTERVIEWER RECORD

Recorded, but not asked of respondent

Respondent's gender

554	*87.24%*	*Male*
81	*12.76%*	*Female*

Respondent's mailing address

527	*82.99%*	*Maine*
108	*17.01%*	*Out of state*

Appendix 4: Snowmobile Interviewer Manual

INTERVIEWER MANUAL

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

Margaret Chase Smith Center for Public Policy
University of Maine

Snowmobile Survey

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

June 2001

INTERVIEWER MANUAL

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

Margaret Chase Smith Center for Public Policy
University of Maine

June 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. We have completed the interviews with ATV operators, and now are starting the snowmobile portion of the study.

We expect 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 snowmobiles from the Department of Inland Fish and Wildlife records. The registration records are maintained and disseminated by a company called InforME. You, as interviewers, will call the owners of those snowmobiles 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 Fish 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.

Margaret Chase Smith Center for Public Policy
University of Maine

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:

1. 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;

2. 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

Ann Acheson, Ph.D., EpiInfo Programmer

Erin Bock, Graduate Assistant

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

Patrick Norton, Project liaison, 287-1670

Interviewers
ATV and Snowmobile Surveys

Name	*Telephone*	*E-mail*	*Interviewer #*
XXXX	XXXX	XXXX	1
XXXX	XXXX	XXXX	2
XXXX	XXXX	XXXX	3
XXXX	XXXX	XXXX	4
XXXX	XXXX	XXXX	5
XXXX	XXXX	XXXX	6
XXXX	XXXX	XXXX	7
XXXX	XXXX	XXXX	8
XXXX	XXXX	XXXX	9
XXXX	XXXX	XXXX	10
XXXX	XXXX	XXXX	11
XXXX	XXXX	XXXX	12
XXXX	XXXX	XXXX	13
XXXX	XXXX	XXXX	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 Snowmobile 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. Wait it out.
•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!
Okay.
Right.
Right on.
Me too.
I'll say.
You bet.
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.
I don't like that, either.
Good.

Excellent.
Cool.
Way cool.
Ain't it the truth.
Awesome!!

Snowmobile 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 Fish and Wildlife, Transportation, and Marine Resources. It's OK to use this shortened form of the Commission name because the notification letter contains the full legal name of the Commission.

•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 snowmobile. 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 a snowmobile?

'Snowmobile' means any vehicle propelled by mechanical power and supported in part by skis, belts or cleats that is primarily designed to travel over ice or snow.

Snowmobilers often call the vehicle a "sled." You may use this term as an alternative to "snowmobile" if R uses the word "sled."

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 snowmobile has been sold. If R isn't the literal owner, but is the one who knows the most about the snowmobile, 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 snowmobile's gas use. If the snowmobile is still owned by the father, record 1 for YES and interview the teenager.

Q3. Conduct the interview if the this R and/or someone connected to this household had the vehicle during at least some part of the past snowmobiling season. The season is the snow season, generally November '00 to April '01. Some of these sleds will probably have had no gas use: that is OK: continue the interview..

Q4. Count all snowmobiles that are reasonably operational and are owned by the household, even if some of them were not functional during the past season. Be sure to count the one that you're going to be asking about.
--Count both registered and unregistered snowmobiles.
--Count only those snowmobiles that are currently owned. If the sled you're asking about was sold during the past registration year, do not count it in the total.
--Enter the number of snowmobiles in the blanks in the coding strip.
A household is the dwelling unit and all the related and unrelated people who live in it at least some part of the year. Let R be the judge of whether someone "regularly" lives there.

Q5. In this question we want to know how much this sled is used relative to others in the household. Be aware of the response to Q4 before you ask this one. Ask this question only if the household has more than one snowmobile. If the household has only one snowmobile, select INAP (INAPPLICABLE) because there are no other snowmobiles in the household to compare with. We may have selected the sled 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.

Q6. 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 ask: "Do you want me to count him?"

Q6a. We want to know the ages of persons who use snowmobiles to better understand the characteristics of people who use them, and to help plan recreational facilities.

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

Q7. If anyone else — outside R's household — uses any of the snowmobiles, 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.

Q8. Count only gasoline-powered boats, not diesel, wind, or muscle-powered. Enter 00 if no one in the household has any gasoline-powered boats. Count the number of boats, not motors.

Q9. Count any reasonably operable ATVs. Enter 00 if there are none.

Q10. 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.

Examples of rounding exact halves to the nearest even number:
•4.5 becomes 4 (4 is the nearest even number to 4.5);
•5.5 becomes 6 (6 is the nearest even number to 5.5).
•5.3 becomes 5 because .3 is not an exact half (only .5 is an exact half), so you round to the nearest whole number;
•5.7 becomes 6 because .7 is not an exact half, so you round to the nearest whole number;
•4.7 becomes 5 because .7 is not an exact half, so you round to the nearest whole number.

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

Q11. From this point, you will be asking about the selected snowmobile only, until after you get past the gasoline use questions. Read the registration tag number from the label in the blank in the question.

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 record it in the blank.

Q13. Engine size is measured in cc's. Engine sizes range from about 120 to 1,000 cc, and are usually in the 500 to 800 cc range. The smaller ones are for younger riders.

Although engine size is often very close to the number in a model name, the actual engine size is often a number such as 785 cc (for a machine with "800" in the model name), 999 (for a 1000), 231 (a 230), 599 (a 600), 497 (a 500), etc. If R knows the actual number of cc's, then record it; however, it is also correct to use the approximate number.

Do not assume that the model number represents the engine size. If R doesn't know engine size, do not suggest that the model number may contain a clue.

Q14. 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.

Some of the newest snowmobile model lines include machines with 4-stroke engines.

Q15. The year is the model year, not the year R acquired it.

Q16. Enter the number of years R has owned the snowmobile. If R has owned it less than a year, circle the 00 in Q15 and enter the number of months in 15a.

Q17. 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.

Q18. In Q18 we want to know the ways in which the selected snowmobile is used. If the snowmobile 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 snowmobile in one's job (a) and also ride it for fun (e). R could use the sled for recreation (e), and also use it to help with trail maintenance (d).

Q19. The categories are not mutually exclusive. Most people probably ride in more than one type of location.

Public lands owned by the state or town include many types of land that may or may not be marked for snowmobile 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.

Q20. Many people take their snowmobiles 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.

Q21. From this point through Q36, 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 snowmobile we selected.

Ask all the questions carefully. The answers are crucial to our ability to estimate the overall amount, in gallons, of gasoline bought and used in Maine in all the snowmobiles that we selected for this survey.

In Q21, 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.

Q22a. We want to be able to account for the gallons of gas bought out-of-state. Therefore, we want to know how much of the gas used in the selected sled is bought outside of Maine. Some of the selected vehicles will have been registered in Maine on 3- or 10-day passes. Therefore, the sled may have had considerable use in another state, and the amount of gas bought in Maine will be small relative to the amount R used for the season. R will have bought MOST of the gasoline outside of Maine.

Q22b. There are several categories of snowmobile registration in Maine. There is a resident registration for Maine residents, a nonresident season registration for out-of-staters, and short-term three-day and ten-day registrations for visitors to Maine.

In this question the responses are in lower case, which means that you read them to R as part of the question (unlike most of the questions). Because the responses here are mutually exclusive, you can stop reading when you reach a YES. It is likely that the Rs with Maine addresses will have regular in-state registrations and the out-of-staters will have either nonresident registrations or the short-term registrations. There may be exceptions, however, so don't assume you know what the response will be.

Q23. 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 an additional clarification to be read to Rs who have, or may have, bought gas out-of-state. If you are interviewing an out-of-stater, or someone who bought some gas out-of-state, read the part of the question that emphasizes that we want to know only about gas bought in Maine. Use the answers to Q22a and Q22b, together with an out-of-state address and comments that R may have volunteered as clues to the possibility that R may have bought gas out of state.

There is a crucial component to Q23. It is the point at which you ask R if s/he knows how many gallons of gas s/he has used in this snowmobile in the past year. Snowmobilers are often hobbyists who are proud of their machines and enjoy keeping records about them and comparing notes with other snowmobilers. It is quite possible that R already knows the number of gallons of gas s/he has used. Many keep a trip and 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 Q31 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 gallons of gas without further questions, 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.

Circle the 9998 code for DK.

Be prepared to use probes to help R narrow a range if s/he gives a range in answer to Q23. Explain "Thank you. I have space here for just one number, and I can't record a range. Do you think it was closer to X or Y, or somewhere in between?"

A response of zero gallons is appropriate if R didn't buy any gas in Maine. That can happen if R did not use the sled, did not use it in Maine, or bought gas over the state line in New Hampshire or Canada. Continue the interview with an R who didn't buy any gas in Maine.

Q24. 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.

Q25-Q30. There are the "calculation" questions. Along with Q24, 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.

There is a phrase "(in Maine)" added to some of the questions to help you remind R that we are interested only in gas bought in Maine. Use it when you are speaking with an R who may have bought gas elsewhere. It is never wrong to include the clarifying phrase, no matter with whom you are speaking.

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."

Q31. 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 snowmobile riding. It is not required that you put any notes here.

If you recorded the number of miles ridden in Q24 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 Q34.

Q32. This 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 Q33 for some ranges that will give an approximation.

Q33. 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've finished the question.

Q34. We know that the year and the snowmobile we are asking about is not necessarily typical of the riding that has been done in Maine on this snowmobile in prior years. Note that this is a two-step question. First, you ask if the amount of riding was typical, more, or less than other years. Then, if MORE or LESS, you ask how much more or less.

Q35. In this question we want to know on how many days this snowmobile was ridden in Maine. Riding around in the yard counts as a ride.

Q36. In this question, we want to know how far this snowmobile is ridden at an outing. An outing is a ride from where you start riding the snowmobile until you return at the end of the trip or arrive at a destination. Do not count the miles that the snowmobile is trailered 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. We want to know the extent of travel for the primary purpose of riding snowmobiles. 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. Make sure the trips are in Maine. Don't count trips in other states or Canada.

Q38. We would like to know many nights people pay for lodging, as a very rough indicator of some of the contribution to economic activity that is made by snowmobilers. Count lodging that one has to pay for: motels, hotels, bed-and-breakfasts, etc. Count nights in lodging in Maine on the way to the snowmobiling site: e.g., count a night spent in a motel in Freeport on the way to a snowmobiling site in northern Maine. Do not count nights spent for free with friends or relatives.

Count only nights spent by R and those staying in R's room. Do not "double-count" for others traveling with R who stayed in other rooms.

If R spent NO NIGHTS in commercial lodging, record 00. (Coders: note that the INAP code here is 997, to accommodate a true 00 code as a valid response.)

Q39-56. Starting with Q41, through to the end of the survey instrument, you will be asking about any and all snowmobile riding that R does on *any snowmobile, in Maine or elsewhere*. Heretofore, the emphasis in all the questions was about the *selected snowmobile*. From here to the end, it's about the Respondent. Be sure you read the lead-in to Q39, and in the questions make sure R understands that now you're talking about any snowmobile riding that R does.

Q39. "Riding alone" means without a passenger, and without any other riders on their snowmobiles going along with R as a group. Count all riding that R does, including any commercial purposes, such as R's job.

Q40. R can be the passenger or the driver.

Q41. "Night" means during hours of darkness, which shifts a little throughout the season.

Q42. Helmets are not required for snowmobile riders.

Q43. "Near" and "far" are whatever they mean to R.

Q44, Q45. Watch the skip patterns here. They are marked in the questions. Remember, read the questions *in order* unless a GO TO instruction associated with an answer tells you to skip some questions. If R *doesn't* ride trails (Q44), ask if s/he would *like to* (Q45). If R *does* ride trails (Q44), *skip* to questions about the trails (Q46 and those questions following).

If R doesn't ride trails (Q44), and *doesn't want to* (Q45), *don't ask* about trails. *Skip* ahead to Q54 (belong to club?).

If R doesn't use trails (Q44), but *would like to* (Q45), *don't ask* about current trail use (Q46-49). *Skip* to Q50 to begin asking about characteristics of trails that R would like.

Q44. Trails made specifically for snowmobiles are marked, usually mapped, and may have facilities along the trail. There are over 12,000 miles of groomed trails in Maine. They may be carefully and continuously groomed by paid municipal or volunteer groomers using heavy equipment, or maintained less rigorously. Some trails are maintained by local clubs. Some less formal trails are maintained by snowmobile enthusiasts who keep them groomed for their own use. Some of the trails may be maintained for mixed use such as skiing, hiking, dog walking, etc. Mixed-use trails qualify as those made specifically for snowmobile use, as long as snowmobile riding is one of the intended uses.

The Interconnected Trail System (I.T.S.) is a 3,000- mile long network of groomed trails which crosses the state from the Allagash to southern Maine. The New England Snowmobile Trail (NEST) runs from New Brunswick through Maine to New York.

Q45. Ask this question only of Rs who do not use snowmobile trails.

Q46. This question asks trail-using respondents to select their one preference: Large major trails, or smaller local ones? The major trails are wide (12-14'), and even have median strips in some places. The major trails are the "highways." The local trails are the "back roads." They are narrower (4' or so).

R may say "both." If so, restate the first part of the question: "Which kind of trail do you like **better**?"

Q47. Note that the question asks for the distance to an snowmobile 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.

Q48. This question refers to the closest trail that R uses. 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.

Q49. This question refers to the closest trail that R uses. Safety includes whatever aspects of safety that is important to R. It can include characteristics of the trail or of the usual riders and their behavior.

Q50. The travel can include trailering or trucking the snowmobile, 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.

Q51. 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.

Q52. 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.

Q53. There are many ways to increase safety on trails. These are some that are frequently mentioned. We want R to pick the one that is "best," whatever "best" means to R. This question has a "START AT RED STAR" instruction. Ask the red starred item first, then the one below it until you reach the bottom of the list (do not read the OTHER, DK, etc. responses), then go to the top of the list and read down until you reach the item before the red star. Using this method will randomize the order in which the answer options are presented, to ensure that all the items have an equal chance to be the first and last items read.

Q54-Q58. These questions are about R. We ask them to make sure that our sample represents all the snowmobile 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. Snowmobile clubs are formal membership organizations formed for the purpose of promoting and enjoying snowmobile riding, and grooming trails. Groups of riders are not clubs unless they have actually formed a formal organization.

Q55. The snowmobile could be a replacement for a current one, or an additional one. It need not be a replacement for the one whose registration we selected for the sample. It could be a new or used snowmobile.

Q56. The major manufacturers are beginning to offer one or two models that are built to reduce noise and exhaust emissions. We want to know to what extent those factors are specifically considered in the decision about which vehicle to purchase. There are of course many other factors to consider in a purchase.

Q57. We ask R's year of birth. That is a reliable way to obtain R's age

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 respondent's local telephone number; e.g., 989) 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 snowmobile 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 (May=05).

QG. Record the date on which the interview was done (May 2nd = 02).

QH. Enter your interviewer number.

QI. Circle the code for the location of R's address.

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

Sample Cover Sheet

SNOWMOBILE

ID: 02714 GEOCODE: 03300
Happy Sledder
153 Happy Trails Road Houlton, ME 04730
Year: 99 Make: POLARIS Reg# 9792B

Logged_____
Edited_____
Coded_____
Entered_____
Verified_____

Maine Legislature
Commission to Study Equity in the Distribution of Gas Tax Revenues

Call Slot	Day of week	Date	Time, with am/pm	Notes	Disp. code	Iwer #

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 snowmobile.

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 box in the supervisor's room 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 snowmobile, 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: 5/2 for May 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 snowmobile. Sorry we missed you. We'll try again later." Make a note about whether you did, or did not, leave a message.
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 tome), 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 will ask some of you to help with these tasks as interviews are completed. "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.

Snowmobiles from out of state

Approximately 15% of the selected snowmobile registration records are from out of state. Their owner-operators registered them for 3-day and /or 10-day, or nonresident seasonal use in Maine. They may have registered more than once, and/or may have brought in several sleds for use in Maine, each of which had a separate registration. We have taken the out-of-state sample in such a way that no one would be selected more than once, but they may have had multiple vehicles and/or registrations in Maine.

Unlike the in-state registrations, the Maine out-of-state records from which we drew our sample do not contain the model or year of the snowmobile, nor the type of registration for out-of-state registrants, nor a registration tag number. They contain a serial number, which may or may not have been accurately recorded. Some of those numbers are 15 characters long, and look like automobile VIN numbers.

Therefore, when a person with a nonresident registration and an out-of-state address is to be interviewed, there are a few differences in the interview. They are:

1. **Selecting a specific snowmobile to ask about;**
2. **Variations on some question wording;**
3. **Emphasizing that we are interested only in gas bought in Maine.**

1. Selecting a snowmobile to ask about.

In the in-state snowmobile sample, as in the ATV sample, the vehicle that you were to ask about was already selected and indicated on the label. For the nonresident registrations you will have to select a vehicle. The instructions for making that selection are below.

The letter to the respondent did not mention a specific sled. It said that if the owner had registered more than one sled we would select one to ask about.

Therefore, before you ask the first questions, and after you read the introduction, you will select a sled.

Use this script:

All together, how many snowmobiles did you and anyone else in your household bring to Maine in the past season; that is, the 2000-2001 snowmobiling season?

--IF ONLY ONE — that is the one you ask about.

--IF MORE THAN ONE:

Make a quick list of the vehicles in the space at the left of Q3 and pick one using the random number table. Circle it once you've picked it. The list can be of any vehicle characteristics, as long as it is clear to you and R which order the sleds are in.

For example, in many families, each family member has his or her "own" sled. For these families, it will work to make a list of the riders (and hence, their vehicles), then pick one of the vehicles through identification with its primary rider:

I have to pick one sled to ask you about. To do that scientifically, I'm going to make a list of them, and then I'll pick one using the sampling rules we have here. Let's make a short list of who rides them: Does that include you? I'll put you here, then who else — I don't need names. (R SAYS "MY WIFE, AND OUR SON.") *I have three vehicles here:*

(1) yours,
(2) your wife's, and
(3) your son's.

Were all these sleds ridden in Maine? (IF YES, CONSULT CHART) *My chart says that I need to ask about your wife's sled. Is she the one who knows the most about the amount of gas used in that sled, or would you be able to answer those questions?"* (ASK TO SPEAK TO HER, IF APPROPRIATE)

Using the random number table: A random number table is just a big collection of numbers in no particular order, generated by a computer. They are used to make random selections as a scientific version of the "pick a number between 1 and 10" method. The numbers are in groups of two for ease of reading. Use just one digit at a time ("98" is just a "9" next to an "8"). Start at the point indicated, and proceed in a straight line in the direction indicated (horizontally or vertically) until you reach a number from (including) 1 to and including the number of snowmobiles in this family (in the example, 3). Conduct the interview about the snowmobile with that number. On the random number table, mark through the "trail" you followed so no one will use it again. When you use the table again, start where you (or the interviewer before you) left off.

When you hit the edge of the table, start again in the next row or column, which ever you were using.

At the end of a shift, turn in your random number table. In your next shift, you might get your own table back, or you might get someone else's.

Ways of making the list of sleds in multiple-sled families (where all the sleds have been to Maine):

- who rides them, if family members have their "own"
- vehicle year (oldest to newest)
- serial number (if R knows them)
- engine size (largest to smallest).

2. Variations on question wording

If you have had to select one of several vehicles in an out-of-state household, you will have already asked some of the questions about how many snowmobiles there are in the family, who rides them, and so forth. You can just check with R ("You have just the three snowmobiles, right?") when you come to these questions, but don't assume without asking that you know the answers.

Q11. You won't have a registration tag number, so don't use that wording. You can say "That's your sled" or "That's your wife's sled."

Q11 and 15. Unlike the in-state registrations, we do not have the vehicle make, model, and year. Therefore, you will have to ask these questions instead of checking with R:

Q11. "What make is that?"

Q15. "What year is that sled?"

3. Emphasize that we are interested in the riding done *in Maine* (until you reach Q39).

The questions already contain emphasis on Maine riding, for all respondents. That distinction is even more critical when you know that you are asking about a sled that is based out of state. In particular, *we only want to know about gas purchased in Maine*. That should not be a difficult question for people who had only short-term passes. You may help them think about their gas purchases by asking about their 3-day or 10-day registrations, or season passes.

In Q39 to the end, you will be asking about all their snowmobile riding, in Maine and elsewhere.

APPENDIX F

Gasoline Consumption Attributable to Gasoline Powered Watercraft Use 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

Margaret Chase Smith Center for Public Policy
The University of Maine

Jonathan Rubin
Suzanne K. Hart
Charles Morris

Orono, Maine
November 20, 2001

A Member of the University of Maine System

Additional copies of this report may be downloaded from the Margaret Chase Smith Center for Public Policy website at www.umaine.edu/mcsc

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 authors wish to thank the Maine Departments of Conservation, Inland Fisheries and Wildlife, Transportation and Marine Resources and the Committee Chairs Senator Marge Kilkelly, and Representative Joseph Clark, and Patrick Norton, Office of Policy and Legal Analysis, for their invaluable assistance. We also are grateful to the watercraft owners and operators who took the time to give thoughtful responses to the survey.

Gasoline Consumption Attributable to Gasoline Powered Watercraft Use In Maine

Executive Summary

Prepared for the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-Terrain Vehicles and Watercraft by the Margaret Chase Smith Center for Public Policy, University of Maine, November 2001

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 third of three, presents the results of a survey of gasoline powered watercraft users whose watercraft were registered in the State of Maine during 2001. In October of 2001, telephone interviews were completed with 647 randomly selected owners of watercraft registered in Maine. The study had a cooperation rate of 82% among persons who were successfully contacted. The survey data show that the operators of registered watercraft purchased an average of 69.3 gallons of gasoline (rounded to the nearest tenth) in Maine during the most recent one-year period ending in October 2001. Since there are 117,021 registered watercraft, this means that the total quantity of gasoline purchased in Maine for Maine-registered watercraft was 8,105,728 gallons in the one-year season ending in October 2001. The excise tax on gasoline imposed by the state of Maine is $0.22 per gallon. Therefore, the operator of a Maine-registered watercraft pays *on average* $15.24 per year, and operators of all Maine-registered watercraft pay $1,783,260 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 watercraft, the quantity of average and total fuel purchased 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 of fuel purchases for the population of all Maine-registered watercraft will be within the confidence interval. The confidence interval for average fuel purchased per Maine-registered watercraft ranges from 57.0 to 81.6 gallons per year. This translates into a 95% confidence interval for total gasoline purchased in Maine of 6,665,619 to 9,545,838 gallons per year in the year ending October 2001. The total quantity of gasoline excise sales tax by operators of Maine-registered watercraft ranges from $1,466,436 to $2,100,084 with the expected (mean) value of $1,783,260.

Total gas tax collections for fiscal year 2000 were $146,190,243 (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine-registered watercraft, represent 1.2% of all State gasoline excise tax receipts. At the same time, the revenues returned to support watercraft programs represent 113.9% of the estimated revenues collected from Maine-registered gasoline powered watercraft. Additional gasoline excise taxes are paid by watercraft used in Maine but registered out-of-state or with the U.S. Coast Guard.

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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 all-terrain vehicle 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 purchases for Maine-registered boats was determined through telephone survey interviews with the owners or operators of a random sample of gasoline powered watercraft registered in Maine. The boats whose owners would be interviewed were selected randomly by the Margaret Chase Smith Center for Public Policy, using the file of vehicles with registrations for the year 2000 since the file of 2001 registrations was not complete at the time of the study. That file was provided by InforMe, a company that maintains the records for the State of Maine. 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 boats in all geographic areas of the state as well as those with addresses outside of Maine had a chance of selection directly proportional to the number of boats in their area. The interviews took place from October 11 through October 30, 2001.

It should be noted that this study was of boats registered in Maine and does not include boats registered in other states and for which gasoline was purchased in Maine. This includes those boats which come to Maine along coastal waters. In addition, this study does not include boats that are owned or operated in Maine and are documented with the U.S. Coast Guard. By federal law, commercial vessels over five net tons used on navigable waters must have Certificates of Documentation with the Coast Guard. Owners of pleasure boats over five net tons have the option of documenting those boats with the Coast Guard or of registering them with the State of Maine.

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

[1]Geocodes 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.

following discussion at the August 23, 2001 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.

Survey implementation

From the State's list of registered watercraft, a random sample of gasoline powered, registered watercraft was drawn. Unregistered boats 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 boats). 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 three-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 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 data were double entered to check for input accuracy. Extreme values of fuel use were also verified by hand.[2] In particular, all reports of zero fuel use and fuel use of 200 gallons or more were verified to ensure internal consistency. As a result of this review, four records were identified to contain time of use, type of use and total gasoline consumption data that were not consistent. Accordingly, the gasoline consumption data for those records were not included in the analysis conducted for this report.

[2]In particular, the data were key entered using a data entry program that forces consistency in following skip instructions in critical portions of the questionnaire (so that gasoline use cannot be inadvertently double-counted), and disallows out-of-range codes (e.g., a code 5, when only codes 1, 2, or 3 are possible).

Survey Disposition and Response Rate

From InforMe, the Margaret Chase Smith Center for Public Policy obtained the Department of Inland Fisheries and Wildlife list of 126,478 boat registrations for the year 2000. From that list, 9,457 records were removed including: 8,606 records of non-gasoline powered boats; 92 records of non-active boats; 758 records with a geocode of "0" (mostly state and municipal boats); and one record with no data in the name fields[3]. From that list of 117,021 records, a random sample of 2,018 registered boats was drawn. The list contains no telephone numbers. Although they are collected on the registration application form, they are not key-entered. For the 2,018 registrations in the sample, possible phone numbers were identified using at least two different Internet search engines and Maine printed telephone directories for 1,599 individuals. From 1,599 individuals with identified phone numbers, a survey sample of 1,373 individuals was drawn. Attempts to contact sample members were made between 5:00 p.m. and 9:00 p.m. weekday evenings, from 9:00 a.m. to 5:00 p.m. Saturdays, and from 1:00 p.m. to 9:00 p.m. Sundays. Some sample members asked to be contacted during the daytime and contact attempts were made when specified. Similarly, attempts to contact boat owners identified as businesses included daytime calls.

A total of 4,182 contact attempts were made during the survey, which was conducted from October 11 through October 30, 2001. Three-quarters of the completed interviews were conducted within the first three call attempts. An average of 6.5 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	647	47.1 %
Unable to contact	222	16.2 %
Refused	137	10.0 %
Wrong number	82	6.0 %
Ineligible	56	4.1 %
Ineligible - not registered in 2001	151	11.0 %
Disconnected, not in service	75	5.4 %
Terminated by respondent	3	.2 %
Total in sample	1373	100.0 %

During the course of attempting to contact sample members, 151 were determined to be ineligible for participation in the survey because they did not register the selected boat in 2001. Another 56 were determined ineligible to participate for other reasons such as the boat is propelled by an electric or diesel motor, the respondent was deceased or too ill to participate, or the respondent

[3]State and Municipal boat owners are entitled to a refund of the gasoline excise taxes, personal communication, Herbert Hartman, Deputy Director, Bureau of Parks and Lands, Maine Department of Conservation.

did not own the specified boat. Seventy-five phone numbers were either not in service or were disconnected and 82 were wrong numbers. An additional 222 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 survey sample members is given in Table 1.

Telephone contact was made with a total of 787 eligible individuals. Of those, 137 refused to participate in the survey and three were terminated at the respondent's request before completing the interview. Interviews were completed with 647 individuals resulting in a survey cooperation rate of 82%. See Table 2 for details.

Table 2: Outcome when Eligible Respondent was Contacted

Outcome	Number	Percent of Those Contacted
Completed an interview	647	82.2%
Refused	137	17.4%
Terminated by respondent	3	.4%
Total contacted	787	100.0%

Results from the Survey

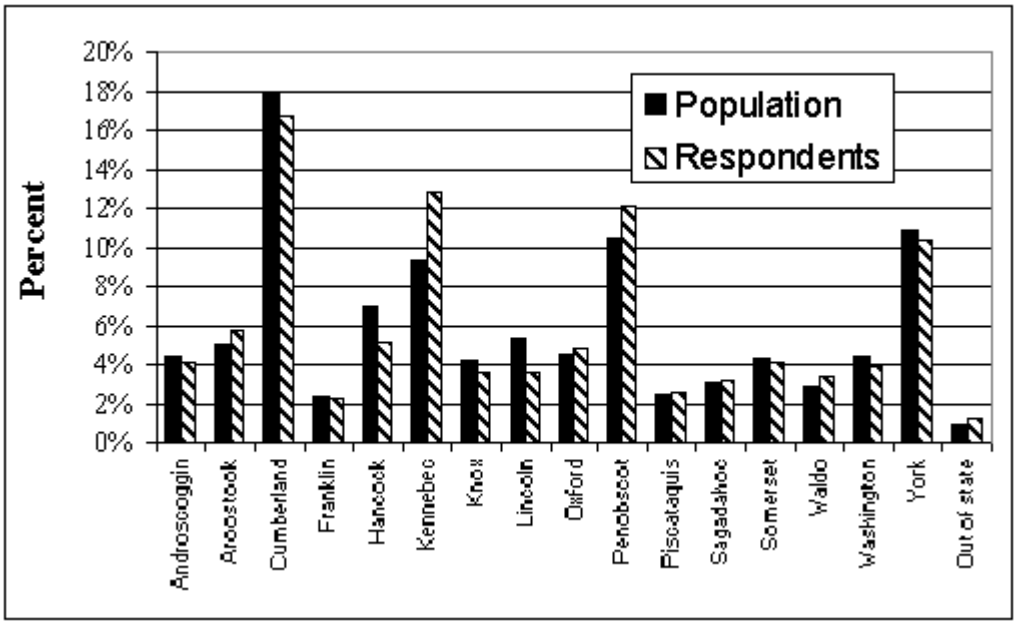
Geographic distribution of all Maine-registered boats

The geographic distribution of the owner-operators of all Maine-registered gasoline powered boats includes all 16 Maine counties as well as 1% 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 647 individuals who completed interviews. This means that our results represent the geographic diversity of boat owners.

Table 3: Geographic Location of Survey Respondents

	Population		Respondents	
County	number	percent	number	percent
Androscoggin	5,264	4.50%	27	4.17%
Aroostook	5,925	5.06%	37	5.72%
Cumberland	21,042	17.98%	108	16.69%
Franklin	2,766	2.36%	15	2.32%
Hancock	8,160	6.97%	33	5.10%
Kennebec	10,952	9.36%	83	12.83%
Knox	4,936	4.22%	24	3.71%
Lincoln	6,234	5.33%	24	3.71%
Oxford	5,371	4.59%	31	4.79%
Penobscot	12,278	10.49%	78	12.06%
Piscataquis	2,993	2.56%	17	2.63%
Sagadahoc	3,650	3.12%	21	3.25%
Somerset	5,082	4.34%	27	4.17%
Waldo	3,327	2.84%	22	3.40%
Washington	5,221	4.46%	25	3.86%
York	12,790	10.86%	67	10.36%
Out of state	1,111	0.95%	8	1.24%
Total	117,021	100.00%	647	100.00%

Figure 1: Geographic Location of Survey Respondents



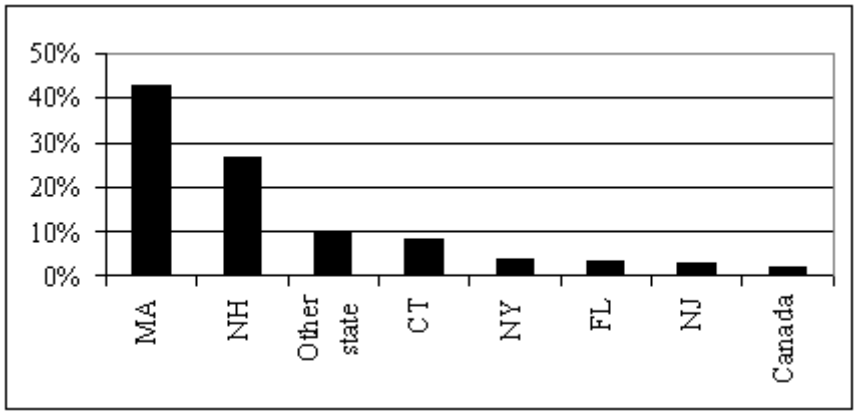
Geographic distribution of out-of-state owned, Maine-registered watercraft

As is shown in Figure 2, 43% of all boat owners with out-of-state addresses who registered their boats in Maine are from Massachusetts and 27% are from New Hampshire. Nonetheless, there are at least one or more boats registered in Maine from 28 states (including the District of Columbia) and Canada. Owners of boats not registered in Maine purchase gasoline in Maine, particularly along the coast. However, it was determined by the Commission that conducting a parallel survey of non-Maine-registered boat owners was beyond the scope of this study.

Table 4: Origin of Out-of-State Gas Powered Registrations

State	Total Count	Percent
Canada	23	2.07%
Connecticut	92	8.28%
Florida	38	3.42%
Massachusetts	476	42.84%
New Hampshire	296	26.64%
New Jersey	34	3.06%
New York	45	4.05%
Other States	107	9.63%
Total	1,111	100.00%

Figure 2: Out-of-State Gas Powered Watercraft Registrations



Gasoline use by watercraft

In our sample, the operator of an average registered watercraft purchased 69.3 gallons of gasoline (rounded to the nearest tenth) in Maine during the most recent one-year period ending in October 2001. Since our sample is a random sample of the population of all registered, gasoline powered watercraft in the State of Maine, we can estimate the total quantity of gasoline purchased in Maine for use in registered watercraft based on our sample. Given that there are 117,021 registered watercraft, this means that the total quantity of fuel purchased in Maine for Maine-registered

watercraft was 8,105,728 gallons in the one-year season ending in October 2001.[4]

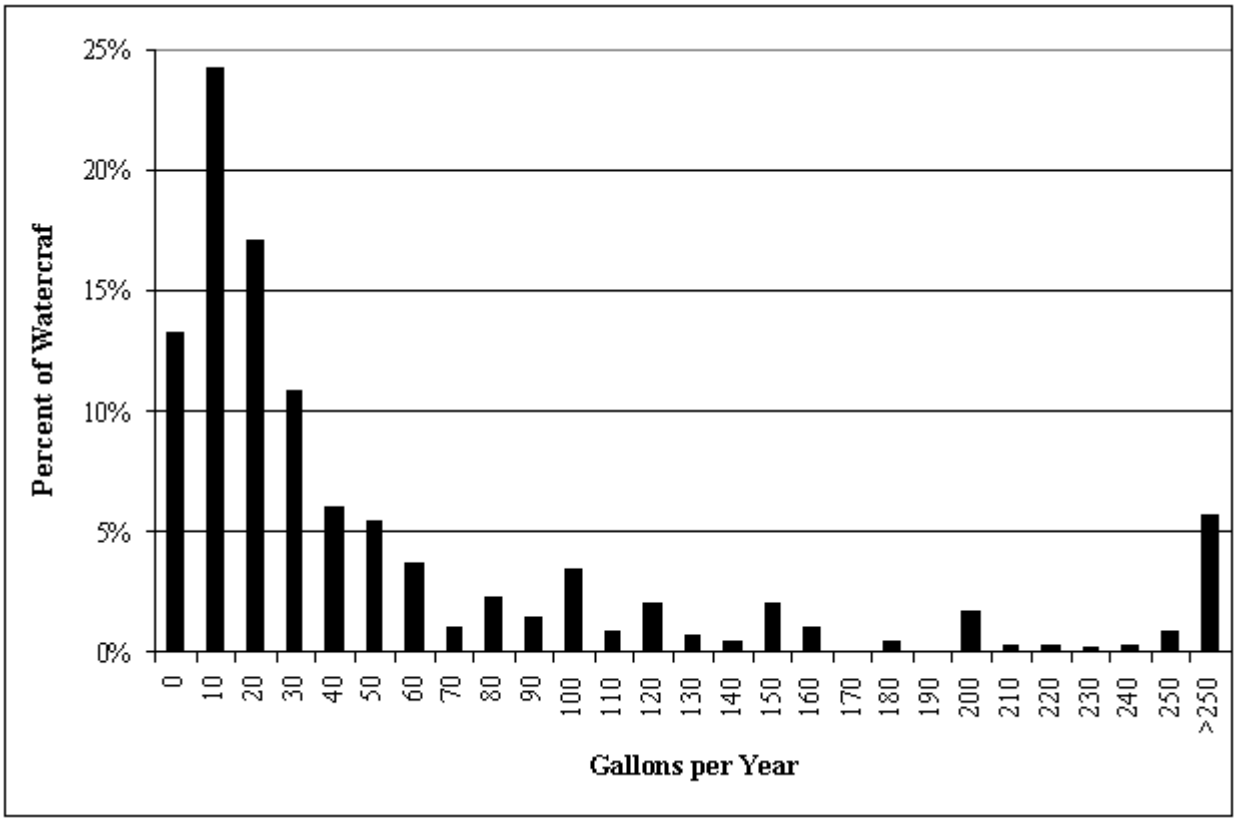
Since these data were gathered from a random sample rather than from the entire population of all Maine-registered watercraft, the quantity of average and total fuel purchased and average and total taxes paid are subject to error. This sampling error is typically quantified by confidence intervals based upon the sample data. A 95% confidence level means that in 95 out of 100 samples of the same size, the true average of fuel purchased for the population of all watercraft will be within the confidence interval. See Appendix 1 for additional details on statistical accuracy. The confidence interval for average fuel purchased per Maine-registered watercraft ranges from 57.0 to 81.6 gallons per year. This translates into a 95% confidence interval for total gasoline purchased in Maine of 6,665,619 to 9,545,838 gallons per year in the year ending October 2001.[5] This estimate of gasoline use excludes purchases by out-of-state registered watercraft and those registered with the U.S. Coast Guard.

The distribution of annual gasoline purchases by operators of Maine-registered watercraft is shown in Figure 3. The average number of gallons purchased is 69.3 and it is clear that the average (or mean) reflects a large number of vehicles that use fewer than the average gallons of gas bought in Maine. A full 13% of contacted, registered boat owners indicated that they purchased no gasoline in 2001. A very small number use far more. To describe typical gasoline use by watercraft, the median is also helpful. The median for this distribution is 20.0 gallons. That means that half the vehicles use more than 20 gallons of Maine-purchased gasoline, and half use less.

[4]As discussed above, this number does exclude 758 state and municipal gasoline using watercraft. Including these watercraft would raise the total gasoline purchased in Maine by Maine-registered watercraft to 8,158,233 gallons. This assumes that state and municipal owners of watercraft use the average quantity of gasoline as calculated from private owners.

[5]Consistent with our earlier reports, gasoline use is derived from individuals' own estimation of their annual fuel usage. An alternative methodology is to calculate fuel use based on engineering estimates of fuel use per hour given the number of hours of use in a year, the power of the motor, and an estimate of the time at partial and full throttle (see for example, WF Surveys, "Gasoline Used For Pleasure Boating in Maine," 1988). We have found this method to be extremely sensitive to assumptions concerning the amount of time at full or partial throttle. Without very detailed information on patterns of throttle use, we believe this method is unreliable.

Figure 3: Size Distribution of Watercraft Gasoline Purchases In Maine



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 watercraft contributes *on average* $15.24 (rounded to the nearest cent) per year, and all Maine-registered watercraft contribute $1,783,260 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 excise taxes paid by Maine-registered watercraft ranges from $1,466,436 to $2,100,084 with the expected value of $1,783,260.

Total gas tax collections for fiscal year 2000 were $146,190,243 with $76,243 returned to commercial motor boat operators who filed for refunds, $390,899 to the Department of Marine Resources, and $1,563,597 to the Department of Conservation's Boating Facilities Fund (Commission report, p. 9, 2000). Gas tax revenues attributable to Maine-registered watercraft, represent 1.2% of all State gasoline excise tax receipts. At the same time, the revenues returned to support watercraft programs represent 113.9% of the estimated revenues collected from Maine-registered gasoline powered watercraft. Additional gasoline excise taxes are paid by watercraft used in Maine but registered out-of-state or documented with the U.S. Coast Guard.

Salt and freshwater gasoline use

Among those who indicated that they *only* use their boats in saltwater (17%), the average fuel consumption is 138 gallons per year. Those who *only* use their boats in freshwater (38%) use an average of 44 gallons of gasoline per year.

Commercial versus recreational gasoline use
Among those who indicated that they used their gasoline-powered boat for commercial purposes (6.8%), the average fuel use per year is 195 gallons. Recreational boaters, 93.2% of boaters, use an average of 61 gallons per year.

Characteristics of boat-owning households
The sampling procedure used in this study targeted individual boats, not owners, households, or businesses. Therefore, questions about the household, the boaters, and other vehicles owned by persons in the household were included to provide a more complete picture of boat ownership and use in Maine. Forty-four of the 647 study boats are used at least occasionally for commercial purposes. Because relatively few of the boats are used for anything other than home-based activities, we refer here to boat-owning "households."

Forty-four percent of the households in this study have more than one boat. The number of boats in the households and businesses interviewed ranges from zero (the selected boat was sold during the past season) to a high of forty-five, with an average (mean) of 1.7 boats per boat-owning household. The mean is affected by the case in which forty-five boats are owned by one respondent. Over half of the respondents (55%) have only one boat. The boats are used by an average of 1.7 persons per household.

The average age of boat users in the boat-owning households is 45.5 years, ranging from four-year-olds to age eighty-eight. Most (84%) of the respondents to the survey, who are the persons in whose name the boats were registered or the persons most knowledgeable about the selected boats, are male. They have been going out in boats for an average of 35 years, ranging from new boaters with less than one year of experience to a veteran of eighty-two years.

Fifteen percent of the respondents belong to a group related to boating. "Boating groups" in this study include groups such as fishing trade associations, recreational boating associations, and other groups to whom boat use is essential.

One-third of the households (33%) own one or more snowmobiles, and 25% own one or more all-terrain vehicles.

Characteristics of the selected boats
There are many boat manufacturers represented in the study. The most frequently occurring is Starcraft, at 9% of the boats. The distribution of manufacturers is shown in the copy of the survey instrument with data inserted, which appears in Appendix 3.

The information in the Maine registration records identifies the boats in the study according to type. Most (81%) of the boats in the study are an "open" type. Among the remainder, 5% are cabin boats, 5% are canoes with gasoline motors, 3% are personal watercraft (usually "Jet Skis"), 3% are sailboats with auxiliary motors, and 3% are designated as "other."

Eighty-one percent of the boats have outboard motors. Six percent are inboards, 10% are inboard-outboards, and 2% have jet drives. The average (mean) horsepower is 62, with half the motors

having less than 28-horsepower motors. The horsepower of the motors in the study ranges from one to one thousand. Three-quarters (76%) have two-stroke engines.

Half the boats in the survey were manufactured in 1984 or later. More than one-third (37%) have been owned by their present owners more than ten years. Almost two-thirds (63%) have the original motor that was with the boat when the respondent bought it.

How the boats are used

In 51% of the households with more than one boat, the selected boat is used more than the other(s); in 16% it is used about the same; and in 33% 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 boats are used *less* than the other boats because a household's *least* used boat may not have a gasoline motor, and therefore would not have been eligible for the study.

Most of the boats in the study (93%) are used exclusively for recreational purposes. Five percent are used for both commercial and recreational purposes, and only 2% (11 boats) are used exclusively for commercial purposes.

Commercial use

Among the forty-four boats which are engaged in commercial activity (7% of all boats in the study), the most frequent use is fishing (including lobstering). Over half (54%) are at least sometimes are used for fishing, and 15% are exclusively used for that purpose. Seventeen percent of the boats are at least sometimes used to take paying customers for such activities as sightseeing and fishing. Fifteen percent are used exclusively as a dinghy or skiff to go out to another boat. Fifteen percent are at least sometimes used to get to a place for commercial clamming, worming, and so forth.

In the Commission's deliberations, there was discussion of the utility of the state gasoline tax refund records as an indicator of the amount of gasoline used in boats engaging in commercial pursuits. In this study, only four of the forty-four respondents with commercially-active boats indicated they filed last year for a gasoline tax refund. Of those, three said they got a refund for less than the total amount of gasoline they bought.

Recreational use

Almost all (98%) of the boats are used at least sometimes for recreation. Although only 11% are used exclusively for recreational fishing, 80% are used at least sometimes for fishing from the boat, including trolling, deep sea fishing, and casting from the boat. Almost one-third (31%) use their boats to get to a place to fish (such as the shore), even though the fishing would not take place from the boat. Nine percent use their boat as a skiff or dinghy to get to another recreational boat. Three percent of boaters say they use their boats for racing. The most frequent recreational use of the boats is riding around for fun: 82% use their boats at least sometimes for that activity. (The percentages sum to more than 100% because boats are used for multiple recreational activities).

Where the boats are used

Just as the boats are used for multiple purposes, they are often used in both salt and fresh water, and in different fresh-water bodies. Less than one in five boats (17%) is used only in salt water, and 37% are used at least sometimes in salt water. Thirty-eight percent are used exclusively on inland lakes and ponds, and 80% are at least sometimes used there. While only 1% are used exclusively on rivers and streams, one-third (32%) are at least sometimes used there. (The percentages in this section sum to more than 100% because boats are used for multiple recreational activities).

As one would expect, summer is the time when the boats are used most. One-quarter (24%) are used only then, and 99% are used at least sometimes in the summer. Two-thirds are used at least sometimes in the spring, and almost that many (58%) are used at least sometimes in the fall. Use drops dramatically in the winter, of course, when only 3% of the boats see any activity at all.

Most (83%) of the owners were through with their boats for the season at the time they were interviewed. Those who planned to continue using their boats a while longer expected to purchase an average (mean) 33 gallons of gas more this year. Half the continuing boaters expected to buy eleven gallons or less. The mean in this case is affected by a few continuing users who expect to purchase from 100 to 600 gallons of gasoline before they are through with their boats. (It is important to note that the data concerning gasoline purchase discussed elsewhere in this report reflect gasoline purchases in the last year, from October 2000 through October 2001. Therefore, it is not appropriate to add these expected purchases of gasoline to the totals of gasoline reported by these respondents.)

Trailering and storage

Slightly more than half the boats (54%) are put in and taken out every time they are used. The remainder stay in the water during the seasons in which they are used, with the exception of taking them out for repairs. Almost all (98%) are stored on land in the off-season. A third (34%) of the boats were taken out of the water only once in the past year, another third (34%) were put in and taken out six or more times, and twelve percent were in and out of the water more than twenty times.

About three-quarters (73%) of owners trailered their boats in the past year. The average number of miles traveled was 265, although that average is skewed by one boater who estimated a total travel distance of 15,000 miles. Half of the boaters estimated total trailer mileage of 60 miles or less, and 90% trailered their boats a total 570 miles or less. The total number of boat-miles traveled by the boats in the survey is 122,738.

Where boaters purchase gasoline

More than half (59%) of boaters say they usually buy their gas at the same place. Only fifteen respondents bought any gasoline outside of Maine. Of those, six bought all their gas outside Maine, four bought 20% to 50%, three bought ten percent, and two bought five percent of their gas outside of Maine. The questions in the survey about gasoline purchases emphasized gas purchases *in Maine*, so no post-interview adjustment in the total gasoline purchase figure was necessary. The low frequency of out-of-state-gas purchases means that most of the gasoline used by the boats in this study produces gasoline tax revenues in Maine.

Most (82%) of the respondents buy their gasoline at a gas station or convenience store, not at a marina where the hose goes down to the water to fill the boat. Ten percent buy their gasoline at marinas, and eight percent use both sources. Those who get at least some of their gas at a marina purchase an average (mean) of 69% of it there.

Boat use patterns: hours the boat was used

The boats were used an average (mean) of 26 days in the past year. Half the boats were used on 14.5 days or fewer. Ninety percent were used on sixty or fewer days. One in ten was used on only one day in the past year. The range of days that the boats were used was from zero to 250 days.

On days that the boat was used, the average period of use in the past year was 2.6 hours. The estimate of the total number of hours of use for the boats in the study is an average (mean) of 66 hours per boat, or a total of 40,915 hours of use for the boats in the study.

Those who purchase their gas exclusively at marinas used their boats an average of 139 hours last year, more than twice as much as those who bought their gas at convenience stores (61 hours), and more than those who bought their gas at both types of locations (85 hours).

Boat use patterns: was 2000-2001 a typical year?

For almost half of the boaters (48%), this last year was a typical boating year. Twelve percent used their boat a little (7%) or a lot (5%) more; and 14%, a little less, and 25%, a lot less.

Boat use patterns: operating time at or near full throttle

Most boat operation is done at less than half throttle. Over half (54%) say they operate at or near full throttle a lot less than half the time; and 23%, a little less than half the time. Less than a quarter (23%) of operators run their boats at or near full throttle more than half the time: 13%, a lot more than half the time; and 10%, a little more than half the time.

Improving boating

When given an opportunity to describe "one thing that would improve boating in areas where you use your boat in Maine," boat owners had a variety of suggestions. The responses were grouped according to their themes. The most frequently mentioned theme (mentioned by 25% of respondents) concerned improvement of ramps and access points. The suggestions included ramps that are less steep, better designed ramps that were easier for those with small boats to use, and more parking for vehicles and boat trailers.

Next most frequently mentioned was the need for more education, greater observance of rules, and more common courtesy among boaters (13%). Almost as frequent (11%) was a specific suggestion to ban/regulate jet skis. Less frequently mentioned were addressing issues of water pollution including problems of invasive plants and pollution from fuels (8%); better markers, buoys, and navigation aids (6%); reducing the number of boats and traffic congestion (3%); providing more places to buy gas, and reducing the price of gas (2%); and improvements in fishing such as more stocking, or reserved areas (1%). An additional 21% of responses were sufficiently varied that none of them accounted for more than one percent of total responses.

When specifically asked to select the best one of four potential methods to assure boating safety in their usual areas of boat operation, almost half the boaters (49%) chose education. Nineteen percent selected law enforcement officers; 15%, marker buoys; and 8%, rules and regulations. An additional nine percent were unable to identify the single best factor among the four presented, or offered other items.

Although some boaters would like to see improvements to access areas, over one-third (35%) rated their closest place to put a boat in as excellent, and another 37% rated it as very good. Slightly more than one-quarter rated it as fair (17%) or poor (10%). In addition, two-thirds of boaters (67%) said the amount of public access near where they use boats is "about right." Twenty-eight percent said there was not enough public access, and five percent said there was too much.

Plans for future boat purchases

About one-third (34%) of the boaters thought they would buy another boat in the next few years, and another ten percent said "maybe" they would. More than half (54%) of those who thought they would be buying new boats and motors described themselves as very likely to look specifically for one of the cleaner and quieter boats, and another 26% said it was somewhat likely they would do so. The remaining 19% thought it was somewhat unlikely (5%) or not very likely (14%) that they would be looking for the cleaner, quieter boats and motors.

Appendices

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, watercraft 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 watercraft 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 watercraft 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 647 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 watercraft 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.

Appendix 2: Sample Notification Letter

Margaret Chase Smith Center
for Public Policy

5715 Coburn Hall
Orono, Maine 04469-5715
Tel: 207-581-1648
Fax: 207-581-1266
www.umaine.edu/mcsc

October, 2001

Length	Make	Horsepower	Registration #
First Name Last Name			
Street, Town, State, Zipcode			

Dear Boat Owner:

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 snowmobiles, ATVs, and boats in Maine. We have completed surveys of ATV and snowmobile owners and we are now calling the owners of a random sample of boats. **A boat registered to you is in that sample. It is the one identified 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 boat
- what kind of boating you like
- how much gasoline you bought in Maine for this boat in the past season.

We realize that you may not know right off hand how much gas you used in this boat. The interviewer will be ready to figure that out with you. **The interview will go more quickly if you think ahead of time about: (1) the number of hours you used this boat; and (2) how much gas you bought in Maine for the boat this year.**

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.

Yours truly,

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 watercraft they own), the appropriate measure of central tendency—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 are 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 are displayed in or near the question to which they pertain. They are in italics. We have selected an appropriate measure 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.

Gasoline use in boats

Survey instrument

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 boat owners to see how much gasoline they bought in Maine for their boats. 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. We've already done a survey of people who operate ATVs and snowmobiles. Right now we're talking with people who have boats registered in Maine.

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 boats to ask about, and my instructions are that we have selected the (MAKE)_____ with registration number (READ NUMBER)_____. Are you the person who knows the most about that boat? (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 boat?

No. of cases	*629*	*97.22%*	YES	1
	18	*2.78%*	NO	2

3. Did you have it registered **this year, 2001?**

647	*100.00%*	YES	1
		NO	2

IF NO: FIND OUT WHAT HAPPENED:

- **IF BOAT WAS REGISTERED DURING SOME PART OF 2001, EVEN IF IT WASN'T USED, CONTINUE THE IW.**
- IF THE BOAT WAS **NOT REGISTERED IN 2001** MAKE IWER NOTE AND TERMINATE: "Thank you, but we're only talking with people who had registered boats this past year. I'll make a note here." EXIT INAP (CODED 1 IN Q2) 0

4. My records say it uses **gasoline** as fuel. Is that right?

647	*100.00%*	YES	1
		NO	2

- **IF NOT GAS, MAKE IWER NOTE AND TERMINATE:** "Thank you, but we're only talking about boats that use gasoline in this study. I'll make a note of that here."

5. Does it have an inboard motor, an outboard, an inboard-outboard, a jet drive, or what?

41	*6.34%*	INBOARD	1
527	*81.45%*	OUTBOARD	2
62	*9.58%*	INBOARD/OUTBOARD	3
13	*2.01%*	JET DRIVE	4
4	*0.62%*	OTHER (VOL.) DESCRIBE_____	7
		DK	8
		NA	9

6. **Counting this boat with Registration #_____,** the _____ foot (INSERT MAKE), **how many gasoline-powered boats** do you have in your household? (COUNT THIS BOAT EVEN IF R HAD IT ONLY PART OF THE YEAR)

N=646; mean=1.71; range=0-45

ENTER NUMBER. . . . . (IF 1 GO TO Q8)	___ ___
DK	98
NA	99

7. (ASK ONLY IF THERE ARE OTHER BOATS IN THE HOUSEHOLD: Q6 IS MORE THAN ONE)

Does this boat **get used more**, about the **same**, or **less** than the other boats in your household?

145	*50.70%*	THIS ONE USED MORE	1
47	*16.43%*	THIS ONE ABOUT THE SAME	2
94	*32.87%*	THIS ONE USED LESS	3
		DK	8
		NA	9
		INAP (NO OTHER BOATS IN HOUSEHOLD)	0

8. How many people **in your household** operate (this/these) boat(s)?

N=647; mean=1.72; range=0-10

ENTER NUMBER:	___ ___
DK. . . . . .(GO TO Q10)	98
NA. . . . . .(GO TO Q10)	99

9. 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 BOAT

N= 1,079 persons; mean= 45.51; range= 6-88

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

10. Does anyone in your household own a **snowmobile**? (IF YES: How many snowmobiles?)

Number with snowmobiles=211; of the 211, mean=1.86; range=1-8

ENTER # OF SNOWMOBILES	___ ___
NONE	00
DK	98
NA	99

11. Does anyone in your household own an **ATV -- all-terrain vehicle**? (IF YES: How many ATVs?)

Number with ATVs=160; of the 160, mean=1.28; range=1-4

ENTER # OF ATVs . . . . . ___ ___
NONE 00
DK 98
NA 99

12. How many years have you yourself been going out in boats?

N=644; mean=34.97; range=<1-82

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

13. Thank you. Now, let's **go back to that boat that we randomly selected**. That's the one with registration (READ REGISTRATION NUMBER)_____, the ____foot boat. I need to check the registration file information we have....

That boat **is** a **(MAKE/BRAND NAME)**, right?

22	*3.43%*	BOSTON WHALER	01
16	*2.50%*	GLASTRON	02
36	*5.62%*	GRUMMAN	03
15	*2.34%*	HOMEMADE	04
16	*2.50%*	LUND	05
31	*4.84%*	MIRROCRAFT	06
12	*1.87%*	OLD TOWN	07
14	*2.18%*	SEA NYMPH	08
23	*3.59%*	SEARS	09
57	*8.89%*	STARCRAFT	10
399	*62.25%*	OTHER BRAND (ENTER BRAND NAME_____)	11
		DK	98
		NA	99

14. And the motor -- what make is that?

(These data are recorded in text format and are not included here.)

ENTER MOTOR MAKE_____ AND CIRCLE "1" 1
DK 8
NA 9

15. Its **horsepower** is _____? (IF NECESSARY: PROMPT WITH HP ON LABEL)

N=638; mean=61.84; mode=6; median=28 range=1-1,000

ENTER HORSEPOWER . . . . . ___ ___ ___
997 HP AND HIGHER (ACTUAL HP=_____) 997
DK 998
NA 999

16. Is it a **2-stroke or a 4-stroke** engine?

476	*76.16%*	2-STROKE	1
146	*23.36%*	4-STROKE	2
3	*0.48%*	SOMETHING ELSE (VOL.) (What is it?_____)	7
		DK	8
		NA	9

17. Is this the original motor that was with the boat when you first got it?

404	*63.32%*	YES	1
234	*36.68%*	NO	2
		DK	8
		NA	9

18. For **how many years** have you owned this boat? You can give me an estimate — I have some ranges here. (READ RANGES IF NECESSARY)

56	*8.68%*	LESS THAN 2 YEARS	1
200	*31.01%*	3 - 5 YEARS	2
153	*23.72%*	6 - 10 YEARS	3
140	*21.71%*	11 - 20 YEARS	4
96	*14.88%*	21 OR MORE YEARS	5
		DK	8
		NA	9

19. Thank you. Now I have some questions about **where** and **how** you use this boat. First, do you use this boat as part of your **job**, for **commercial purposes**?

44	*6.82%*	YES	1
601	*93.18%*	NO (GO TO Q22)	2
		DK	8
		NA	9

20. Within the past year, did you file with the state for a **refund** of the **state taxes** paid on gasoline for this boat?

4	*10.00%*	YES	1
36	*90.00%*	NO. . . . . (GO TO Q21)	2
		NEVER HEARD OF IT (VOL.). . (GO TO Q21)	7
		DK . . . . . (GO TO Q21)	8
		NA. . . . . (GO TO Q21)	9
		INAP (CODED 2, 8, or 9 IN Q19)	0

Q20a. Did you get a refund for **all the gas** you bought in Maine, **most** of it, or **just some** of it?

1	*25.00%*	ALL	1
1	*25.00%*	MOST	2
2	*50.00%*	JUST SOME	3
		DK	8
		NA	9
		INAP (CODED 2, 7, 8, 9, or 0 in Q20)	0

21. I'm going to read you a list of ways that people use their boats **in their jobs**, and for each one, please tell me if you use it **only** for that purpose, or **often**, **sometimes**, or **never** use this boat for that purpose.

	ONLY*	OFTEN	SOMETIMES	NEVER
a. To take paying customers on. (SIGHTSEEING, FISHING, ETC.)	*0* *0.00%*	*4* *9.76%*	*3* *7.32%*	*34* *82.93%*
b. Fishing from this boat. (INCL. LOBSTERING)	*6* *14.63%*	*11* *26.83%*	*5* *12.20%*	*19* *46.34%*
c. To get out to and back from another commercial boat. (This boat is a skiff, dinghy)	*6* *14.63%*	*2* *4.88%*	*3* *7.32%*	*30* *73.17%*
d. To get to a place to take clams, worms, crabs, etc. for commercial purposes.	*1* *2.44%*	*2* *4.88%*	*3* *7.32%*	*35* *85.37%*
e. (UNLESS ONE ABOVE IS "ONLY") Any other commercial use?(What? DESCRIBE_____ _____)	*4* *10.00%*	*4* *10.00%*	*6* *15.00%*	*26* *65.00%*

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

22. Do you (ever) use this boat for **recreation**?

628	*97.67%*	YES	1
15	*2.33%*	NO (GO TO Q24)	2
		DK	8
		NA	9
		INAP	0

23. I'm going to read you a list of common recreational uses for boats. For each one I read, please tell me whether you **only, often, sometimes,** or **never** use this boat for that purpose.

	ONLY	OFTEN	SOMETIMES	NEVER
a. Recreational fishing from the boat (trolling, deep sea fishing, casting from the boat, etc.)	*72* *11.36%*	*239* *37.70%*	*194* *30.60%*	*129* *20.35%*
b. To get to a place where you fish for recreation, but not from the boat itself --such as from the shore.	*2* *0.32%*	*56* *8.85%*	*140* *22.12%*	*435* *68.72%*
c. To get out to and back from another recreational boat. (This boat is a skiff, dinghy)	*1* *0.16%*	*20* *3.15%*	*37* *5.84%*	*576* *90.85%*
d. Riding around for fun	*69* *10.88%*	*247* *38.96%*	*201* *31.70%*	*117* *18.45%*
e. Racing	*0* *0.00%*	*5* *0.79%*	*12* *1.90%*	*613* *97.30%*
f. (UNLESS ONE ABOVE IS "ONLY") Anything else? (What? DESCRIBE) _____ _____	*5* *0.86%*	*45* *7.71%*	*38* *6.51%*	*496* *84.93%*

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

24. Now I'd like to know **where** you use this boat. For each place I read, please tell me whether you **only, often, sometimes**, or **never** use this boat there.

	ONLY	OFTEN	SOMETIMES	NEVER
a. How often do you use this boat on fresh water lakes and ponds. Only, often, sometimes, or never?	*244* *37.89%*	*205* *31.83%*	*63* *9.78%*	*132* *20.50%*
b. And on fresh water rivers and streams...	*6* *0.93%*	*70* *10.87%*	*133* *20.65%*	*435* *67.55%*
c. And on salt water...	*112* *17.39%*	*48* *7.45%*	*78* *12.11%*	*406* *63.04%*

25. Thinking of the **seasons** of the year you use this boat in Maine, do you use it only, often, sometimes, or never in the....

	ONLY	OFTEN	SOMETIMES	NEVER
a. ....summer?	*153* *23.76%*	*416* *64.60%*	*66* *10.25%*	*9* *1.40%*
b. ...in the fall?	*1* *0.16%*	*96* *14.91%*	*276* *42.86%*	*271* *42.08%*
c. ...winter?	*1* *0.16%*	*7* *1.09%*	*14* *2.18%*	*620* *96.57%*
d. ...spring?	*3* *0.47%*	*148* *22.98%*	*279* *43.32%*	*214* *33.23%*

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

26. Is this a boat that you **put in and take out** of the water almost every time you use it, or does it **stay in the water**, except for repairs or off-season storage?

350	*54.43%*	IN-OUT	1
293	*45.57%*	STAYS IN WATER	2
		DK	8
		NA	9

27. Do you store it on land in the off-season?

636	*98.30%*	YES	1
7	*1.08%*	NO	2
4	*0.62%*	THERE ISN'T ANY OFF-SEASON (VOL.)	7
		DK	8
		NA	9

28. About **how many times** this past year (if any) did you take this boat **out of the water**?

76	*12.01%*	NEVER TOOK IT OUT (ZERO TIMES). (GO TO Q30)	0
213	*33.65%*	ONCE	1
48	*7.58%*	TWICE	2
81	*12.80%*	3-5 TIMES	3
68	*10.74%*	6-10 TIMES	4
71	*11.22%*	11-20 TIMES	5
76	*12.01%*	MORE THAN 20 TIMES	6
		DK	8
		NA	9

29. In the past year, about how many **miles**, if any, was this boat **hauled over land** (on a trailer)?

N with >0 miles=463; mean=265.09; median=60; range=1-15,000

ENTER NUMBER OF MILES	___ ___ ___ ___ ___
DK	88888
NA	99999
INAP (CODED 0 IN Q28)	00000

30. Are you through using it **in Maine** this season, or not?

533	*83.28%*	YES, THROUGH (GO TO Q32)	1
107	*16.72%*	NOT THROUGH	2
		DK	8
		NA	9

31. (IF NOT THROUGH) How much more gas do you think you'll buy **in Maine** before you put it up for the season?

N=54; mean=32.65; median=11; range=1-600

ENTER NUMBER OF GALLONS	___ ___ ___
NOT GOING TO PUT IT UP (VOL.)	777
DK	888
NA	999
INAP (CODED 1, 8, OR 9 IN Q30)	000

32. Now I'm going to ask you some questions about buying gasoline for this boat — 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 boat, and about this past year; that is, from October 2000 until now**.

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

370	*59.49%*	USUALLY SAME PLACE	1
252	*40.51%*	DIFFERENT PLACES	2
		DK	8
		NA	9

33. In the past year, about **what percent** of the gas for this boat do you buy **outside of Maine**?

- **NONE** BOUGHT OUTSIDE (ALL BOUGHT HERE) ENTER 000
- **ALL** BOUGHT OUTSIDE OF MAINE (NONE BOUGHT HERE) ENTER 100, GO TO Q37, ENTER 0s THERE

N=15; mean=51; median=30; range=5-100

ENTER PERCENT OF GAS **NOT** BOUGHT IN **MAINE**	___ ___ ___
NO GAS AT ALL, IN OR OUT OF MAINE (VOL.) (PROBE: IF 0, CIRCLE 777, GO TO Q37, ENTER 0s THERE)	777
DK	888
NA	999

34. (In Maine) how do you get the gas to the boat — do you gas up directly from a hose that goes down to boats in the water -- like a marina; or get it from a pump at a gas station or convenience store, or what?

57	*10.02%*	HOSE (MARINA OR BARGE)	1
465	*81.72%*	GAS STA., CONV. STORE. (GO TO Q37)	2
47	*8.26%*	BOTH	3
0	*0.00%*	OTHER (SPECIFY_____)	7
		DK. (GO TO Q37)	8
		NA (GO TO Q37)	9
		INAP (CODED 777 IN Q33)	0

35. (IF BOTH) (In Maine) about **what percent** of your gas do you get from the hose that goes down to the boats in the water?

N=91; mean=69.03; median=95; range=1-100

ENTER PERCENT (GO TO Q37)	___ ___ ___
DK	888
NA	999
INAP (CODED 2, 7, 8, 9, OR 0 IN Q34)	000

36. (IF R CANNOT GIVE A % ESTIMATE IN Q35) Would you say it is a little, some, or most of it (you get from the hose that goes down to boats in the water)?

1	*50.00%*	A LITTLE	1
1	*50.00%*	SOME	2
		MOST	3
		DK	8
		NA	9
		INAP (% OR 000 IN Q35)	0

IWER NOTE: **NO GAS**

IF R BOUGHT **NO GAS AT ALL**, OR **NO GAS IN MAINE**,

•ENTER 0s IN Q37

•GO TO Q45 (NEXT WHITE PAGE)

37. Now we are coming to some questions about **how much gas you bought in Maine for this boat 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 hours you used the boat.

IWER NOTE: WE WANT REPORTS OF ONLY **MAINE-BOUGHT** GAS. IF R BOUGHT AT LEAST SOME GAS OUT OF STATE (Q33), OR HAS AN OUT-OF-STATE ADDRESS, SAY "We are interested only in the gas you bought in Maine — not gas bought outside of Maine."

Before I go any further — do you happen to **know how many gallons of gas** you bought for this boat in the past year (in Maine)?

•YES (How many is that?) ENTER#, GO TO Q45 (NEXT WHITE PAGE) . ENTER 0s IF "NO GAS" (CODE 777) IN Q33	____ ____, ____ _____ ____
•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.	

38. How do you think about the amount of gas you use in this boat? Do you usually think about the **hours of use time**, or do you think about the **gallons you buy each time**, or **the amount of money you spend**, or what?

HOURS OF USE TIME. . . . . ===>GO TO Q39 (GREEN)	1
GALLONS YOU BUY EACH FILL UP. . . . . ==>GOTO Q42 (PINK)	2
AMOUNT OF MONEY SPENT. . . . . .====> GOTO Q43 (YELLOW)	3
STATE GAS TAX REFUND (VOL). . . . . .=====> GO TO Q44 (BLUE)	4
OTHER (VOL.) EXPLAIN BELOW_____..==>GOTO CLOSEST METHOD	5
DK (IF R IF NOT ABLE TO HELP CALC. GAS USE, GO TO Q45)	8
NA (IF R REFUSES, GO TO Q45)	9
INAP (KNEW GALLONS IN Q37)	0

The data from the questions concerning gasoline use were extracted from the responses given to questions Q37 to Q44. While there are several methods by which respondents could arrive at their estimates of the amount of gasoline they bought in Maine, only one estimate was obtained from each respondent. A summary of the derived measures is presented below.

Gasoline bought in Maine by watercraft operators

The mean number of gallons of gas bought in the 2000-2001 season by the operators of the watercraft in the study is 69.3 gallons, with a range of 0 to 1823 gallons. The gas usage calculations are based on 636 cases.

Hours the watercraft were operated

Respondents indicated the number of hours they operated their boats in Q40b or Q41b if they used hours of operation to calculate their gas use, as two respondents did. If respondents did not use that method to calculate their gas use, they were asked the number of days they used their boat in Q46 and the number of hours they used their boats, on average on those days, in Q47: 616 respondents provided estimates of the number of days and average daily hours of operation in response to those questions.

The sum of hours of use for the 616 respondents who provided that information in Q40b, Q41b, and Q47 combined is 40,915; the mean is 66.4 hours, and the range is 0 to 2,080.

GREEN PAGE #1

*****MAINE GAS ONLY*******

IF HOURS OF BOAT USE (CODED 1 IN Q38):

39. Would that be **hours you get per gallon**, or **gallons you use per hour**?

HOURS PER GALLON	1
GALLONS PER HOUR----> GO TO Q41	2
DK--TRY ANOTHER METHOD	8
NA--TRY ANOTHER METHOD	9

40. IF HOURS PER GALLON (CODED 1 IN Q39)

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

ENTER # OF HOURS PER GALLON **(A)** . . . ___ ___ ___ • ___

b. And about how many **hours did you use the boat** (in Maine)?

ENTER # OF HOURS **(B)** . . . ___ , ___ ___ ___

B ÷ A = GALLONS

IWER: B÷A=GALS. CALCULATE: NUMBER OF HOURS **(B)** DIVIDED BY THE NUMBER OF HOURS PER GALLON **(A)**. ENTER THE RESULT IN THE BLANK IN Q40c, BELOW:

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

YES. . •CIRCLE CODE -------->	1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT"	___ ___ , ___ ___ ___
•GO TO Q45.	

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 #2

****MAINE GAS ONLY*****

41. IF GALLONS PER HOUR (CODED 2 IN Q39)

This means that you use more than one gallon per hour, right?

a. Approximately how many **gallons per hour**, on average, did you use in your boat in the last year (in Maine)?
ENTER # OF GALLONS PER HOUR **(A)** . . . . . ___ ___ ___ • ___

b. And about how many **hours did you use the boat** (in Maine)?
ENTER # OF HOURS **(B)** . . . . . ___ , ___ ___ ___

A x B = GALLONS

IWER: A x B= GALS. CALCULATE: NUMBER OF GALLONS PER HOUR **(A)** TIMES THE NUMBER OF HOURS **(B)**. ENTER THE RESULT IN THE BLANK IN Q41c, BELOW:

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

YES. . •CIRCLE CODE --------> 1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ___ ___ , ___ ___ ___
•GO TO Q45.

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.

PINK PAGE

*****MAINE GAS ONLY*****

42. GALLONS AT FILLUP (CODED 2 IN Q38)

REMIND R OF THE METHOD OF FILL UP: Now let me check — you said you usually (FILL THE BOAT IN THE WATER, DIRECTLY FROM A PUMP / GET GAS FROM SRVS STA-CONV STORE / BOTH...").

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

ENTER # OF GALLONS **(A)** . . . . . ___ ___ • ___

b. About **how many times** did you **fill it** last year (in Maine)?

ENTER # OF TIMES **(B)** . . . . . ___ ___ ___

A x B = GALLONS

IWER: MULTIPLY THE # OF GALLONS **(A)** BY THE # OF TIMES **(B)**, AND ENTER THE RESULT IN THE BLANK IN **Q42c** BELOW:

c. My calculation shows that you bought about _____ gallons of gas for that boat last year (in Maine). **Does that sound right**?

YES. . •CIRCLE CODE --------> 1

•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ___ ___ , ___ ___ ___

•GO TO Q45.

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

*****MAINE GAS ONLY*****

43. AMOUNT OF MONEY (CODED 3 in Q38)

a. Do you know **how much you spent** on gas for this boat over the past year (in Maine)? (What was that?) (ROUND CENTS TO NEAREST $)

ENTER DOLLAR AMOUNT **(A)** -------->GO TO Q43e . . . . . $___ ___ , ___ ___ ___

DK YEAR'S $ AMOUNT 99998

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 (in Maine)?

ENTER # TIMES **(C)** . . . . . ___ ___ ___

IWER: MULTIPLY THE $ AMOUNT **(B)** BY THE # OF TIMES **(C)**, AND ENTER IN BLANK IN **Q43d** BELOW:

d. My calculations show that you spent about $_____ on gas for this boat last year (in Maine). **Does that sound right**?

YES: ENTER $ **(D)** . . . . . $ ___ ___ , ___ ___ ___

NO: GO BACK AND RE-FIGURE

e. The average price of gas in Maine was $1.53 per gallon last year. I'm going to do some arithmetic here — **should I use $1.53** per gallon, or should it be **higher** or **lower** to be close to the average you paid **where you fill up** (in Maine)? (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 or D) ÷ E = GALLONS

IWER: DIVIDE $ SPENT **(A) or (D)** BY THE PRICE PER GALLON **(E)**. ENTER IN BLANK IN **Q43f** BELOW:

f. My calculation shows that you bought about _____ gallons of gas for that boat last year (in Maine). **Does that sound right**?

YES. . •CIRCLE CODE --------> 1

•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ___ ___ , ___ ___ ___

•GO TO Q45.

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.

BLUE PAGE
*****MAINE GAS ONLY*****

44. AMOUNT OF STATE GAS TAX RECOVERED THROUGH GAS TAX REFUND (CODED 4 in Q38)

a. Do you know **how much you got back** for gas for this boat in the last year from the State of Maine? (What was that?) (ROUND CENTS TO NEAREST $)

ENTER DOLLAR AMOUNT (A) . . . . . $___ ___ , ___ ___ ___
DK YEAR'S $ AMOUNT 99998

A ÷ .16 = GALLONS

IWER: DIVIDE $ REFUNDED **(A)** BY **$ .16** (SIXTEEN CENTS). ENTER IN BLANK IN **Q44b** BELOW:

b. The state tax on gas in Maine is eighteen cents per gallon.
If you got $_____ back, then my calculation shows that you bought about _____ gallons of gas for that boat last year (in Maine).
Does that sound right?

YES. . •CIRCLE CODE --------> 1
•ENTER # OF GALLONS R SAYS "SOUNDS RIGHT" . . . . . ____ ____, ____ ____ ___
•GO TO Q45.

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.

NOTE: THE TAX IS $.18 PER GALLON, BUT THE REFUND IS $.16. THE DIFFERENCE IS NONREFUNDABLE.

****

45. ☞ 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?

426	*66.36%*	1--VERY CERTAIN	1
170	*26.48%*	2--	2
41	*6.39%*	3--	3
5	*0.78%*	4--VERY UNCERTAIN	4

IWER COMMENTS:

_____

_____

_____

****

46. **IF R HAS ALREADY GIVEN YOU HOURS THE BOAT WAS USED IN Q40b or Q41b, GO TO Q47**.

About how many days in the past year — from early October last year -- 2000 --- until now — was this boat's motor used in Maine?

N=614; mean=25.52; median=14.5; range=0-250

ENTER NUMBER OF DAYS. . . . (IF 0 GO TO Q48)	___ ___ ___
DK	888
NA	999
INAP (HOURS GIVEN IN Q40b or Q41b)	000

47. On days when the boat's motor is in use, how many **hours** is it run, on average?

USE DECIMALS IF NECESSARY (USE CLOSEST QUARTER HR.):
15 MINS.= .25; 30 MINS.= .50; 45 MINS.= .75.

N=616; mean=2.57; median=2; range=0-12

ENTER NUMBER OF HOURS	___ ___ • ___ ___
DK	8888
NA	9999
INAP	0000

48. Did you use this boat in Maine **more, less, or about the same** as other years?

		--USED **MORE** THIS YEAR. ASK: **A lot** more, or a **little** more?	
33	*5.20%*	A LOT MORE THIS YEAR	1
45	*7.09%*	A LITTLE MORE THIS YEAR	2
305	*48.03%*	--**ABOUT THE SAME** USE THIS YEAR	3
		--USED **LESS** THIS YEAR. ASK: **A lot** less, or a **little** less?	
91	*14.33%*	A LITTLE LESS THIS YEAR	4
161	*25.35%*	A LOT LESS THIS YEAR	5
		HAD IT ONLY A YEAR/LESS (VOL.)	7
		DK	8
		NA	9

49. When this boat's motor is being used, is it **at or near full throttle** more than half the time, or less than that?

		--MORE THAN HALF THE TIME AT FULL THROTTLE	
75	*12.61%*	A lot more than half the time,	1
60	*10.08%*	or a little more than half the time?	2
		--HALF OR LESS OF THE TIME AT FULL THROTTLE	
136	*22.86%*	A little less than half the time,	3
324	*54.45%*	or a lot less than half the time?	4
		DIDN'T USE THE BOAT	7
		DK	8
		NA	9

50. If you could pick **one thing** that would improve boating in the areas where you use your boat (in Maine), what would that be?

DESCRIBE_____

_____ ... . __ __

		DK	88
		NA	99
59	*11.46%*	*Ban, further regulate jet skis*	
66	*12.82%*	*More education, courtesy among boaters; observe rules*	
7	*1.36%*	*Improvements for fishing (stocking, reserved areas)*	
9	*1.75%*	*More places to buy gas; less expensive marina gas*	
29	*5.63%*	*Better markers, buoys; navigation aids*	
15	*2.91%*	*Reduce number of boats; traffic congestion*	
130	*25.24%*	*Improve ramps and access points (less steep; better design for small boats; more parking for cars, trucks and trailers)*	
39	*7.57%*	*Address issues of water pollution (invasive plants, polluting motors etc.)*	
55	*10.68%*	*Nothing; no complaints; couldn't do anything to improve it*	
106	*20.58%*	*Other*	

51. Thinking of the **place closest to you to put a boat in**, how would you **rate** the facility — would you call it **excellent, good, fair, or poor**?

221	*35.42%*	EXCELLENT	1
231	*37.02%*	GOOD	2
109	*17.47%*	FAIR	3
63	*10.10%*	POOR	4
		DK	8
		NA	9

52. Thinking of public access to the water for boating **around where <u>you</u> use boats** (in Maine), would you say that there is **too much public access**, about the **right amount**, or **not enough public access** to the water for boating?

29	*4.63%*	TOO MUCH	1
423	*67.46%*	ABOUT RIGHT	2
175	*27.91%*	NOT ENOUGH	3
		DK	8
		NA	9

53. What do you think is the **best** way to make sure that boating is **safe for everyone** around where you use your boat, would it be (START AT RED STAR)

95	*15.25%*	marker buoys	1
52	*8.35%*	rules and regulations	2
117	*18.78%*	law enforcement officers	3
305	*48.96%*	education?	4
54	*8.67%*	OTHER (SPECIFY)_____	5
		DK	8
		NA	9

54. Do you belong to any **groups** related to boating?

99	*15.33%*	YES	1
547	*84.67%*	NO	2
		DK	8
		NA	9

55. Do you think you will buy another boat or motor **in the next few years?**

219	*34.22%*	YES	1
354	*55.31%*	NO .....(GO TO Q57)	2
67	*10.47%*	MAYBE (VOL.)	3
		DK .....(GO TO Q57)	8
		NA .....(GO TO Q57)	9

56. (IF YES OR MAYBE BUY NEW BOAT OR MOTOR) Some of the newest boats and motors are said to be **quieter and run cleaner**. How likely is it that you would be looking **specifically** for one of those boats — very likely, somewhat likely, somewhat unlikely, or not very likely?

151	*54.32%*	VERY LIKELY	1
73	*26.26%*	SOMEWHAT LIKELY	2
14	*5.04%*	SOMEWHAT UNLIKELY	3
40	*14.39%*	NOT VERY LIKELY	4
		DK	8
		NA	9
		INAP (CODED 2, 8, OR 9 IN Q55)	0

57. And finally, in what **year were you born**?

N=640; median=1947 (age 54); range=1913-1984

ENTER YEAR	___ ___ ___ ___
DK	8888
NA	9999

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

Enter time now ___ ___ : ___ ___ Circle: a.m. p m.

DON'T FORGET TO COMPLETE THE IWER RECORD!

****

INTERVIEWER RECORD

Recorded, but not asked of respondent

Respondent gender	*545*	*84.23%*	*Male*
	102	*15.77%*	*Female*
Respondent's mailing address	*577*	*89.18%*	*Maine*
	70	*10.82%*	*Out of state*

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

Boat Survey

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

October 2001

INTERVIEWER MANUAL

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

Margaret Chase Smith Center for Public Policy
University of Maine

October 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, according to state law. 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. We have completed the interviews with ATV and snowmobile operators, and now are conducting the boat portion of the study.

Your role

Because we don't have the time or money to ask everyone, we have drawn a large random sample of registered boats from the Department of Inland Fisheries and Wildlife records. The registration records are maintained and disseminated by a company called InforME. You, as interviewers, will call the owners of those watercraft 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.

Margaret Chase Smith Center for Public Policy
University of Maine

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:

1. 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;

2. 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

Ann Acheson, Ph.D., EpiInfo Programmer

Erin Bock, Graduate Assistant

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

Patrick Norton, Project liaison, 287-1670

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 Boat 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. Wait it out.
•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 appears on the questionnaire.

BAD FEEDBACK. ..... DO NOT USE!

Great!
Okay.
Right.
Right on.
Me too.
I'll say.
You bet.
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.
I don't like that, either.
Good.
Excellent.
Cool.
Way cool.
Ain't it the truth.
Awesome!!

Boat 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 because the notification letter contains the full legal name of the Commission.

•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 boat. 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 boat.

What is a boat?

"Boats" in this study include any boats, commercial aor recreational, that are propelled by a motor or engine. It includes personal watercraft (PWCs, or Jet Skis), sailboats that have an auxiliary motor for moving the boat in the harbor and for use in case the sailboat gets becalmed, and small boats and canoes that have motors for fishing. The sample includes only those boats whose owners say their motors use gasoline as fuel.

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 last years's (2000) registration lists because the current year's list is not yet fully compiled. The registrations on the list we are using expired on December 31, 2000. Therefore, it is possible that the respondent does not still own the boat.

If R isn't the literal owner, but is the one who knows the most about the boat, 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 boat's gas use. If the boat is still owned by the father, record 1 for YES and interview the teenager.

Q3. We need to ask if the boat was registered to this respondent (or surrogate) sometime in this year, 2001; that is, the owner renewed the registration after it expired last December. Conduct the interview if this R and/or someone connected to this household had the boat during at least some part of 2001. Some of these boats will probably have had no gas use. That is OK: continue the interview.

If R did not register the boat for use in 2001, circle the 2 for NO, make a note, thank R and terminate. Circling the interviewer instruction for termination (BOAT WAS NOT REGISTERED IN 2001) is sufficient for a note, unless further explanation is necessary.

Q4. The registration records record the type of fuel used. We have sampled from the boats that are recorded as using gasoline. We do not expect any boats that do not use gasoline, but we need to ask to make sure. The list includes sailboats, rowboats, etc. that use auxiliary gasoline motors.

Q5. An outboard motor attaches to the outside of the boat, usually on the transom at the stern (the back end), with the propeller held away from the boat. The whole motor, driveshaft, and propeller are outside the boat.

An inboard/outboard motor has the motor itself (where the gas combustion takes place) inside the boat, and the rest of the unit -- the driveshaft and the propeller -- outside. Inboard/outboards are also called "stern drive" engines.

An inboard has only the propeller on the outside.

A jet drive has no propeller. It uses an inboard engine to take water in, then discharge it at high pressure through a nozzle, thus pushing the boat forward. Jet skis have jet drives, as do some large boats. See the descriptions and pictures on the following pages.

Jet drives come in both inboard and outboard models, depending on the location of the motor. If the boat is a jet boat, circle the code for jet boat, not for the inboard or outboard location.

Q6. Insert the registration number, the length of the boat is feet, and the make of the boat in the question: "Counting this boat with registration number QB 1208, the fourteen-foot Starcraft, how many..."

Count all boats that are reasonably operational and are owned by the household, even if some of them were not used during the past season. Be sure to count the one that you're going to be asking about.

- •Count both registered and unregistered boats.
- •Count only those boats that are currently owned.
- •Enter the number of boats in the blanks in the coding strip.

A household is the dwelling unit and all the related and unrelated people who live in it at least some part of the year. Let R be the judge of whether someone "regularly" lives there.

Q7. In this question we want to know how much this boat is used relative to others in the household. Be aware of the response to Q6 before you ask this one. Ask this question only if the household has more than one boat. If the household has only one boat, select INAP (INAPPLICABLE) because there are no other boats in the household with which to compare this boat. We may have selected the boat 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 boat.

Q8. 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 ask: "Do you want me to count him?"

Q9. We want to know the ages of persons who use boats to better understand the characteristics of people who use them, and to help plan recreational facilities.

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

Q10. Count any reasonably operable snowmobiles. Enter 00 if no one in the household has one.

Q11. Count any reasonably operable ATVs. Enter 00 if there are none.

Q12. This question refers to R alone, not to other members of the household. If R says "All my life," you can say "How many years should I put down here?"

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 going out in boats 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.

Examples of rounding exact halves to the nearest even number:
•4.5 becomes 4 (4 is the nearest even number to 4.5);
•5.5 becomes 6 (6 is the nearest even number to 5.5).
•5.3 becomes 5 because .3 is not an exact half (only .5 is an exact half), so you round to the nearest whole number;
•5.7 becomes 6 because .7 is not an exact half, so you round to the nearest whole number;
•4.7 becomes 5 because .7 is not an exact half, so you round to the nearest whole number.

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

Q13. From this point, you will be asking about the selected boat only, until after you get past the gasoline use questions. Read the registration tag number from the label in the blank in the question.

Read the make of the boat (not the motor) 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 boat is. If a boat has been modified to include parts of several makes, ask R which make to record.

There is a "homemade" make, which is not a commercial brand, for boats that are designed and built by individuals.

Q14. Ask for the make of the motor (engine) and record it in the blank. It may be the same as the boat, but usually is not.

Q15. Horsepower is a measure of engine power. There are horsepowers from very small motors (2-3 HP) to a very few very large ones, apparently over 999. There are only three spaces to enter the digits for the answer. If you encounter a very large engine, 997 HP or greater, circle the 997 and write the real HP. After the data have been entered, we will look up those cases with codes of 997 and enter the real answer by computer (better than entering a lot of leading zeroes for the sake of a case or two).

Q16. A 2-stroke engine burns the lubricating oil and gas together. In older and/or smaller motors, you mix the gas and oil by pouring them together in the gas tank. In newer and/or larger 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. We want to know whether this is the original motor that R had when s/he got the boat. If R got the boat first, then later got a motor, circle the 1 for YES because it is the first motor that R had for the boat. NO means that R has replaced the first motor s/he had with the boat. For an inboard or similar engine, a NO means that the whole engine (the part that creates the combustion from the gas to make the shaft turn) has been replaced.

Q18. Enter the code for the range of years R has owned the boat. Read the ranges if necessary.

Q19. This question is the lead for one or both of two sections, one about commercial uses of the boat (Q20. Q20a, and Q21), and one about recreational uses (Q22 and Q23). The boat may be used for either or both purposes. If the boat was not used at all in the past year, ask R to tell you how the boat was used when it was being used.

Q20. Maine state law allows a refund of most of the state tax paid on gasoline purchased in Maine for commercial motor boats. Applications for refunds are filed on special forms, following the instructions of the Maine Revenue Services. Don't try to give advice here if R hasn't heard of this or wants details. If necessary, you can give R the number of the Maine Revenue Services office that works with fuel taxes: 207-624-9734.

Q20a. Requests for refunds are of course voluntary, and can be filed monthly. Refunds are applicable only to commercial uses of the boat. Therefore, R may not have requested refunds for all the gas s/he bought in Maine. If R filed for refund(s) in the past year, we want to know roughly for how much of R's Maine-bought gas s/he got a refund.

Q21 In Q21 we want to know the ways in which the selected boat is used for commercial purposes. If the boat 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 fish from the boat (b), and sometimes take people out for sightseeing (a).

Be cognizant of the difference between (b) fishing from the boat, and (c) using the boat as a skiff to get out to and back from the fishing boat, which may stay anchored or moored away from shore.

(a) "To take paying customers on" includes ferrying paying riders to islands; sightseeing on lakes, rivers, or the ocean; whale-watching; deep-sea fishing for sport; providing Maine guide services to people who hunt and fish; party boating, etc.

(b) "Fishing" includes hauling lobster traps (or pots, depending on what part of the coast you're on), diving for sea urchins, dragging for scallops, etc.

A deep-sea fishing boat that takes customers out to sport-fish is (a) "To take paying customers on," not (b) "Fishing from this boat." "Fishing from this boat" means that the primary purpose is to take fish, not provide recreation.

In (d), the boat is a means to get to the clam flats, mud flats, etc., to harvest clams, worms, etc.

"Other" commercial uses might be tending salmon pens, delivering goods to islands, etc.

Q22. If R uses the boat commercially, insert the word "ever" in Q22. If R has said there is no commercial use, then you don't need the "ever." You should make sure that even a clearly commercial boat is never used for recreation before skipping the recreational boating questions. For example, many lobster boats are raced a time or two in the summer, or may be used for family excursions.

Q23. Distinguish between hired recreational uses (such as sight-seeing, whale-watching, deep-sea-fishing) that are commercial uses for the boat owner, and recreational uses, which are uses that the owner pursues in his/her own boat.

In (a), the fishing must be done from the boat itself. In (b), R uses the boat to get to the fishing spot, but does not actually fish from the boat.

(d), "Riding around for fun" is what people do who sightsee, cruise around the lake, travel from boat to boat visiting their friends in the harbor, use the boat to travel out to islands for fun, have floating parties, ride a Jet-ski, tow a water skier, etc.

(d) "Racing" can be a formal race, or informally playing around with friends.

Q24. This question is about the waters in which R uses the boat. Most boats are used with in fresh or salt water, but some are used in both. The "fresh water" parts of the question distinguish between lakes and ponds (a) and rivers and streams (b). The coastal mouths of the rivers are likely to be "brackish" (a mix of salt and fresh water). If R isn't sure how to classify those waters, find out if R is really on the river, and happened to go into brackish water (which is more like "b"), or was on the ocean and happened to go into area where the river started to dilute the salinity of the ocean (which is more like "c"). However, if the boat travels up and down the coast and sometimes goes up the rivers, you will probably mark "sometimes" or "often" for fresh water rivers.

Q25. Some boats, especially commercial ones, are used year-round. Note that the question asks about use in Maine. Some boats are here in the summer, then cruise to warmer climates for the rest of the year. We are interested only in use in Maine. The seasons here have common-sense definitions tailored to Maine. Winter starts when the snow comes (late November), and lasts until the snow goes. Spring starts when the snow leaves, and ends around Memorial Day. Summer lasts until Labor Day. Fall starts on Labor Day and lasts until the snow arrives.

Q26-Q31 are about the way R uses the boat. We want to know whether this is a boat that is usually kept on land and hauled around to various (or the same) places for use; or whether it stays in the water for a season (usually the summer), then is taken somewhere and stored; or whether it is in the water (whether used or not) most of the year.

Q26. Note that the "in-out" answer is typical of boats that are either taken around to various (or the same) places and put in and taken out for (almost) every use, or perhaps kept on the land in front of a camp when they aren't being used. Boats that stay in the water are

anchored or moored, kept tied to a dock, etc., and rarely are taken out of the water except for the end of a season, or to be repaired on land.

Q27. "Storing the boat on land" means storing it anywhere but in the water: in a boathouse, at a storage facility, in the back yard, etc. If the boat is used all year, there may be no "off-season"-- for those cases, circle code 7.

Q28. The boat may have been taken out of the water for several reasons: to take it somewhere else over land; to store it between uses; to put it up for the season; to repair it during the season. Even a boat that is kept in the water may be taken out for some purpose. Even if you know the boat is one that stays in the water all the time (e.g., a commercial fisherman's boat), you must ask this question, because the boat may have been taken out of the water for repairs.

Q29. Enter the number of miles the boat was hauled over land on a trailer. It may be 00000, even if the boat was taken out of the water, because the boat may be stored at the place where it is used (e.g., it may be used at a camp and taken of the water at the end of the season and put in a boathouse or garage on the property.)

If the boat was hauled over land to a boat storage facility, be sure to count the miles in the round trip to and from the storage place.

Q30. This question about being through using the boat <u>in Maine</u> for the season is prompted by the fact that the season for recreational boating is ending just as we are starting to interview. You may already have a very good idea by this point in the interview whether the respondent's boat use is seasonal or not. You must make sure, however, that you know whether the boat's use <u>in Maine</u> is over for the season. It is possible that boats used year-round are taken to other (warmer) places for use in the rest of the year.

Q31. If R is not through using the boat, ask how much more gas R will buy <u>in Maine</u> before putting it up for the season or taking it away from Maine waters.

Q32-Q49. From this point through Q36, we will be asking some very specific questions that will help us find out about gasoline bought in Maine. Make sure that R is talking about the boat we selected.

Ask all the questions carefully. The answers are crucial to our ability to estimate the overall amount, in gallons, of gasoline bought in Maine in all the boats that we selected for this survey.

Q32. In Q32, 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.

The most important part of this question is the introduction. It tells R what you are going to do, and gives the frame of reference. We want R to understand that we are asking about this boat only, and this past year only: October 2000 to now. Use these prompts liberally in asking all the gasoline questions where they are indicated, and whenever you think R may need to be reminded, even if the frames of reference are not indicated in the questions.

Q33. We want to be able to account for the gallons of gas bought out-of-state. Therefore, we want to know how much of the gas used in the selected boat is bought outside of Maine. The question asks for the percentage of gas bought OUTSIDE of Maine. Therefore, if R never buys gas out-of-state, the answer is 000. If R buys <u>all</u> gas out-of-state, the answer is 100.

If R bought no gas at all in the past year, or no gas in Maine, make sure to probe that response ("Let me make sure. You didn't buy any gas <u>at all</u> (in Maine) for this boat in the past year, form October 2000 to now. Is that correct?"). If R agrees that is the case:•circle the code 777 in Q33
•GO TO Q37 (the question for people who know how much gas they used without calculating it), and enter a string of 5 zeroes there. (You will skip Q34-Q36, and they will be coded INAP). Then go to Q45 and rate R's confidence in giving the answer about the amount of gasoline used.

Use probes to help R arrive at an estimated percentage of the percentage of gas bought out-of-state. If you're given a range, use "Which is closest?" or a variant. Do not just take the midpoint of the range. Tell R you have room for just one number — you can't write down a range.

Q34. This question is the first in a series that will help us estimate how much gas is sold at Maine marinas and similar facilities that have pumps on land or on the docks, and a gas hose (and usually also a diesel pump and hose) going down to the water which fills boats or gas cans at the water's edge, usually while the boat stays in the water. Although it is theoretically possible to gas up a car from some marina pumps, it is awkward and expensive (gas sold at marinas costs more).

Boaters can also buy gas at regular service stations or convenience stores by filling a gas can and taking the can to the boat. If the boat is on a trailer, some people fill the gas tank

directly from the pump. The important distinction is between (CODE 1) gas bought at marinas and (CODE 2) gas bought at regular gas pumps used by cars and trucks.

Q35. If R gets gas from both marinas (hose-down-to-the-water) and regular (car/truck) pumps, we want to know the percentage of the gas obtained at the marina. Make sure you and R are talking about Maine marinas. Most marinas are on the coast or the rivers. There are a few on the larger lakes.

Q36. If R cannot give a percentage in Q35, and you can't arrive at one with appropriate probes (e.g., "Was it about half, or more or less than half?" (IF LESS THAN HALF) "More than a quarter?"), ask Q36 to get a verbal description of how much gas is bought at Maine marinas. Note that NONE should not be an option, since those Rs should have gone to Q37, based on their response in Q34.

IWER NOTE BOX: NO GAS. This highlighted box is meant to let you check whether R bought gas in Maine last year, or not. If not, the box is a reminder to enter zeros in Q37, the first gas question, where you record the answer if R knows how much gas s/he used. Then go to Q45 and rate R's confidence in the estimate.

It is always appropriate to check with R: "I'm coming to some questions about how much gas you bough for this boat in Maine last year. You have said that you never put your boat in this year. Is that correct? (IF YES) Did you buy **any gas at all** for it this past year, that is, from October 2000 to now?" If the answer is still NO GAS, then record that in Q37 (00000) and go to Q45.

Q37. 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 an additional clarification to be read to Rs who have, or may have, bought gas out-of-state. If you are interviewing an out-of-stater, or someone who bought some gas out-of-state, read the part of the question that emphasizes that we want to know only about gas bought in Maine. Use an out-of-state address and comments that R may have volunteered as clues to the possibility that R may have bought gas out of state.

There is a crucial component to Q37. It is the point at which you ask R if s/he knows how many gallons of gas s/he has used in this boat in the past year. Both recreational and commercial boaters may keep logs of their trips and their gas use. It is quite possible that R already knows the number of gallons of gas s/he has used. 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 Q45 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 gallons of gas without further questions, 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.

Circle the 99998 code for DK.

Be prepared to use probes to help R narrow a range if s/he gives a range in answer to Q37. Explain "Thank you. I have space here for just one number, and I can't record a range. Do you think it was closer to X or Y, or somewhere in between?"

A response of zero gallons is appropriate if R didn't buy any gas in Maine. That can happen if R did not use the boat, did not use it in Maine, or bought gas over the state line in New Hampshire or Canada. Enter 00000, GO TO Q45, and continue the interview with this R who didn't buy any gas in Maine.

Q38. 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 if it isn't working. 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 (actually refuses) then thank R and GO TO Q45. Make notes on this page about why R doesn't think s/he could arrive at an answer.

Note the "STATE GAS TAX REFUND (VOL.), code 4. Some commercial boat operators may file for tax refunds (see Q20 and Q20a). If so, the amount of money refunded may be used to calculate the gallons of gas used. If R has the refund forms to look at, s/he will find the number of gallons on them, and you can enter the number of gallons in Q37, above, instead of doing the calculation in Q44.

Q39-Q44. These are the "calculation" questions. Along with Q33 (percent of gas bought outside Maine), 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.

There is a phrase "(in Maine)" added to some of the questions to help you remind R that we are interested only in gas bought in Maine. Use it when you are speaking with a R who may have bought gas elsewhere. Be particularly careful when you are speaking with someone who takes his or her boat out of state in Maine's off-season. It is never wrong to include the clarifying phrase, no matter with whom you are speaking.

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 or a calculator may help.
•Letting R tell a story out loud about the number of trips taken, or the number of hours spent in the boat 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 lake a couple of times on weekends? How often do you have to get gas — every weekend, or less often?" "How many hours can you go before you know you'll need to fill up again?"
•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.
•Respondents can ask others at their end of the line for help.

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.

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." Don't do all the work of arriving at an estimate and then forget to write it down!

Q45. 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 boat use. It is not required that you put any notes here.

If you recorded the number of hours R used the boat in Q40b 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 Q47.

Q46. This question is for those who have not already told you how many hours the selected boat was used in the past year. Use the techniques described above to help R arrive at one figure for an answer.

If necessary, be ready to help R with some neutral probes. You can help a respondent who is not sure by asking questions (not making assertions) that help R arrive at an accurate

answer. For example, if you know the boat is used only in the summer, you can ask R which months and how many weeks s/he used the boat this past summer, then ask the number of days in a typical week, and then the number of hours in the typical day. It is important that this number be reasonable and as accurate as you and the respondent can make it.

Q47. In this question we are looking for an estimate of the hours (or fractions thereof) the motor is actually running on the days the boat is in use. Count hours the motor is idling as well as the hours it is propelling the boat.

Q48. We know that for some respondents this year may not have been typical of other years. Note that this is a two-step question. First, you ask if the amount of riding was typical, more, or less than other years. Then, if MORE or LESS, you ask how much more or less. If it was ABOUT THE SAME, don't forget to circle code 3.

Q49. "Full throttle" means "wide open," or as fast as the motor can go, given the conditions. We want to know a rough estimate of the amount of time that the boat is run at top power.

Now that you have R's estimate of the gallons of gas used, the hours the motor was operated, and how much of the time it was used at full throttle, take a moment to consider the reasonableness of the answers you have. If the answers do not seem to fit together, review those elements with R to make sure you have the situation recorded correctly.

Q50. 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 single response clearly in the blank provided. We will code the responses later.

Q51. This question refers to the closest place to where R usually goes out in a boat. The facility can be a private or public launching area, or a beach that is not a formal "facility." It may have a crane and a cradle for lifting big boats out of the water, or just be a place you drop the motorboat in. 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.

Q53. There are many ways to increase safety. These are some that are frequently mentioned. We want R to pick the one that is "best," whatever "best" means to R. This question has a "START AT RED STAR" instruction. Read the red starred item first, then the one below it until you reach the bottom of the list (do not read the OTHER, DK, etc. responses), then go to the top of the list and read down until you reach the item before the red star. Using this method will randomize the order in which the answer options are presented, to ensure that all the items have an equal chance to be the first and last items read. If R picks a combination, try to get R to select the one that is best. If having heard the list, R mentions an item not on the list, write it in the OTHER (SPECIFY) space.

If R mentions something very close to the items on the list, ask R if it is OK to use the list item. For example, if, after hearing the list, R says "We need more Coast Guard patrol boats," you can say: "If you had to choose, which would it be -- marker buoys, rules and regulations, la enforcement officers, or education?" If R still chooses the Coast Guard patrol boats, then circle CODE 5 and write the choice in the bland. If R chooses "law enforcement officers," which is probably quite close to R's idea, then circle the code # for that answer choice.

Q54-Q57. These questions are about R. We ask them to make sure that our sample represents all the boat users 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. Boat clubs and associations are formal membership organizations formed for the purpose of promoting and enjoying boats, or for looking out for the interests of those who use boats. Groups of boaters are not clubs unless they have actually formed a formal organization. Commercial co-ops (such as lobster co-ops) and trade associations are considered a group related to boating, since boat use is essential to their activities.

Q55. The boat or motor (either or both) could be a replacement for a current one, or an additional one. It need not be a replacement for the one whose registration we selected for the sample. Purchasing a new boat can mean buying a used boat — the question means new to the respondent, not necessarily brand new.

Q56. The major manufacturers are beginning to offer models that are built to reduce noise and exhaust emissions. We want to know to what extent those factors are specifically considered in the decision about which boat to purchase. There are of course many other factors to consider in a purchase.

Q57. We ask R's year of birth. That is a reliable way to obtain R's age.

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. You can also tell R that it will be on the Margaret Chase Smith Center's website once the Commission has reviewed it. 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 four-digit 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 respondent's local telephone number; e.g., 989) at which the interview was conducted; or, if this is an out-of-state call, the respondent's area code. We can later tell the difference between a Maine exchange and an out-of-state area code by using the answer to QI, below.

QD. The respondent's gender. Note that this is not necessarily the same person whose name appears on the label. For example, the boat 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 operator of the boat.

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 (October=10).

QG. Record the date on which the interview was done (October 13 = 13).

QH. Enter your interviewer number.

QI. Circle the code for the location of R's address.

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

Sample Cover Sheet

BOAT

ID: 2714 GEOCODE: 03300
Happy T. Boater
153 Seaweed Lane Machias, ME 04654

YR: 77 LTH: 14 MAKE: Starcraft
HP: 8 TYPE: open Reg#: 3247G

Logged_____
Edited_____
Coded_
_____
Entered_____
Verified_____

Maine Legislature
Commission to Study Equity in the Distribution of Gas Tax Revenues

Call Slot	Day of week	Date	Time, with am/pm	Notes	Disp. code	Iwer #

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 boat.

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 box in the supervisor's room as you accumulate a pile of them.

Parts of the Coversheet

Information about the respondent and the boat. The coversheet has a label in the upper-left corner which has information that you will use to contact the respondent and to conduct the interview. It includes:

- a *case identification* number (ID), which was generated by us for use in this study;
- a *code for the town or city* where R lives (GEOCODE), which is a standard state of Maine code for each town or city in Maine;
- the *name* of the person you are to contact;
- his or her address;
- the *year* of the boat (YR), as recorded in the State's records;
- the *length* of the boat in feet (LTH), as recorded in the State's records;
- the *make* of the boat (MAKE), as recorded in the State's records;
- the *horsepower* of the motor (HP), as recorded in the State's records;
- the *type* of boat (TYPE), as recorded in the State's records, where types can be open, cabin, sail, canoe, houseboat, pontoon, personal watercraft (e.g., Jet Ski), and other;
- the *registration number* (Reg#) assigned by the State; and
- a handwritten *telephone number* that represents our best attempt to find contact information for this respondent.

Information about the call attempts. 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. 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: 5/2 for May 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.

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, in which R states clearly that s/he does not want to be interviewed. You can usually avert a refusal by being sensitive to R's time, questions, and concerns, and by answering R's objections. 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 rings.) Do not call more than a couple of times in one call slot. It may be that R is sleeping, watching TV, ignoring the telephone, or children are home alone and instructed not to answer the phone (in which case, repeated calls will frighten them).

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 or voice mail. 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 NAME) calling from the University of Maine to do a research interview about gas use in your boat. Sorry we missed you earlier this evening. We'll try again." Make a note about whether you did, or did not, leave a message. Do not call repeatedly and leave a string of messages. That annoys respondents and jams the capacity of answering machines.

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), or a computer line, note that and try again soon. A one-line phone may have been switched to the Fax or computer 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 will ask some of you to help with these tasks as interviews are completed. "Logged" means that the case has been checked off 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. (Usually we do editing and coding in one step.) "Entered" means that the data have been entered into the computer, and "Verified" means that the data have been entered a second time to assure accuracy.

APPENDIX G

Maine State Legislature

OFFICE OF POLICY AND LEGAL ANALYSIS

13 State House Station, Augusta, Maine 04333-0013
Telephone: (207) 287-1670
Fax: (207) 287-1275

November 6, 2001

Memo to: Members, Gas Tax Equity Study Commission

From: Patrick Norton, Principal Analyst

Re: Questionnaire to marina owners; summary of responses

At its last meeting, the Commission asked the Office of Policy and Legal Analysis to work with the Department of Inland Fisheries and Wildlife and the Department of Marine Resources to develop a list of marinas and to send those marinas a questionnaire inquiring about their gasoline sales to boats. The purpose of the questionnaire was to help the Commission better understand if recreational boats that operate in Maine but that are not registered in Maine are consuming a small, medium or large percent of the total amount of gasoline consumed in Maine by all recreational boaters.

This memo and the attached materials summarize the results of that mailing. I have attached seven bar charts summarizing the responses received as of November 5th, a copy of the letter and questionnaire sent to the marinas for which I was able to obtain a mailing address and a spreadsheet including the names and addresses of the 239 marinas that were mailed a questionnaire.

It is important to note that the group of marinas that received this questionnaire do not constitute a randomly selected sample and that the individuals who responded were "self-selected"---meaning that they made an independent choice as to whether or not to respond to the questionnaire. In addition, no attempt was made to evaluate the reliability of the responses. For those reasons, responses to this questionnaire cannot be used to make statistical inferences about gasoline sales by all marinas. The statistical usefulness of the data obtained through this questionnaire is limited to describing the answers provided by the respondents.

Tables 1 and 2 show the number of questionnaires sent and a summary of the responses:

Table 1
Overview of Mailing and Responses

Number of questionnaires mailed [1]	239
Number returned as undeliverable	4
Number who responded	115

Table 2
Summary of 115 Responses

Number responding that the questionnaire did not apply or that they did not sell gasoline	22
Number responding (by 11/5) to some or all of the questions[2]	93
Total responses (by 11/5)	115

The attached bar charts summarize the information provided by the 93 respondents who answered some or all of the questions.[3]

Chart 1 shows that the distribution of marinas (by volume of gasoline sold) is roughly similar for the fresh and salt-water marinas that responded to the survey, although a noticeably larger percentage of fresh-water marinas than salt-water marinas reported sales greater than 25,000 gallons. **Chart 2** also shows similar patterns between fresh-water and salt-water respondents with respect to the percentages of gasoline they sell to boats. In both cases, the large majority of the marinas reported selling more than 75% of their gasoline to boaters. **Chart 3** reveals perhaps the most noticeable difference between the fresh-water and saltwater respondents by showing that a large majority (77%) of the fresh-water respondents reported that they sold more than 75% of their gasoline to recreational boaters while a minority (29%) of the salt water respondents reported that more than 75% of their sales were to recreational boaters. **Chart 4** illustrates the flip side of that question, to some extent, by showing that a larger percentage of salt water respondents (29%) reported selling more than 75% of their gas to commercial boats than did fresh-water respondents (8%). **Chart 5** shows that 38% of the fresh-water and 41% of the salt-water respondents reported selling less than 25% of their gasoline to out-of-state boaters. There is an interesting blip in this chart, however, which shows that 23% of the fresh-water respondents reported selling

[1] Approximately 80% of the marina names were provided by the DMR, the remainder by the DIFW.
[2] Approximately 75% of the respondents reported that they were located on salt water.
[3] The totals do not always add up to 100% since not all the respondents answered all the questions.

between 50-75% of their gas to out-of-state boaters. A more systematic and detailed survey would be needed to determine, for example, how real that blip is and whether or not the location of those marinas plays a role in those sales. **Chart 6** shows that most of the fresh-water and salt-water respondents report selling from 0-25% of their gasoline to documented vessels. The responses to this question are probably the least informative, however, since only 33 of the marinas responded to this question at all and only 3 of them were fresh-water marinas. **Chart 7** shows that a large majority of fresh and salt-water respondents reported having an "average" summer with respect to gasoline sales. More fresh-water marinas reported having an "above average" summer and more salt water marinas reported having a "below average" summer. Only one marina, a salt-water marina, reported having a "poor" season.

The questionnaire also included space for the respondent to provide comments or additional information and invited the respondent to attach additional material to their questionnaire if they so desired. None of the respondents attached additional information, and only fourteen used the available space on the questionnaire to provide comments.[4] Most of those fourteen comments were clarifications of their responses (such as "all our gasoline sales go to commercial fishermen" and "almost all our sales are recreational", etc). One respondent provided a precise number for gallons of gasoline sold. Three respondents made policy-related comments: one person wrote, "*Many boats on the lake which are used only in Maine are registered in other states. This creates a large loss of revenue for the state and is a problem hard to correct*"; another person wrote, "*There should be no road use tax on this fuel. Fleecing boaters is not good business*"; and a third person wrote, "*Our inland lakes and rivers need attention. Please help.*"

I anticipate that some additional responses will be received between the date of this memo and the Commission's final meeting. If the Commission wishes to include a summary of this questionnaire in its final report, I would be happy to update the summary to incorporate those responses.

Please feel free to contact me if you have questions.

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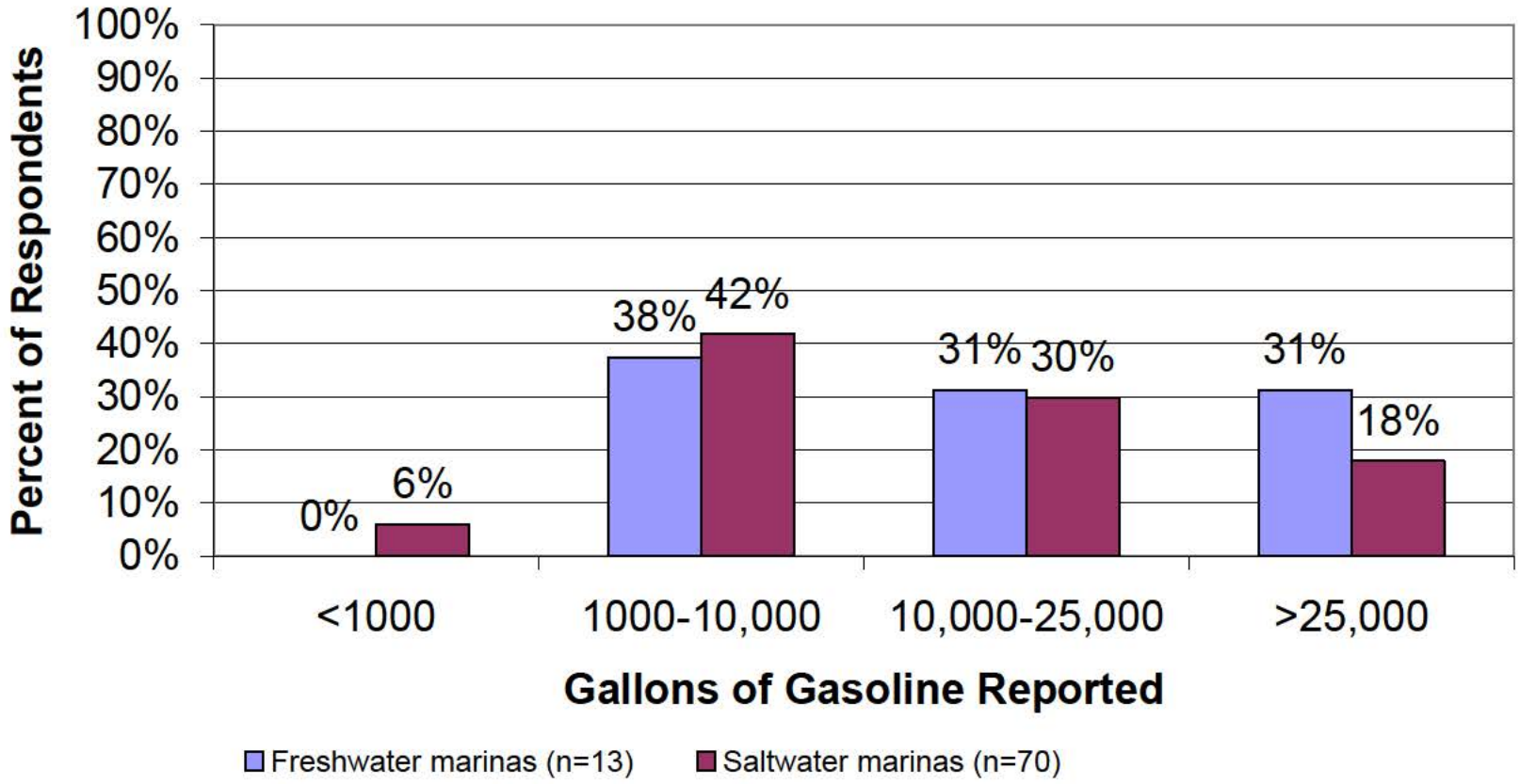
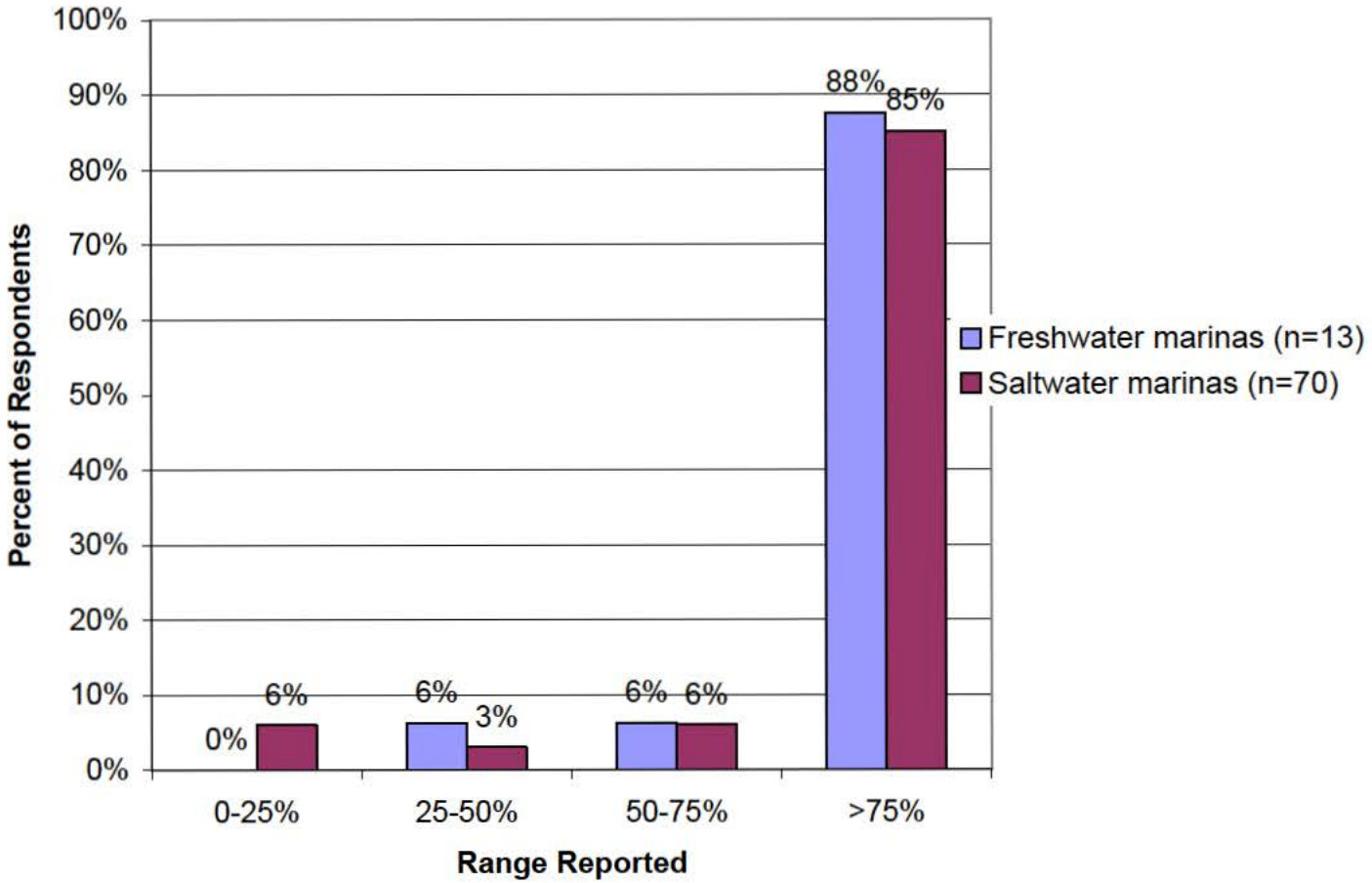
[4] These 14 do not include the 22 respondents who returned their questionnaire with a note saying simply that they "didn't sell gas" or that they "were not a marina".

Chart 1
Range of Total Gas Sales by Respondents



Prepared by the Office of Policy and Legal Analysis
November, 2001

Chart 2
Percent of Gasoline Sold to Boats



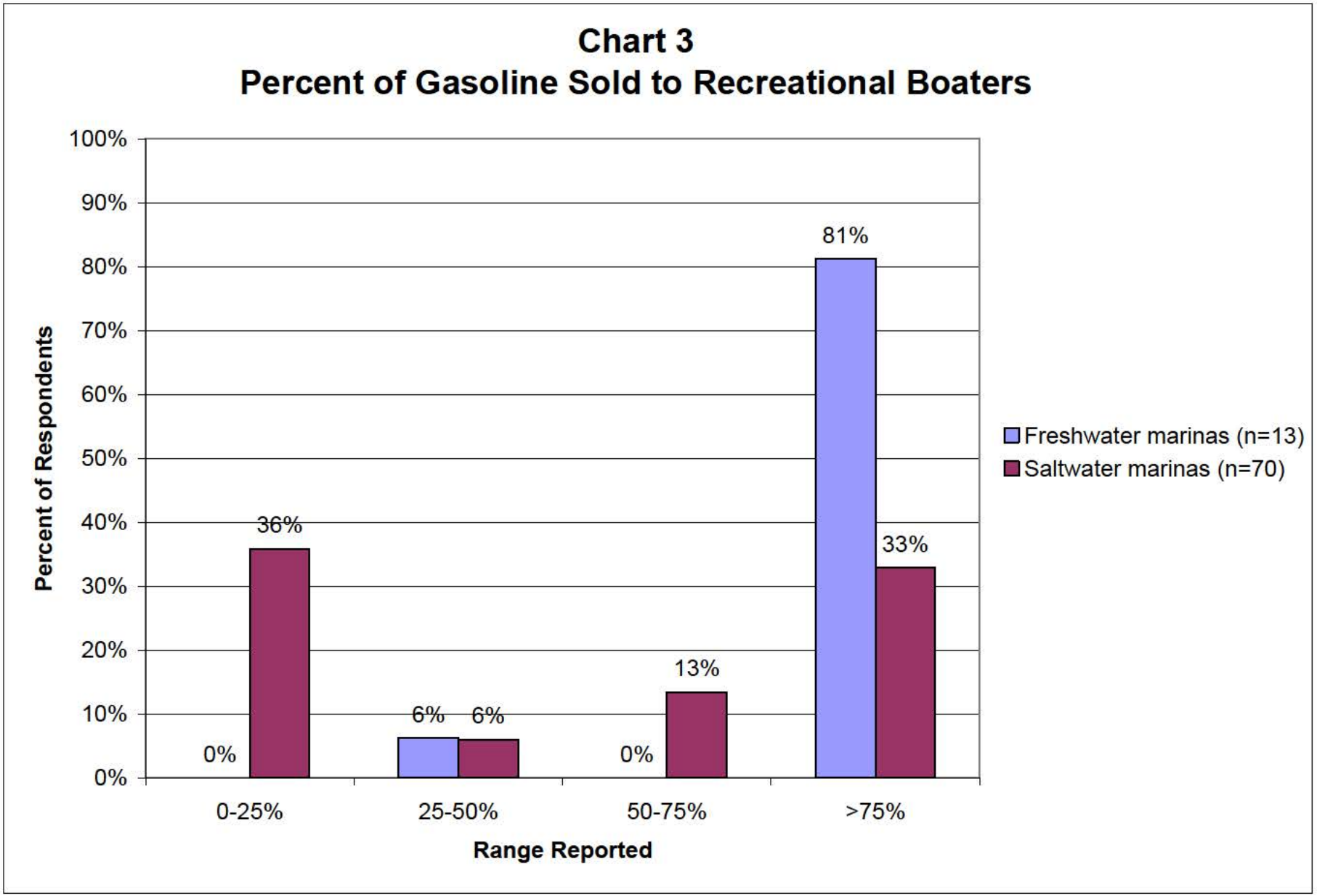


Chart 3
Percent of Gasoline Sold to Recreational Boaters
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percent of Respondents
36%
0%
6%
6%
13%
0%
81%
33%
0-25%
25-50%
50-75%
>75%
Range Reported
Freshwater marinas (n=13)
Saltwater marinas (n=70)

Chart 4
Percent of Gasoline Sold to Commercial Boaters

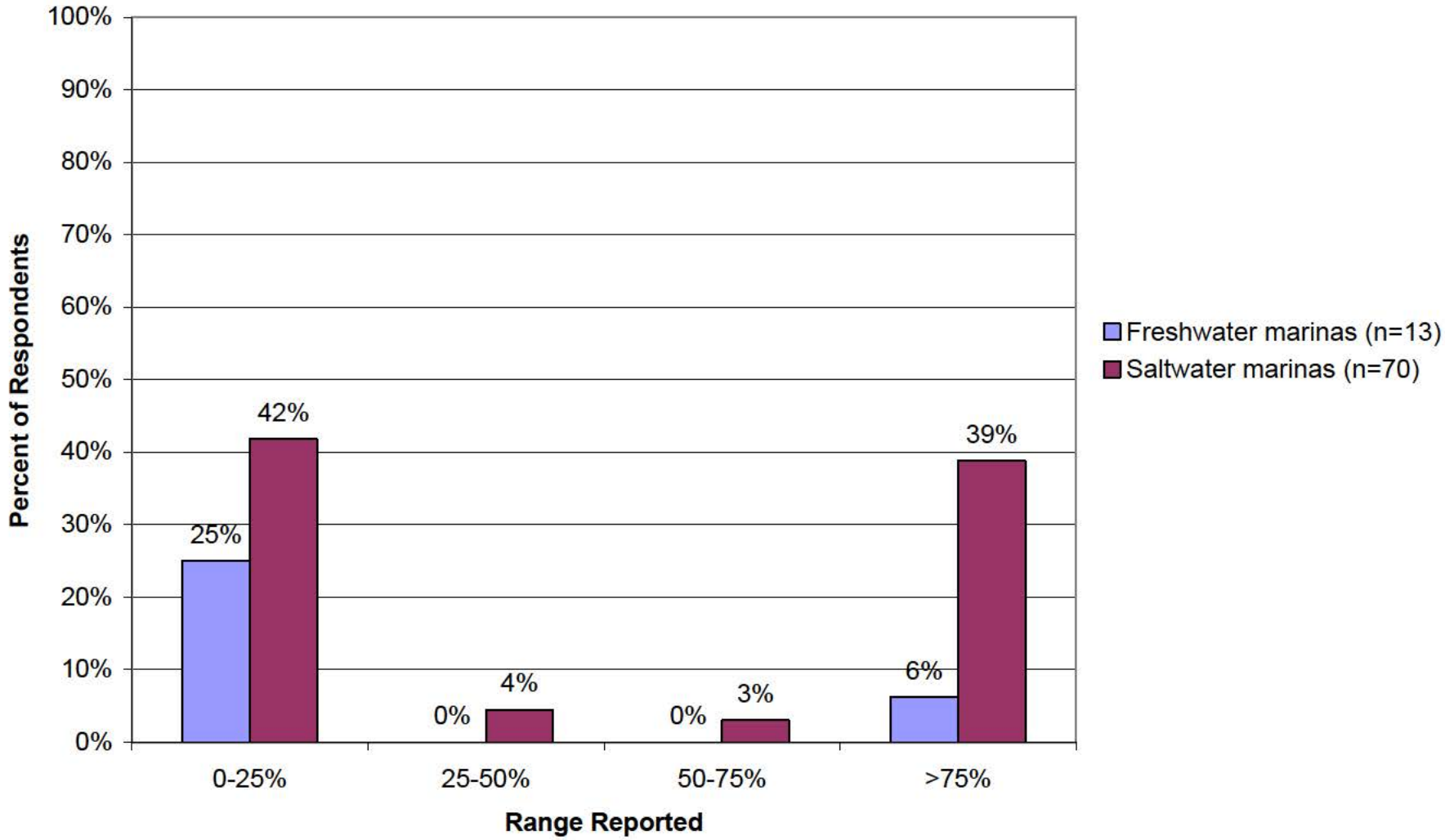


Chart 5
Percent of Gasoline Sold to Out-of State Boats

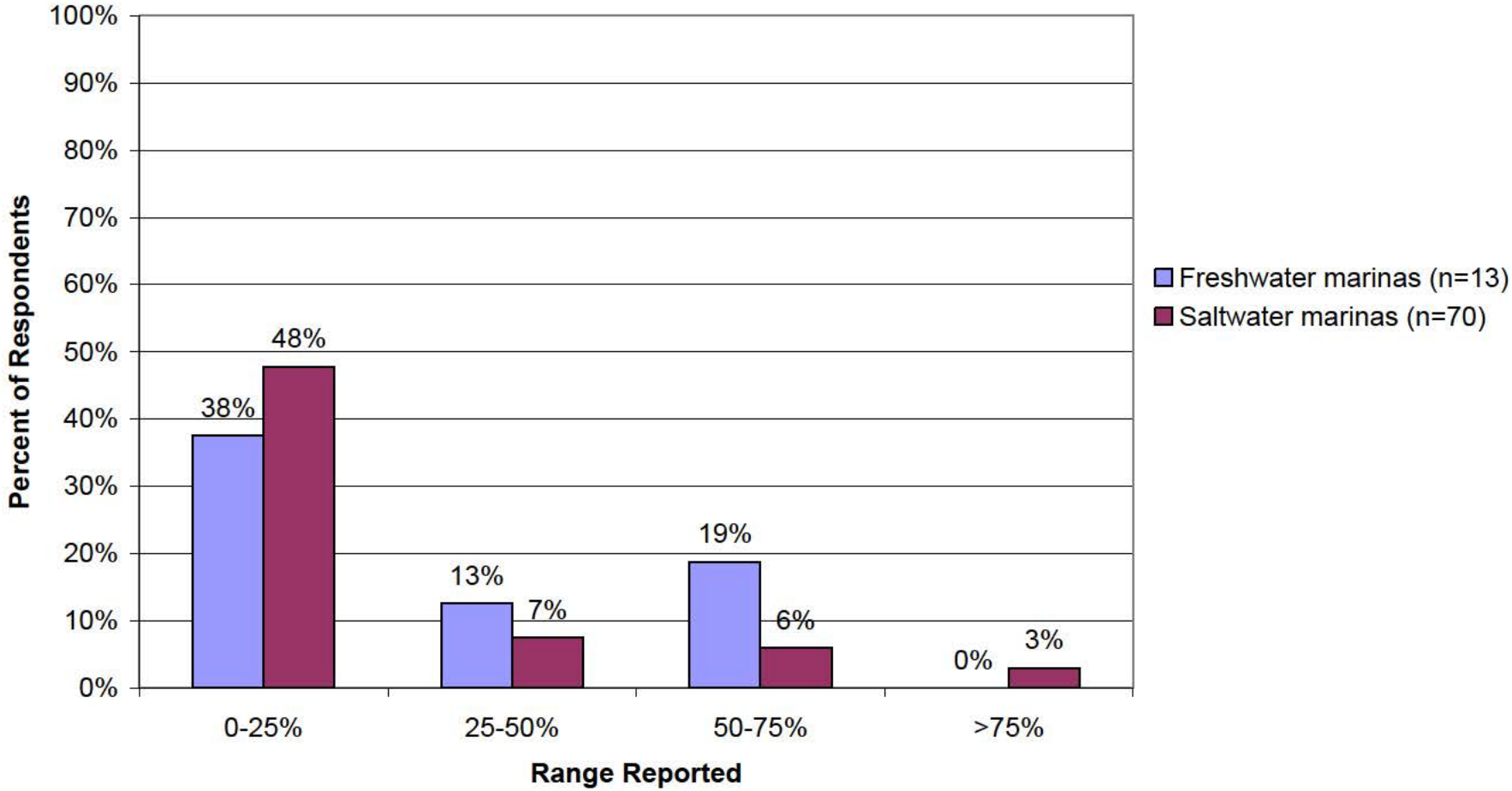
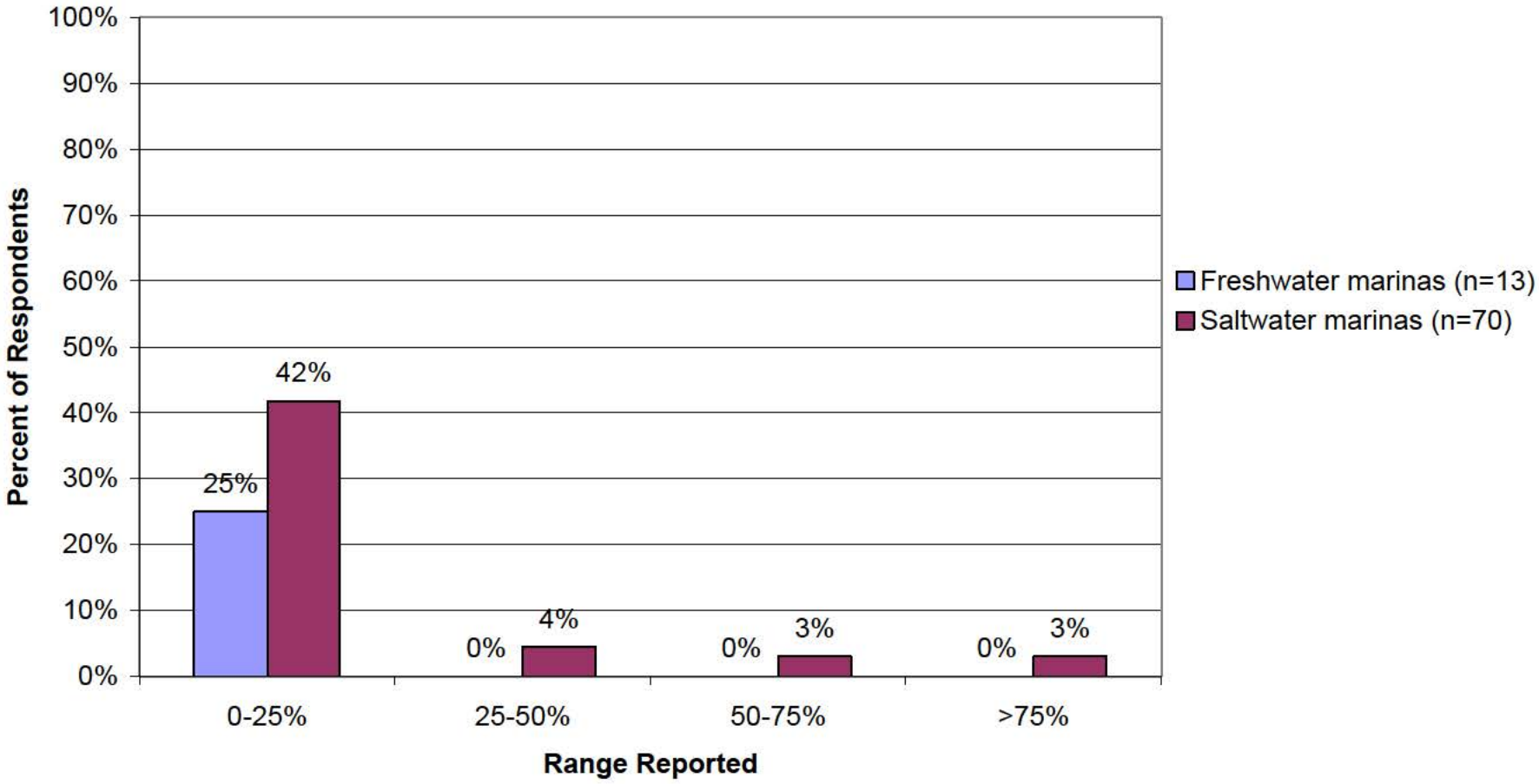


Chart 6
Percent of Sales to Documented Boats?



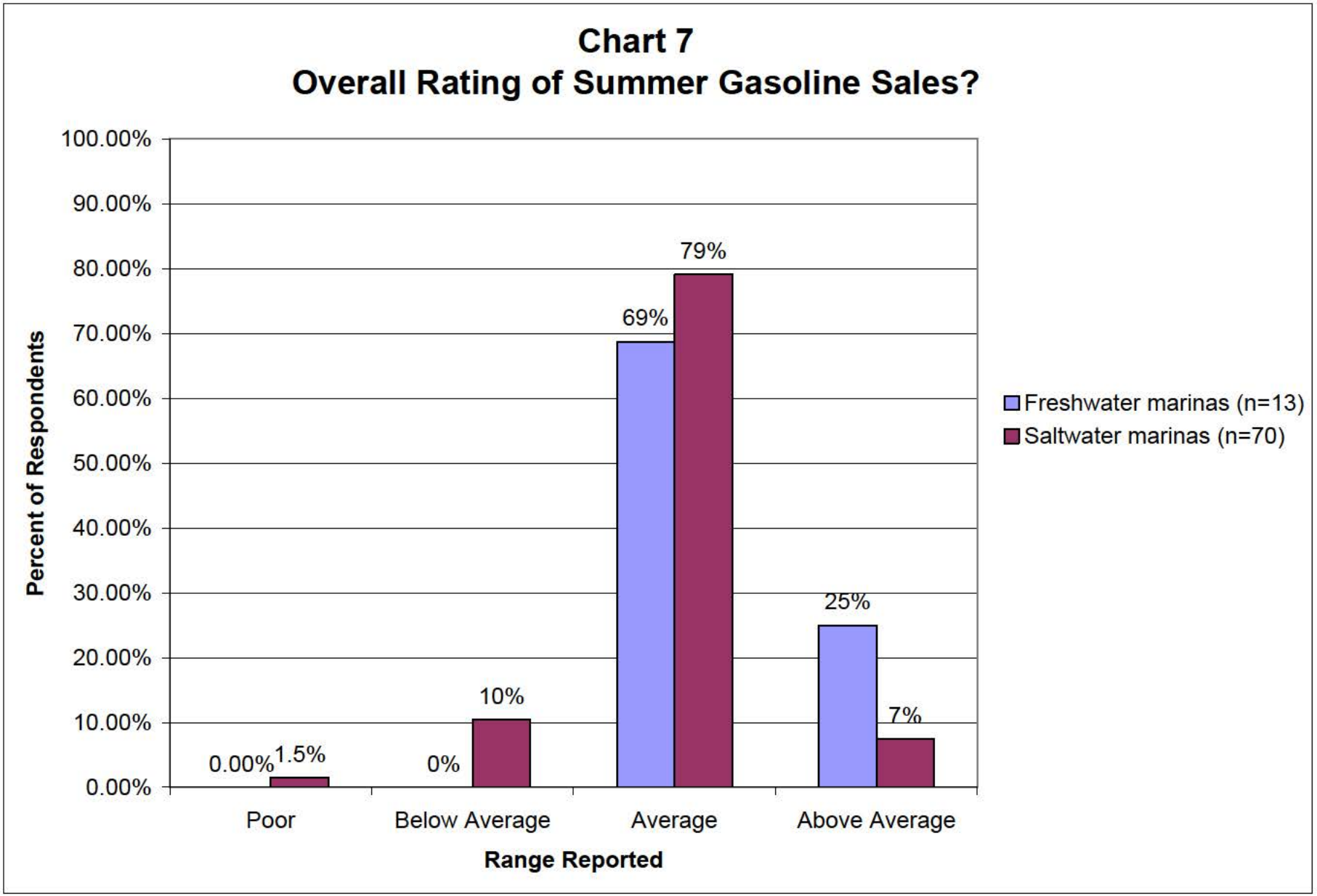


Chart 7
Overall Rating of Summer Gasoline Sales?
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Percent of Respondents
0.00%
1.5%
0%
10%
69%
79%
25%
7%
Poor
Below Average
Average
Above Average
Range Reported
Freshwater marinas (n=13)
Saltwater marinas (n=70)

October 22, 2001

Dear Marina owner,

Last year, the Maine Legislature created the "Commission to Study the Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain vehicles and Watercraft." A major part of the Commission's work over the past year has included surveys to determine how much gasoline is consumed in Maine by snowmobiles, ATV's and boats. The data from those surveys will be important to the Commission as it prepares its recommendations to the Legislature regarding the allocation of gas tax revenues for those off-road recreational uses.

A telephone survey of roughly 600 randomly selected owners of boats registered in Maine is currently underway. In planning for that survey, however, we learned that there is no list of addresses for people who use their boat in Maine but who are not required by law to register their boat in Maine. Those boaters include out-of-state residents who keep their boats in Maine for fewer than 60 consecutive days per year and boats documented by the U.S. Coast Guard. Without a list of those boat owners, we were not able to include them in that survey.

As the chairs of this study Commission, we hope that you will help us gather additional information so that we can perhaps better understand if recreational boats not registered in Maine are consuming a small, medium or large percent of the total amount of gasoline consumed in Maine by recreational boaters. As a marina owner or operator, you are in a unique position to help us with those questions.

Please help us with those questions by completing the attached questionnaire and returning it to us in the enclosed self-addressed, stamped envelope. We have sent this same questionnaire to every marina in the state that we were able to identify. Although we will include a summary of this information in our report to the Legislature, we assure you that your response will remain confidential and the information we receive from marinas will be added together in a way that will not allow any single marina to be identified.

We greatly appreciate your help and hope you will return the completed questionnaire to us within the next two weeks. If you have questions, please feel free to call our staff, Patrick Norton, at the Maine Office of Policy and Legal Analysis at 287-1670.

Thank you. We greatly appreciate your help, and we look forward to hearing from you.

Senator Marge Kilkelly, Senate Chair
Gas Tax Equity Study Commission

Representative Joe Clark, House Chair
Gas Tax Equity Study Commission

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Marina Gas Sales Questionnaire
Prepared by the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain vehicles and Watercraft.

Please take a moment to answer the following questions about gasoline sales at your marina to recreational boaters this summer. Please return the completed Questionnaire to the Legislature's Office of Policy and Legal Analysis using the enclosed self addressed, stamped envelope.

If you have questions about this survey, please contact the Commission's staff at the address below:

Patrick Norton, Principal Analyst
Office of Policy and Legal Analysis
13 State House Station
Augusta, ME 04333
Tel: (207) 287-1670
FAX: (207) 287-1275
Email: Patrick.Norton@state.me.us

The complete description of the Commission 's staturory duties can be viewed on the Legislature's website at :

http://janus.state.me.us/legis/ros/lom/LOM120th/Res51-69/Res51-69-17.htm#P308_57204

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1. Is your marina located on fresh or salt water?

____ Fresh ____ Salt

2. Approximately how many gallons of GASOLINE (***not*** *Diesel*) did you sell this summer?

____ < 1000 gals ____ 1,000 to10,000 gals ____ 10,000 to 25,000 gals ____ > 25,000 gallons

3. What percent of that GASOLINE was sold to boats?

____ 0-25% ____ 26 to 50% ____ 51 to 75% ____ >75%

4. Of the GASOLINE you sold to boats, approximately what percent was sold to:

Recreational boaters	____ 0-25%	____ 26 to 50%	____ 51 to 75%	____ >75%
Commercial boaters	____ 0-25%	____ 26 to 50%	____ 52 to 75%	____ >75%
Out-of-State boats	____ 0-25%	____ 26 to 50%	____ 51 to 75%	____ >75%
Coast Guard documented boats	____ 0-25%	____ 26 to 50%	____ 51 to 75%	____ >75%

5. Overall, how would you rate your gasoline sales this summer?

____ Poor ____ Below Average ____ Average ____ Above Average

6. Is there any additional information you would like to share with our committee about this issue? If so, please feel free to provide your comments here or attach a separate sheet when you return this survey.

Please attach extra pages if necessary.

MARINA ADDRESSES
Developed by OPLA, DIFW and the DMR for the Gas Tax Equity Study Commission
AUGUST 2001

	Name of Marina	Street Name	City/Town Located	Zip Code	State	Contact Name
1	Square Pond Marina	559 Route 109	Acton	04001	ME	Dan Petrone
2	North Atlantic Lobster Sales Inc	420 Mooeneck Road	Addison	04606	ME	James Bucknam
3	Bailey Island Lobster Co.	P. O. Box 787	Bailey Island	04003	ME	Doug Pilon
4	Cooks Lobster Pound	P. O. Box 12	Bailey Island	04003	ME	
5	City of Bangor		Bangor	04401	ME	Harbormaster Office
6	Harbor Place	One Harbor Place	Bar Harbor	04609	ME	
7	C.H. Rich	P O Box 8	Bass Harbor	04653	ME	Morris Rich
8	F.W. Thurston Co	Box 178	Bass Harbor	04653	ME	Mike Radcliffe
9	Hermit Island	42 Front Street	Bath	04530	ME	
10	Kennebec Tavern	119 Commercial Street	Bath	04530	ME	Christen
11	Barney Cove Lobster Co	P O Box 97	Beals Island	04611	ME	Stanley Beal
12	Great Wass Seafood Co	P O Box 100, Alley Bay Road	Beals Island	04611	ME	Galen Alley
13	Hixey Head Lobster Pound	P O Box 119	Beals Island	04611	ME	Tom Phillips
14	Perio Point Lobster Co	P O Box 187	Beals Island	04611	ME	Albert Carver
15	Belfast City Boat	131 Church Street	Belfast	04975	ME	Kathy Messier
16	Great Pond Marina	P O Box 405	Belgrade Lakes	04918	ME	Debbie Gardner
17	Biddeford Pool Yacht Club & Mooring Field	Biddeford Pool	Biddeford	04005	ME	Daniel Reisbach
18	Marble Head Mooring Field	1 Arundel	Biddeford	04045	ME	Paul Lariverre
19	Reeds Boat Yard	109 Cleaves Street	Biddeford	04005	ME	Chip Blanchard
20	Kollegewidgewock Yacht Club	P O Box 368	Blue Hill	04614	ME	Sam Vaughn
21	Boothbay Region Lobstermens Co-op	99 Atlantic Avenue	Boothbay Hbr	04538	ME	Buch Cressey
22	Carousel Marina Ltd	109 Atlantic Avenue	Boothbay Hbr	04538	ME	Patricia Gottlieb
23	Coastal Marine	106 Ocean Point. Road	Boothbay Hbr	04538	ME	Greg Har ley
24	Sea Pier	87 Atlantic Avenue	Boothbay Hbr	04538	ME	Laura Hughes
25	Wotton Lobster	P O Box 866	Boothbay Hbr	04538	ME	Don Wotton
26	Bremen Co-op	P O Box 159	Bremen	04551	ME	Gary Worthy
27	Broad Cove Marine Service, Inc	P O Box 208	Bremen	04551	ME	Blair Pyne
28	Maine Fresh Lobster	316 Medomak Road	Bremen	04551	ME	Melanie Gilbert
29	Medomak Shellfish	P O Box 268	Bremen	04551	ME	Craig Prior
30	Muscongus Marina	38 Muscongus Road	Bremen	04551	ME	William Webber
31	Eugley's Wharf	P O Box 162	Bristol	04539	ME	Rob Eugley
32	New Meadows Marina	450 Bath Road	Brunswick	04011	ME	John Fitzpatrick
33	Paul's Marina	P O Box 338	Brunswick	04011	ME	John Marsh
34	BBS Lobster		Bucks Harbor	04655	ME	Blair West
35	Bucksport Marina	P O Box 1069	Bucksport	04496	ME	
36	Nicatous Lodge	P O Box 100	Burlington	04417	ME	Gary Betz
37	Wayfarer Marine	P O Box 677, Sea Street	Camden	04843	ME	Wendy Hart
38	Willey Wharf	P O Box E	Camden	04843	ME	Willard White
39	Town of Cape Elizabeth	2 Jorday Way	Cape Elizabeth	04107	ME	Steve Jordan
40	Cape Porpoise Mooring Field	Pier Road	Cape Porpoise	04046	ME	Dave Billings
41	Thompson Lake Marina	340 Heath Road	Casco	04015	ME	Edward Leonard
42	Eaton's Boat Yard	P O Box 123, Sea Street	Cas ine	04421	ME	Ken Eaton
43	Eatons Boat Yard, Inc	P O Box 440	Cas ine	04421	ME	Ken Eaton
44	Corea Co-op	P o Box 99	Corea	04624	ME	Dwight Rogers
45	Green Bay Lobster	493 River Road	Cushing	04563	ME	Kevin Keizer
46	Kips Seafood	117 River Road	Cushing	04563	ME	Carl Krute
47	Sam's Seafood		Cushing	04563	ME	Sam Olson
48	Little River Lobster Co		Cutler	04626	ME	Dean Crossman
49	Basil Heanssler	Conary Cove Rd, Box 84	Deer Isle	04627	ME	
50	BC Heanssler Lobster	P O Box 69, Old Place Road	Deer Isle	04627	ME	Bruce Heanssler
51	Sebec Lake Marina	no answer	Dover-Foxcroft	04426	ME	
52	C & B Marina	P O Box 513	E. Boothbay	04544	ME	No contact listed
53	Little River Lobster Co	123 Samost Trl.	East Boothbay Hbr	04544	ME	Mike Unda
54	Lakeside Motel and Marina	P O Box 236	East Winthrop	04343	ME	Andy & Sherry Wess
55	Eastport Marina	Commercail Street	Eastport	04631	ME	Stanley MacNichol
56	The Eddy Marina	P O Box 156, Eddy Road	Edgecomb	04556	ME	Willis Clifford
57	Great Cove Marina & Boat Club	P O Box 272, 1 Main Street	Eliot	03903	ME	Debbie Jordan
58	Union River Public Landing	P O Box 586	Ellsworth	04605	ME	Randy Heckman
59	Handy Boat	215 Foreside Road	Falmouth	04105	ME	Merle Hallett
60	Long Beach Marina	6 Victoria Lane	Falmouth	04105	ME	Jan Minervino
61	Portland Yacht Club	Old Power House Road	Falmouth	04105	ME	Jim Lamson
62	Town of Falmouth	271 Falmouth Road	Falmouth	04105	ME	John Dalton (Hbrmaste
63	Foggy Bottoms	195 Maine Avenue	Farmingdale	04344	ME	Dan Alexander
64	Lunt Dock	Shore Road	Frenchboro	04685	ME	David Lunt
65	Bramhall Lobster Wharf	Bradford Point Road	Friendship	04547	ME	Roger Bramhall
66	Davis Wharf	P O Box 151	Friendship	04547	ME	Blain Davis
67	Donald Simmons Wharf	176 Harbor Rd, P O Box 293	Friendship	04547	ME	Don Simmons
68	Friendship Lobster Co-op	Harbor Rd, P O Box 64	Friendship	04547	ME	Harlan Wallace
69	Hatchet Cove Lobster	14 Brian's Wharf	Friendship	04547	ME	Brian Reed
70	Heritage Lobster Co-op		Friendship	04547	ME	SteveThompson
71	L & J Lobster Wharf	97 Forest Lake Road	Friendship	04547	ME	Leroy Genthner
72	Lash Lobster	261 Bradford Point Road	Friendship	04547	ME	Steve Lash

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	Name of Marina	Street Name	City/Town Located	Zip Code	State	Contact Name
73	Simmons Lobster	68 Cushing Road	Friendship	04547	ME	Ron Simmons
74	Gotts marine	79 Morse Turnpike	Georgetown	04548	ME	Sam
75	Robinhood Marina	340 Robinhood Road	Georgetown	04548	ME	Joe McCarty
76	Robinhood Marine Center	340 Robin Hood Road	Georgetown	04548	ME	Joe McCarthy
77	Sheepscot Bay Boat Co.	62 Old Schoolhouse Road	Georgetown	04548	ME	Carroll Plummer
78	Sheepscott Bay Boat Co	62 Old School House Road	Georgetown	04548	ME	Carroll
79	Packard's Camps	RFD #2, Box 176	Gilford	04443	ME	Laura Packard
80	Diamond Cove Marina	Great Diamond Island	Great Diamond Isl.	04109	ME	Peter Mccullum
81	Beaver Cove Marina	P O Box 1185	Greenville	04441	ME	Rodney Folsom
82	Big Lake Marina	P O Box 359	Greenville Junction	04442	ME	Paul Fichtner
83	Currier's Flying Service, Aircraft Charter & Si	P O Box 351	Greenville Junction	04442	ME	Roger Currier
84	Turtle Head Marina	100 Marina Road	Hampden	04444	ME	Marcel Whine
85	Hancock Marine Service	Ferry Road	Hancock	04640	ME	Phil Johnson
86	Allen's Seafood	Lookout Point Road	Harpswell	04079	ME	Dain Allen
87	Cundys Harbor Wharf	963 Cundys Hbr Road	Harpswell	04079	ME	Lester
88	Dolphin Marina	Basin Cove Road	Harpswell	04079	ME	Saxton
89	Great Island Marina	419 Harpswell Island Road	Harpswell	04079	ME	Frank Kibbee
90	Hawks Lobster	992 Cundys Hbr Road	Harpswell	04079	ME	Gary
91	Interstate Lobster Co-op	Ash Point Road	Harpswell	04079	ME	Bud Moody
92	Kens Lobster	11 Long Road Lane	Harpswell	04079	ME	Jakie
93	Merrimans Lobster & Crab	Route 123	Harpswell	04079	ME	Dick Merriman
94	Morse Lobster	Shore Road	Harpswell	04079	ME	Sheldon Moorse
95	Quahog Lobster	5 Lobster Lane	Harpswell	04079	ME	Bob Waddle
96	Watsons General Store	Cundys Harbor Road	Harpswell	04079	ME	Rob
97	Webber & Sons	Box 596	Harpswell	04079	ME	Linda
98	Whittens	Allen Point Road	Harpswell	04079	ME	Clayton Whitten
99	Harrison Marina	P O Box 38	Harrison	04040	ME	Kathy Randall
100	Village Tie-Up	29 Main Street	Harrison	04040	ME	Bob Swett
101	Cranberry Isles Fishermens Co-op	P. O. Box 258	Islesford	04646	ME	Mac Nighman
102	Damariscotta Lake Marina	38 Lake Farm Circle	Jefferson	04348	ME	
103	Beals- Jonesport Co-op	P O Box 195	Jonesport	04649	ME	Steve Peabody
104	OW & BS Look Co, Inc.	P O Box D	Jonesport	04649	ME	Sid Look
105	OW & Son Look	P O Box 192	Jonesport	04649	ME	Oscar Look
106	Performance Marine	P.O. Box 1039	Kennebunk	04043	ME	Dwight Raymond
107	Arundel Yacht Club	51 Ocean Avenue	Kennebunkport	04046	ME	Chris Audley
108	Chicks Marina	Ocean Avenue	Kennebunkport	04046	ME	No contact listed
109	Government Wharf & Mooring Field	31 Pennwood Drive	Kennebunkport	04046	ME	Jeff Reed
110	Kennebunkport Marina	P. O. Box 2734	Kennebunkport	04046	ME	Gary Martineck
111	Reids Yacht Yard	P. O. Box 588	Kennebunkport	04046	ME	Bob Reid
112	Yachtsman Marina	Ocean Avenue	Kennebunkport	04046	ME	No contact listed
113	Dion's Yacht Yard	48 Bowen Road	Kittery	03904	ME	Main Office
114	Morale, Welfare & Recreation	Naval Shipyard	Kittery	03904	ME	Naval Shipyard Joel Po
115	Frisbee's Supermarket	88 Pepperell Road	Kittery Point	03905	ME	Frank Frisbee
116	Dar Harbor Boat Yard	P O Box 25	Lincolnville	04849	ME	John Gorham
117	Pendleton Yacht Yard	525 Pendleton Road	Lincolnville	04848	ME	Robin Pendleton
118	Johnson's Boat Yard	88 Island Avenue	Long Island	04050	ME	Steve Johnson
119	Kezar Lake Marina	P O Box G	Lovell	04051	ME	Lee Conary
120	Lubec Marina	P O Box 10	Lubec	04652	ME	Mark Staggs
121	MKM Island Lobster	P O Box 185	Matinicus	04851	ME	Marty Molloy
122	Barton's Marina	HC 74, Box 544	Millinocket	04462	ME	Douglas Remick
123	Joe Mary Campground	P O Box 329	Millinocket	04462	ME	James Smith
124	Causeway Marina	RR#1, Box 10	Naples	04055	ME	Dan Allen
125	Long Lake Marina	Route 302, P O Box 1559	Naples	04055	ME	Jim Davenport
126	Mardon Marine	Route 302, P O Box 1556	Naples	04055	ME	Lorraine MacDonald
127	Naples Marina	P O Box 1499	Naples	04055	ME	Jim Allen
128	New Harbor Co-op	P O Box 125	New Harbor	04554	ME	Ken Tonneson
129	Shaw's Wharf	P O Box 73	New Harbor	04554	ME	No contact listed
130	Brown's Boat Yard	Box 525, Main Street	North Haven	04863	ME	Foy Brown
131	White's Marina	93 Lake Road	Norway	04268	ME	Randa White
132	Oquossoc Cove Marina	P O Box 335	Oquossoc	04964	ME	Larry Koob
133	Dickinson's Sunset Park Marina	HC 61, Box 38	Orient	04471	ME	Harold Dickinson
134	Owls Head Lobster Co	7 Lobster Lane	Owls Head	04854	ME	TerryWatkinson
135	Ship to Short Lobster Co	P O Box 268	Owls Head	04854	ME	Tom Philbrick
136	Jones Landing	6 Welch Road	Peak's Island	04168	ME	George Clark
137	Peak's island Marina	98 Island Avenue	Peak's Island	04108	ME	Terry Mulkern
138	Trefethen Evergreen Improvement Assoc.	Peakes Island	Peak's Island	04168	ME	David Norton
139	Pemaquid Co-op,	32 Co-op Road	Pemaquid	04558	ME	Charlie Blaisdell
140	Devereux Marine Inc.	RR 1, Box 426	Penobscot	04416	ME	Bill Stevenson
141	Kate's Wharf	59 Wallace Circle	Phippsburg	04562	ME	Kate
142	Seashores Lobster	39 Carry Place Road	Phippsburg	04562	ME	Doug
143	Smithtown Marina	Smithtown Road	Pittston	04345	ME	Mike Baker
144	Smithtown Marina	Bakers Smelt Camps	Pittston	04345	ME	Verna Damon & Mike B

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	Name of Marina	Street Name	City/Town Located	Zip Code	State	Contact Name
145	Paul and Gail's Marina	723 Main Street	Poland Spring	04274	ME	Paul Komanetsky
146	Bay Lobster	Horse Point Road	Port Clyde	04855	ME	Dave Larsen
147	Port Clyde Co-op	Rte 131, St. George	Port Clyde	04855	ME	Donny Schwab
148	Port Clyde General Store	Rte 131, St. George	Port Clyde	04855	ME	Betsy Sherrick
149	Simmons Wharf	Horse Point Road	Port Clyde	04855	ME	Todd Simmons
150	St. George Marine	Rte 131, St. George	Port Clyde	04855	ME	John Boulware
151	Chandler's Wharf	Commercial Street	Portland	04101	ME	Shawn Neilson
152	Custom House Wharf	Commercial Street	Portland	04101	ME	Ken MacGowen
153	Deake's Wharf	Commercial Street	Portland	04101	ME	Roger Hale
154	Dimillo's marina	Commercial Street	Portland	04101	ME	Chris Dimillo
155	Gowen's Marine	400 Commercial Street	Portland	04101	ME	Joe Schmader
156	Hobson's Wharf	Commercial Street	Portland	04101	ME	Atchun Tamaki
157	Holyoke Wharf	Commercial Street	Portland	04101	ME	Roger Hale
158	Long Wharf	Commercial Street	Portland	04101	ME	Steve Dimillo
159	Merrills Marine Terminal	601A Danfort Street	Portland	04102	ME	James Carter
160	Point East Trust-Maine Wharf	104 Grant Street	Portland	04101	ME	Tom Watson
161	Portland Fish Pier	Commercial Street	Portland	04101	ME	John Flynn
162	Portland Fish Pier	6 Portland Fish Pier	Portland	04101	ME	Ron Inman
163	Portland Harbor Fuel Co	Peakes Wharf	Portland	04101	ME	John Ready
164	Portland Pier	Commercial Street	Portland	04101	ME	Pete McAleney
165	Portland Yacht Services	58 Fore Street	Portland	04101	ME	Phin Sprague
166	Union Wharf	Commercial Street	Portland	04101	ME	Charlie Poole
167	Vessel Services Inc	Commercial Street	Portland	04101	ME	Rhonda Coppersmith
168	Widgery Wharf	Commercial Street	Portland	04101	ME	John O'Brien
169	Prospect Harbor Trading Co	P O Box 259	Prospect Hbr	04669	ME	Donny Smith
170	Lucky's Landing		Pushaw Lake			
171	Haines Landing Marina	P O Box 1195	Rangeley	04970	ME	Mark Beauregard
172	Jordon Bay Marina (Port Bay)	1328 Roosevelt Trail	Raymond	04071	ME	
173	Pantha Run Marina	P O Box 1099	Raymond	04071	ME	
174	Knights Marine Service	525 Main Street	Rockland	04841	ME	Horatio Knight
175	Rockland Fish Pier	P O Box 625	Rockland	04841	ME	Everett Dodge
176	Rockland Landings Marina	1 Commercial Street	Rockland	04841	ME	Kevin Taylor
177	Moose River Store	P O Box 236	Rockwood	04478	ME	Lorianna Douglas
178	North Woods Store	no listing	Rockwood	04478	ME	
179	LLJ's Sea Products	P O Box 296	Round Pond	04564	ME	Steve Brackett
180	Muscongus Bay Lobster Co	P O Box 20	Round Pond	04564	ME	Mike Reny
181	Round Pond Lobster	P O Box 1081	Round Pond	04564	ME	Buddy Poland
182	Bucks Harbor	P O Box 2, 684 Coastal Road	S. Brooksville	04617	ME	Jerry Bates
183	Sabasco Harbor Resort	P. O. Box 75	Sabasco Estates	04565	ME	Phil Ludee
184	Camp Ellis Marina	11 Ferry Lane	Saco	04072	ME	Tom Cassamassa
185	Marstons Marina	41 Glenhaven Circle	Saco	04072	ME	Eric Marston
186	Norwoods Marina	9 Fore Street	Saco	04072	ME	No contact listed
187	Saco Yacht Club	Front Street	Saco	04072	ME	Jim Ward
188	South Arm Camp Ground	5 School House Lane	Salisbury	01952	MA	Don Dyke
189	Sebago Lake Marina	P O Box 199	Sebago	04029	ME	Karen Frechette
190	Lighthouse Marina	28 Marigold Lane	Sidney	04330	ME	James Milligan
191	Coveside Marina	105 Coveside Road	So. Bristol	04568	ME	Mike Mitchell
192	Osier's Seafood	Rte 129, P O Box 54	So. Bristol	04568	ME	David Osier
193	South Bristol Co-op	P O Box 63	So. Bristol	04568	ME	Sonny Leeman
194	Kettle Cove Marina	P O Box 176	So. Casco	04077	ME	Merrill Rollins
195	Brewers Marina	P. O. Box 119	So. Freeport	04078	ME	John Brewer
196	Strout's Point Marina	P. O. Box 95	So. Freeport	04078	ME	Peter Barnes
197	Breakwater Marina	148 Preket Street	So. Portland	04106	ME	Paul Jensen
198	Centerboard Yacht Club	271 Front Street	So. Portland	04106	ME	Sean Snowe
199	City of So. Por land	O'Neil Street	So. Portland	04106	ME	Tom Meyers
200	South Port Marine	14 Ocean Street	So. Portland	04106	ME	Kip Reynolds
201	Spring Point Marina	1 Spring Point Drive	So. Portland	04106	ME	Paul Jensen
202	Sunset Marina	231 Front Street	So. Portland	04106	ME	Dan Lilley, Jr
203	McLoon's Wharf	P O Box 95	So. Thomaston	04858	ME	Terry Costa
204	Spruce Head Fisherman's Co-op	275 Island Road	So. Thomaston	04859	ME	Robert Thompson
205	Noyces Boat Yard	P O Box 72	Sorrento	04627	ME	Crosby Noyces
206	West Cove Boat Yard	P O Box 383	Sorrento	04627	ME	Steve McMullen
207	Boothbay Region Boat Yard, Inc	P O Box 179	Southport	04576	ME	Dick Orne
208	Beals Lobster Pier	P O Box 225	Southwest hbr	04679	ME	Sam Beal
209	Hinckley Dock/Beals Lobster Pier	130 Shore Road	Southwest Hbr	04679	ME	Brian Hatfield
210	Southwest Lobster & Fish	126 Clark Point Road	Southwest Hbr	04679	ME	
211	Maine Coast Seafood	P O Box 156	Spruce Head	04859	ME	Glen Shadduck
212	William Atwood Lobster Co.	P O Box 202	Spruce Head	04859	ME	William Attwood
213	Millers Lobster	Rt 73, Wheelers Bay	St. George	04855	ME	Mark Miller
214	Billings Diesel & Marine Services	P O Box 67	Stonington	04681	ME	Harland Billings
215	Fifield Lobster Co	RFD 3373	Stonington	04681	ME	Walter Fifield
216	Green Head Lobster Co	P O Box 670	Stonington	04681	ME	Hugh Reynolds

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217	North Atlan ic Seafood, Inc	P O Box 116	Stonington	04681	ME	Delbert Gross
218	Stonington Lobster Co-op I & II	P O Box 87	Stonington	04681	ME	Penny Trundy
219	Sunshine Seafood, Inc.	Old Quarry Road	Stonington	04681	ME	Jim Eaton
220	Kents Wharf	Norton Road	Swans Island	04685	ME	David Niquette
221	Swans Island Co-op	15 Morris Hill Road	Swans Island	04685	ME	Cathy Clark
222	Arts Lobster	Barter Point Road	Tenants Harbor	04860	ME	Steve Ausplund
223	Cod End	Rte 131	Tenants harbor	04860	ME	Hale Miller
224	Withers Wharf	Barters Point Road	Tenants Harbor	04860	ME	Bert Witham
225	Bickford's Lobster	W. Main St.	Vinal Haven	04863	ME	Dan Bickford
226	Fisherman's Co-op	Box 366	Vinal Haven	04863	ME	Nora Warren
227	Harborside Lobster	Box 35	Vinal Haven	04863	ME	Peter Jones
228	Redeem Inc.	RR 1, Box 790	Vinal Haven	04863	ME	Brian Rockett
229	Farrins Wharf	P O Box 81	Walpole	04573	ME	Mike Farrin
230	Blue water Seafood	206 South Shore Drive	Warren	04864	ME	Sam Hugh
231	Webhannet Eiver Boat Yard	345 Harbor Road	Wells	04090	ME	Scott Worthing
232	Richardson's Marina	633 Whites Bridge Road	Windham	04062	ME	
233	Winter Harbor Co-op	P O Box 59	Winter Harbor	04693	ME	Paul Dorr
234	Winter Harbor Marine	P O Box 9	Winter Harbor	04693	ME	Warren Pettegrow
235	Mid Coast Marine	P O Box 148	Winterport	04496	ME	Roger Johnson
236	Winterport Marina	P O Box 130	Winterport	04496	ME	Pete Pelletier
237	Donnells	Varrell Lane, York Harbor	York	03911	ME	Mary Donnell
238	York Harbor Marine	P O Box 578	York	03411	ME	Fred Muehl
239	Shirley Hall Fuel Dock			04547	ME	Shirley Hall

APPENDIX H

Estimated Water Access Costs for HIGH Priority "DRAFT" 02/03 BTIP Projects as of November 1st, 2000
(Estimated Costs are approximate and not based on individual evaluations at each site.)

BRGNO	TOWN1	Bridge Name	Water Body	Region	Snowmobile	Fishing from Bridge (22)	Carry-in (21)	Riverbank (59)
3899	ALNA	SHEEPSCOT	SHEEPSCOT RIVER	B			$5,000	
0649	ANDOVER	LEARNED BR	SAWYER BROOK	D				
5159	ASHLAND	BIG MACHIAS RIVER	BIG MACHIAS RIVER	G	$60,500			$5,000
3338	AUBURN	LITTLEFIELDS	LITTLE ANDROSCOGGIN RV	A			$5,000	$5,000
5245	BELGRADE	CRANK	SANFORD BROOK	B		$8,400	$5,000	$5,000
5246	BENTON	JEWETT	JEWETT BROOK	B		$10,800		$5,000
1231	BERWICK	KEAY BROOK	KEAY BROOK	A				$5,000
5730	BERWICK	WEBSTER	KEAY BROOK	A				$5,000
0977	BOWDOINHAM	CARD MACHINE BR	ABAGADASSET RIVER	B		$12,600	$5,000	$5,000
0218	BRIDGTON	WILLETT BROOK	WILLETT BROOK	A				
5471	BROOKS	HALL	MEADOW BROOK	B		$6,000		$5,000
3628	BROOKSVILLE	DAVIS NARROWS	BAGADUCE	C			$5,000	
0755	CAMDEN	ROLLINS ROAD BRIDGE	GOOSE RIVER	B		$14,400		$5,000
2794	CAMDEN	SPRING BROOK	SPRING BROOK	B				$5,000
2602	CANAAN	NEW	CARABASSET STR	B				$5,000
2312	CANTON	GILBERTVILLE	ANDROSCOGGIN RIVER	D			$5,000	$5,000
3985	CARMEL	RUGGLES	HILL BROOK	B		$21,000		$5,000
6115	CHELSEA	WINDSOR ROAD	TOGUS STR	B		$7,200		$5,000
3070	COPLIN PLT	NASH	NASH	D				
0837	DEXTER	PULLEN BR.	KENDUSKEAG STREAM	B		$12,600		$5,000
0127	EASTON	PRESTILE BRK.# 2	PRESTILE STREAM	G				$5,000
0137	EASTON	PRESTILE BROOK	PRESTILE STREAM	G				$5,000
0463	ELLSWORTH	GRAHAM LAKE DAM BR	GRAHM LAKE OUTLET	C				$5,000
0599	FRIENDSHIP	MIDDLE BR	GOOSE RIVER	B		$6,600		$5,000
0230	GORHAM	FILES BR.	BREAKHEART BROOK	A				
0022	GREENE	HALEY	LITTLE STETSON BROOK	A				$5,000
0023	GREENE	STEVENS	STEVENS BROOK	A				$5,000
2801	GUILFORD	SANGERVILLE STATION	PISCATAQUIS RIVER	E				$5,000
0238	HARRISON	RYEFIELD BRIDGE	CROOKED RIVER	A			$5,000	$5,000
0694	HARTFORD	EAST BRANCH	EAST BRANCH NEZINSCOT R	B				$5,000
2583	JACKMAN	MOOSE RIVER	MOOSE R	E			$5,000	$5,000
5053	KINGFIELD	NORTON	CARRABASSET RV	D			$5,000	$5,000
3214	LEEDS	NORTH TURNER EAST	ANDROSCOGGIN R	B		$81,000	$5,000	$5,000
5001	LEEDS	JOHNSON 00	JOHNSON STR	B				$5,000
5857	LIMERICK	PENDEXTER	RANDALL STREAM	A				$5,000
3193	LINCOLNVILLE	POND	MESERVEY BROOK	B				$5,000
3709	LINNEUS	BITHER BROOK	BITHER BROOK	G		$6,000		$5,000

(32)

Estimated Water Access Costs for HIGH Priority "DRAFT" 02/03 BTIP Projects as of November 1st, 2000
(Estimated Costs are approximate and not based on individual evaluations at each site.)

BRGNO	TOWN1	Bridge Name	Water Body	Region	Snowmobile	Fishing from Bridge	Carry-in	Riverbank
2460	LISBON	LITTLE RIVER	LITTLE RIVER	A				
1475	MILBRIDGE	GREAT SOUTH	NARRAGUAGUS RIVER	C				$5,000
3280	MILBRIDGE	GREAT NORTH	NARRAGUAGUS R	C				$5,000
3535	MILFORD	LOWER TRESTLE	HIGHWATER CHANNEL	F			$5,000	
0141	NEW CANADA	SLY BROOK	SLY BK	G				$5,000
3394	NEW GLOUCESTER	UPPER GLOUCESTER BRIDGE	ROYAL RIVER	A			$5,000	
0407	NEW SHARON	BULLENS MILL BR.	MUDDY BK	D				
0112	NEW SWEDEN	BEARSLEY BROOK #1	BEARSLEY BROOK	G		$7,200		$5,000
1530	NEWCASTLE	DYERS	SHEEPSCOTT*RIVER	B			$5,000	$5,000
3170	NEWPORT	DURHAM	STETSON STR	B		$36,000		$5,000
3492	OGUNQUIT	OGUNQUIT BEACH	OGUNQUIT RIVER	A		$129,600		$5,000
1799	ORONO	ISLAND AVE.		B		$0	$5,000	$5,000
0708	PARIS	BRETTS BR	STONY BROOK	A				
0781	PERU	MARY T	SPEARS STREAM	D				
0806	PERU	ARNOLD	SPEARS STREAM	D				
3556	RICHMOND	HALEYS	WILMOT'S BROOK	B				$5,000
5310	RUMFORD	SCOTTY RICHARDSON	RICHARDSON	D				$5,000
1119	SEARSMONT	JAM BROOK BR	JAM BROOK	B				$5,000
1024	SOLON	WILLIAMS	MICHAEL BRK	D				
1245	SOUTH BERWICK	HOOPER MILL	HOOPER BROOK	A				$5,000
0819	STETSON	BUSIELL BR.	BUZZELL STREAM	B		$7,800	$5,000	$5,000
1474	TURNER	NORTH TURNER WEST	ANDROSCOGGIN RV	B		$157,200	$5,000	$5,000
0019	TURNER	RICKERS BRIDGE	MARTIN STREAM	B		$22,200	$5,000	$5,000
5665	UNION	STUART BRIDGE	STUART BK	B				$5,000
1109	UNITY	FARWELLS MILL BR	SAVOY STREAM	B			$5,000	$5,000
5811	UNITY	FOWLER BROOK	FOWLER BROOK	B				$5,000
3090	UPTON	ANDOVER DAM BRIDGE	CAMBRIDGE RIVER	D				$5,000
0122	WASHBURN	WEST BRANCH SALMON BK #2	WEST BRANCH SALMON BROOK	G		$20,400		$5,000
3630	WASHBURN	CHURCHILL BROOK	CHURCHILL BROOK	G				$5,000
3829	WATERBORO	CARPENTER	CARPENTER BROOK	A				$5,000
3227	WAYNE	MAIN ST	MILL STR	B		$16,800		$5,000
3175	WELLS	ISLAND LEDGE ROAD	WEBHANNET RIVER	A		$97,200		
3331	WEST GARDINER	COLLINS	COBOSSEE STREAM	B		$72,600	$5,000	$5,000
5197	WHITEFIELD	ALBEE SCHOOLHOUSE	ALBEE STREAM	B				$5,000
2787	WINDHAM	SOUTH WINDHAM	PRESUMPSCOT RV	A			$5,000	
3342	WINTERPORT	LEWIS WHITE	GRANT BK (OR CLARK)	B				$5,000
2715	YORK	RICES	YORK RIVER	A		$188,400	$5,000	$5,000

APPENDIX I

APPENDIX I

UPDATES TO THE BOATING FACILITIES FUND

1. The Boating Facilities Fund (BFF)

The BFF, which is capped at $2 million, provides DOC about $1.5 million annually. For the last six years, BFF expenditures have exceeded income by drawing down a large unexpended balance.

The cash balance at the beginning of FY 2002 was $1,596,925.

2. Emerging Issues

- At projected funding levels, the Boating Facilities Fund cannot maintain and renovate existing public access sites and provide new access sites at the pace it has for the last six years, and may not be able to meet the objectives of the 1995 Strategic Plan.

- Current staffing levels in both the DOC and DIF&W limit the amount of work that can be accomplished, how well the work is done, and how effectively program staff can address issues raised by local residents.

- Without additional funds, the new opportunity presented by the Land for Maine's Future Program's Public Access to Maine Waters Fund to acquire access sites, and access enhancements identified by the MDOT's Public and Recreational Access Committee, cannot be fully realized except at the expense of current activities.

The BFF's cash balance of $1,595,925 (6/30/01) is projected to be reduced to less than $540,000 at the end of FY 2002, and less than $370,000 at the end of FY 2003. This is the minimum cash balance needed at the beginning of each fiscal year to ensure that outstanding encumbrances can be honored and the fixed costs of administering the Boating Facilities Program met while waiting for additional cash to become available through the monthly transfer of gas tax income. This level of cash balance does not provide a reserve for taking advantage of acquisition opportunities that may develop before funds are available, such as through the Lands for Maine's Future Water Access Fund. Without an increase in funding, monies available for grants, the state acquisition and development of new sites, and the renovation of existing sites will be reduced to about $400,000 per year, a significant reduction from the recent years, when such expenditures exceeded $800,000 annually.

At current funding levels, State programs will continue to renovate, develop, and acquire sites for public access to Maine's waters expeditiously as possible, guided by the policies of the 1995 strategic plan and assisted wherever possible by leveraged state or federal monies. Because the cash balance of the BFF is projected to be drawn down, the rate of access enhancements achieved from 1995-2001 cannot be sustained. Further, despite strong public support for accelerated acquisition of sites, current funding will not allow agencies to take full advantage of new opportunities embodied in the Land for Maine's Future's Water Access Fund or identified by MDOT's Public and Recreational Access at Water Crossings and Properties Adjacent to Water Committee.

Action/Alternatives

A. CURRENT FUNDING

- DOC/DMR/DIF&W/MDOT: fund a survey of a sample of registered boat owners to estimate the current percentage of the gasoline tax generated by recreational boating and identify access concerns/needs;

- DOC/SPO/DMR: develop and maintain a comprehensive data base of coastal access sites and needs to guide and track status, opportunities, and updated priorities. Contract for services as BFF or other funding sources permit;

- DOC/SPO/DMR: identify opportunities to meet access needs in those high priority areas identified in the SPO/DMR access needs study as lacking adequate access. Contract for services as BFF or other funding sources permit.

- DOC/DIF&W: develop and maintain comprehensive, statewide data base of access status on inland water bodies. Contract for services as BFF and other funding sources permit;

- DOC/DIF&W: continue renovation, development, and acquisition of access sites consistent with priorities and in an attempt to meet targets of 1995 Strategic Plan. Explore sources of matching funds for LMFF/Water Access fund. Propose and sponsor access acquisition projects to the LMFB, MOHF, and other potential sources of assistance for approval as funding and staff capabilities permit;

- MDOT/DOC/DIF&W/DMR: continue active participation in review of MDOT bridge and road projects to identify and refine opportunities for enhancing access at suitable sites, as current funding permits;

- DMR/DIF&W: Enforcement and Education as described in the previous section.

B. INCREASED FUNDING

- DOC/DIF&W: continue to meet or exceed targets for renovation, development, and acquisition presented in 1995 Strategic Plan;

- DOC/DIF&W: increase program emphasis on acquisition and accelerate purchase of suitable, available inland and coastal sites by providing matching funds needed for LMF/Water Access Fund for both state and local acquisition as appropriate, as funding permits, increase use of contracted services to proactively search for available, suitable sites in high priority areas.

- MDOT/DOC/DIF&W: participate in the development and management of new access sites and access enhancements associated with bridges and

public roads as identified by the Public and Recreational Access at Water Crossings and Properties Adjacent to Water Committee.

- DIF&W/DMR: hire additional staff to increase enforcement presence and response capabilities as described in the previous section.

- DIF&W: build on current education system of regional coordinators to increase the outreach and instructional capabilities.

APPENDIX J

APPENDIX J

DEPARTMENT OF CONSERVATION
BUREAU OF PARKS & LANDS
OFF-ROAD VEHICLE DIVISION

Updated report for the Snowmobile and ATV Programs prioritizing the need assessment to the Commission to Study Equity in the Distribution of Gas Tax Attributed for Snowmobiles and ATV's. A chart on page 5 depicts the needs listed

The following information provides a brief summary for the emerging needs based on the report submitted to the committee in November of 2000. This summary is updated and prioritized to include projected full funded and half-funded priorities.

Snowmobile Program Future Opportunities

1H The ORV division has assumed new management responsibilities, including grant administration and property management. Additional clerical demands resulting from this program growth could be addressed by increasing the hours of the current part-time Clerk Typist II from 15 to 20 hours per week, at an annual cost of $3,195.

1F The division would benefit from four regional intermittent/part-time field coordinators to help distribute trail signs, establish clubs, conduct workshops, and represent the division locally. The coordinators would work with full-time staff to promote local management, facilitating increased outreach at minimal cost of $14,500.

2H&F There is potentially a significant liability exposure for bureau-owned structures on abandoned railroad corridor trails. The estimated cost will be $60,000 annually from each program (snowmobile/ ATV).

3H Clubs reported costs continue to escalate each year. Grants should increase $10 per mile ($90/mile) for an annual cost of $80,000.

3F Club grants would be increased by $20 per mile (maximum grant of $100 per mile) for 30 miles or a $3,000 grant to cover all reported costs. The cost would be $160,000.

4H Municipal grants are now funded at up to 70% of their projected cost. The average grant for FY01 was $12,000. Request for additional, new municipal grants could be funded. The project cost is $120,000.

4F If this category were fully funded, 10 new grants could be funded, and existing grants slightly increased at a cost of $240,000.

5H&F New abandoned railroad corridor trails need gates to prohibit access to the trail by vehicles. Half funding would not provide any new money for gates but full funding would provide $10,000 a year for 10 new gates annually.

6H&F Acquisitions of abandoned rail corridors are very complicated and expensive. Funds are needed to match other potential fund sources, such as LMF, Heritage grants, and NRTF grants. At half-funding, allocations would not be made, but a full funding program would allot $50,000 to this effort.

7H Recent legislation has covered a significant portion of this objective already with the registration fee increase of $5 this year. A half-funded program would increase those grants by an additional $62,500.

7F The need in FY 2002 was originally projected at $625,000. The new registration increase will provide approximately $500,000, therefore an additional $125,000 annually to fully fund the projected grants is needed.

8H The recently approved highway bond will provide approximately 2 million dollars to provide state snowmobile crossings at 4 highway sites. A stable source of funds to address additional problem sites would still be used. Projected need $250,000 per year.

9F A fully funded program would provide $500,000 per year.

All-Terrain Vehicle Future Opportunities

1H The ORV Division operates without a comprehensive strategic plan. The snowmobile program currently pays half the cost of Planning & Research Associate II, who has provided assistance in corridor acquisition, grant writing, and program planning. This should become a full-time position and would assume responsibilities such as expanded program review and planning; greater assistance with corridor acquisitions; cooperative management agreements; grant requests; review of liability insurance needs, and contracts for services the bureau is unable to provide directly. Cost $28,000 per year.

1F The Division would benefit from four regional intermittent/part-time field coordinators to help distribute trail signs, establish clubs, conduct workshops, and represent the division State wide. The coordinators would work with full-time staff to promote local management facilitating increased out reach at a minimal cost of $14,500. Total cost with planner $42,500.

2H&F There is potentially a significant liability exposure for bureau-owned structures (bridges and trestles) on abandoned railroad corridor trails. The estimated cost will be $60,000 annually from each program (ATV/snowmobile).

3H&F The increased number of ATV clubs, multi-user abandoned railroad corridors, and new trails being opened on Public Reserved Land, have stretched staffing to the point that work needs to be contracted to maintain trails in a safe condition. If funding were available, four trail systems could have routine maintenance contracted: Turner; Mt. Blue; Lagrange; and Summer Haven. The work would include sign maintenance, brush cutting, minor bridge maintenance, and minor grading of roadways. The costs range from $5,000 to $15,000, depending on the work to be done each year, with a projected total annual cost of $30,000.

4H&F Increasing the number of ATV clubs is a major goal of the program. Clubs provide local management; teach respect for private land and proper ethics (similar to the early days of snowmobiling); and promote efficient trail construction. There has been a substantial increase in the number of ATV clubs over the past three years, rising from 29 to 56 clubs. Assuming the present growth rate in club activity, 30 new clubs are anticipated in the next two to three years. To maintain the same level of funding for the grant program requires an additional $75,000.

5H&F There is increased interest from town and county governments in building and promoting ATV trails to take advantage of the growth in ATV tourism, to reduce landowner concerns, or to participate in projects too large for a local club. Currently, the Municipal Grant Program is a 50/50 match. There are two projects for the current fiscal year; rapid growth I projects is anticipated in the next few years. An increase of five to seven projects annually would require $50,000 in additional funds, which would result in trail projects worth a total of $100,000. If more funds were available, the ATV program should mirror the snowmobile municipal reimbursement currently at the 70% level, which would add $20,000 to projected costs. Total costs, $35,000 to $70,000.

6H&F Maine could use more statewide law enforcement. The bureau supported a Heritage Grant pilot project for the Fort Kent Police Department and recently supported a second grant to the town of Washburn. The grants were a 50/50 match. The Fort Kent project was extremely successful this summer. This objective was not in the original need assessment but would be very effective to help curb inappropriate or illegal use of the vehicles. A $50,000 program could allow us to provide ten $5,000 50/50 (local match) grants each year.

7H&F The bureau has agreements with the major landowners (International Paper and Wagner) in Washington county for approximately 600 miles of new, approved ATV trail. Although much of the trail maintenance work is done by volunteers, at least three large bridges (crossing the Narraguagus and Machias Rivers) should be built at a cost of at least $50,000 each. The primary purpose of these bridges is to improve safety and contribute to the Atlantic Salmon Restoration effort by eliminating fords, about which there are concerns regarding impact on salmon spawning habitat. This project could also include dozens of sites that need culverts and erosion control work, the cost of which remains to be determined. The ATV program has expressed an interest to the landowners and to LURC in assisting in this effort, if funds were available. The local clubs lack the resources for such large projects. According to the timetable of the Salmon Restoration effort, there is a three-year window to do this work. The projected total cost is $25,000 half-funding or $50,000 full-funding.

8H&F New abandoned railroad corridor trails need gates in order to prohibit access to the trail by vehicles. Half funding would not provide any new money for this but full-funding would provide $10,000 a year for 10 new gates annually.

9H&F Acquisitions of abandoned rail corridors are very complicated and expensive. Funds are needed to match other potential funding sources such as LMF, Heritage grants, and NRTF grants. Half-funding would not provide new money for this, but a full funding program would make $50,000 available.

10H&F Purchase of use areas were listed in the original report. That objective remains on our list of future opportunities, but is a low priority. A half-funded program would not provide any funding; however, a fully-funded program would make $250,000 available.

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APPENDIX K

Appendix K

MAINE WARDEN SERVICE
EXPANDED RECREATIONAL VEHICLE ENFORCEMENT

	Spring	Summer	Fall	Winter
Snowmobile Enforcement	----------	----------	600 Hours	5400 Hours
ATV Enforcement	3000 Hours	3000 Hours	7800 Hours	3600 Hours
Watercraft Enforcement	6000 Hours	6000 Hours	600 Hours	----------
Total Expanded Enforcement	**9000 Hours (18 FTE)**	**9000 Hours (18 FTE)**	**9000 Hours (18 FTE)**	**9000 Hours (18 FTE)**

Recreational Vehicle Enforcement Budget

	Existing Program	Expanded Program	**Total**
Snowmobile Enforcement	$ 569,377 (15,300 Hours)	$273,000 (6000 Hours)	**$842,377 (21,300 Hours)**
ATV Enforcement	$187,701 (3700 Hours)	$770,000 (17,400 Hours)	**$957,701 (21,100 Hours)**
Watercraft Enforcement	$1,293,037 (64,300 Hours)	$564,000 (12,600 Hours)	**$1,857,037 (76,900 Hours)**

APPENDIX L

Maine State Legislature

OFFICE OF POLICY AND LEGAL ANALYSIS

13 State House Station, Augusta, Maine 04333-0013
Telephone: (207) 287-1670
Fax: (207) 287-1275

December 6, 2000

Memo to: Dawn Gallagher (DOC), Jane Lincoln (DOT), Fred Hurley (IFW), Penn Estabrook (DMR)

From: Patrick Norton, Principal Analyst

Re: Final signed cooperative agreement for gas consumption surveys

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I've attached for your files a copy of the final signed cooperative agreement between your agency and the University of Maine for ATV, snowmobile and motorboat gasoline consumption surveys. The original of this document has been sent to the Margaret Chase Smith Center for Public Policy at the University of Maine.

Thank you. Please feel free to call me if you have questions.

CC: Senator Marge Kilkelly
Representative Joe Clark
David Boulter, OPLA Director
Will Harris, DOC
Alan Stearns, DOT
Rick Record, IFW
Gilbert Bilodeau, DMR

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04A 40121100254

VENDOR CODE	DOC TOTAL	FND	AGY	ORG	SUB	APR	ACTIVITY	OBJ	SUB ORG	JOB NO	REPT CATG	ID
(11)	(14)	(3)	(3)	(4)	(2)	(3)	(4)	(4)	(2)	(8)	(4)	(1)

Project #: 2001160

PROJECT AGREEMENT

for

STATE/UNIVERSITY COOPERATIVE PROJECTS

1. This PROJECT AGREEMENT is entered into by the State of Maine, and the University of Maine System, acting through the University of Maine, Office of Research and Sponsored Programs, Room 408, 5717 Corbett Hall, Orono ME 04469-5717, for the purpose of undertaking a project of mutual interest. This project shall be carried out under the terms and conditions of the GENERAL POLICY AGREEMENT FOR STATE/UNIVERSITY COOPERATIVE PROJECTS dated September 1, 1989, except as may be modified herein.

2. The period of this agreement shall begin on October 15, 2000, and shall expire on January 31, 2002.

3. The work to be carried out during the period of this Agreement is described in the proposal identified below and more fully described in attached Exhibit A., the content of which is incorporated herein as a part of this Agreement.

Project to Conduct Telephone Surveys to Determine Gasoline Consumption Attributable to Snowmobiles, ATVs and Watercraft

4. The following individuals are designated to serve as Project Cooperators:

For the State:

Dawn Gallagher
Department of Conservation
22 State House Station
Augusta, ME 04333
207/287-4901

For the University:

Jonathan Rubin
University of Maine
Margaret Chase Smith Center for
Public Policy
5715 Coburn Hall
207/581-1528

5. The following individuals are designated to serve as Project Administrators:

For the State:

Will Harris
Department of Conservation
22 State House Station
Augusta, ME 04333
207/287-2215

For the University:

Arlene B. Russell
Associate Director, Post-Award
and Fiscal Services
Office of Research & Sponsored Programs
University of Maine
5717 Corbett Hall
Orono, ME 04469-5717
207/581-1476

For the State: (continued)

Rick Record
Department of Inland Fisheries and Wildlife
41 State House Station
Augusta, ME 04333
207/287-5224

Jane Lincoln
Department of Transportation
16 State House Station
Augusta, ME 04333
207/287-3324

Gilbert Bilodeau
21 State House Station
Augusta, ME 04333
207/287-6569

Key Personnel:

The following person is identified as a "key personnel", as provided under section 3 of the General Policy Agreement for State/University Cooperative Projects:

Patrick Norton, Principal Analyst
Office of Policy and Legal Analysis
State House Station 13
Augusta, ME 04333

6. Key Personnel: The University must send the person identified in this contract as a "key personnel", or that person's successor within that person's office, one copy of any progress report, completion report or correspondence related to this project that is sent by the University to the Project Cooperator. Such materials must be sent or delivered to the Key Personnel at the same time and in the same manner in which they are sent or delivered to the Project Cooperator and must include all attachments, appendices or supporting documents sent to the Project Cooperator. Nothing in this contract may be construed to create or impose any obligations, including any financial obligation, on the Key Personnel or that person's employer.

7. Total project costs for the period of this Agreement shall not exceed $72,515 of which $22,863 shall be provided by the Department of Conservation, $10,000 shall be provided by the Department of Inland Fisheries and Wildlife, $7,900 shall be provided by the Department of Marine Resources, $13,500 shall be provided by the Department of Transportation and $18,252 shall be provided by the University of Maine.

8. Invoices should be sent to the following funding sources: State of Maine, Department of Conservation, Department of Inland Fisheries and Wildlife, Department of Marine Resources and Department of Transportation.

STATE OF MAINE:

Transportation
Department

by Jane L Lincoln
Authorized Signature

Jane Lincoln
Deputy Commissioner
Typed Name and Title

11-16-00
Date

UNIVERSITY OF MAINE SYSTEM:

University of Maine
Institution

by James S. Ward IV
Authorized Signature

James S. Ward IV, Director
Department of Industrial Cooperation
Typed Name and Title

11/9/2000
Date

STATE OF MAINE:

CONSERVATION
Department

by Willard Harris
Authorized Signature

Willard Harris
~~Director of General Services~~
Typed Name and Title

11-16-00
Date

STATE OF MAINE:

Inland Fisheries and Wildlife
Department

by Richard E. Record
Authorized Signature

Richard Record
Director of Administrative Services
Typed Name and Title

11/16/00
Date

ENCUMBERED
NOV 17,2000

STATE OF MAINE:

Marine Resources
Department

by _____
Authorized Signature

11/16/00
Typed Name and Title

Penn Estabrook
~~Deputy Commissioner~~
Date

(signing for Gilbert Bilodeau)

REVIEWED, CONTRACT REVIEW COMMITTEE:

_____
Chairperson

NOV 17 2000

_____
Date

Proposal to Conduct Telephone Surveys to Determine Gasoline Consumption Attributable to Snowmobiles, ATVs and Watercraft

Introduction

The Maine State Legislature created the Commission to Study Equity in the Distribution of Gas Tax Revenues Attributable to Snowmobiles, All-terrain Vehicles and Watercraft and charged the Commission to collect and analyze information to determine an equitable distribution of gas tax revenues to support the enforcement and enhancement of programs supporting off-road vehicle use in Maine. The Margaret Chase Smith Center for Public Policy at the University of Maine has engaged in discussions with and has prepared materials for the Commission and the Office of Policy and Legal Analysis regarding data collection methods for identifying gasoline consumption among users of off-road vehicles. As a result of those efforts, the Office of Policy and Legal Analysis has asked the Margaret Chase Smith Center for Public Policy to submit a proposal to conduct survey research to collect information from snowmobile, all-terrain vehicle and watercraft users in Maine. The effort proposed herein will involve the expertise of a variety of Maine state government agencies in off-road vehicle use in Maine and the survey research expertise of the Margaret Chase Smith Center for Public Policy. Accordingly, the proposal is presented as a cooperative agreement between the state and the University.

This proposal describes activities related to the conduct of telephone surveys of snowmobile, all-terrain vehicle and watercraft users in Maine and provides a budget for those activities. Each of the three surveys will be conducted at or near the end of primary season of use for each vehicle type. This proposal outlines sampling methods, survey implementation procedures and reporting of results for each of the three user populations. In all project activities, Margaret Chase Smith Center for Public Policy staff will continue to work closely with representatives of the Office of Policy and Legal Analysis as well as other state agencies working with the Commission.

Sampling

For each user population (snowmobile, all-terrain vehicle, and watercraft), registration lists will be identified. From each registration list, a random sample of 860 individuals will be selected as the survey sample. From the 860 in each survey population, it is estimated that 600 interviews will be completed. This assumes that 70% of the sample population can be located and agree to participate.

To ascertain gasoline consumption of coastal watercraft registered out-of-state and of documented vessels, a telephone survey will be conducted of Maine businesses (marinas, etc.) that sell gasoline almost exclusively to watercraft operators. The obtained figures will be adjusted by the survey results of Maine registered watercraft owners.

Questionnaire Development

The Margaret Chase Smith Center for Public Policy will develop survey instruments for each user population. Questionnaire development will be conducted in close consultation with state agencies also working with the Commission. The survey instruments will include questions that permit the respondent to describe gasoline consumption in a variety of ways (e.g., estimated annual consumption, gallons per trip, number of trips) as well as to compare reported consumption with prior years. In addition to questions related to gasoline consumption, the questionnaires will address other issues related to use of off-road vehicle use. Questionnaires will be designed to be completed in a ten minute telephone interview. All questionnaires will be pre-tested prior to survey implementation.

Survey Implementation

Each survey will be administered at or near the end of the primary use season for each type of vehicle. Before each survey is implemented, all members of the survey sample will be mailed a letter describing the study and how the potential respondents were chosen and explaining that attempts will be made to contact them by phone. The telephone surveys will be conducted from the Margaret Chase Smith Center for Public Policy. The Margaret Chase Smith Center for Public Policy will provide interviewers who are already trained in professional interviewing skills. All interviewers will participate in a training session designed specifically

for each of the surveys. Interviewer training will include background information on the project and the charge of the Commission, the purpose of the survey, how and when to contact respondents, as well as question by question instructions on potential respondent concerns and appropriate methods of handling those concerns.

A protocol will be 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 have maximum opportunity to participate in the survey. Interviewers will document all attempts to contact respondents.

Data Entry and Analysis

All survey responses will be double-entered to data files. Separately entering each completed interview twice and comparing data identifies data entry errors and ensures accuracy of the final data file. In addition, final data files will be cleaned to remove out-of-range codes and logical inconsistencies. Margaret Chase Smith Center for Public Policy staff will develop necessary computer programs to analyze the data. The analysis will be consistent with predetermined needs identified by the Office of Policy and Legal Analysis. Based on that analysis, the Margaret Chase Smith Center for Public Policy will produce a descriptive report of results for each survey. The Office of Policy and Legal Analysis will be provided a draft report for review and comment prior to preparation of final reports.

Project Personnel

Staff of the Margaret Chase Smith Center for Public Policy at the University of Maine bring a wealth experience and expertise to this project. Jonathan Rubin is Assistant Professor of Resource Economics in the Margaret Chase Smith Center for Public Policy and the Department of Resource Economics and Policy and will serve as Principal Investigator. Dr. Rubin is a specialist in environmental and natural resource economics with extensive background in quantitative and qualitative analysis of national and regional policies and programs. His recent and current work includes evaluating the impacts of acid rain in Maine=s high elevation lakes, evaluating the relative merits of intertemporal permit systems to reduce the emissions of greenhouse gasses, and estimating the likely penetration of alternative fuels and vehicles in the US market. Suzanne K. Hart is Research Associate at the Margaret Chase Smith Center for Public Policy and will serve as Co-Principal Investigator. Ms. Hart has been a research associate

in Maine-based survey research organizations for more than twenty years and served as Director of the Survey Research Center at the Edmund S. Muskie School of Public Service prior to assuming her position at the University of Maine. Charles E. Morris is Senior Research Associate at the Margaret Chase Smith Center for Public Policy and will serve as Co-Principal Investigator. Mr. Morris has over twenty years experience in providing research and consultive assistance to public and non-profit organizations in Maine.

Project Timetable

Each survey will be administered at or near the end of the primary use season for each type of vehicle. All-terrain vehicle users will be surveyed in the fall/early winter of 2000 with a final report of findings produced by March 15, 2001. Snowmobile users will be surveyed in late winter/early spring 2001 with a final report of findings produced by June 15, 2001. Watercraft users will be surveyed in late summer/early fall 2001 with a final report of findings produced by November 30, 2001.

Project Budget

Total cost for this project is $72,515 (detailed budget is attached). As a cooperative agreement, the University will contribute $18,252 of the total project indirect cost resulting in a total sponsor cost of $54,263. Implementation and data entry costs are $11,926 for each of the three surveys. In addition, the survey of coastal gas pump operators will add $1,010 to implementation costs of the watercraft survey. Activities related to sampling, questionnaire development, analysis and reporting must include consideration of all three vehicle types and cannot be attributed directly to the individual surveys.

Activity	Total Cost
Development, Analysis & Reporting	$17,475
ATV Phone Survey	$11,926
Snowmobile Phone Survey	$11,926
Watercraft Phone Survey	$12,936
Project Total Cost	$54,263

Gas Tax Equity Study

Project Budget

	Sponsor	University	Total
Personnel			
a. J. Rubin			
20 days @ $270	$5,400		$5,400
b. C. Morris			
22 days @ $184	4,048		4,048
c. S. Hart			
25 days @ $172	4,300		4,300
d. C. Boynton			
30 days @ $80	2,400		2,400
e. Interviewers			
134 days @ $86	11,524		11,524
f. Data Entry			
30 days @ $86	2,580		2,580
Fringe Benefits (a,b,c & d) @ 33.4%	5,393		5,393
Fringe Benefits (e & f)* @ 8.4%	1,185		1,185
Supplies/Materials	1,500		1,500
Telephone	8,400		8,400
Printing/Photocopy	1,400		1,400
Postage	950		950
Travel	250		250
Total Direct Cost	$49,330		$49,330
Indirect Cost @ 47%	$4,933	$18,252	$23,185
Total Project Cost	$54,263	$18,252	$72,515

* temporary non-faculty employees

Gas Tax Equity Study

Project Budget

	Department of Conservation		Inland Fisheries and Wildlife		Department of Marine Resources		Department of Transportation		Project Total		
	Conservation	University	IF & W	University	D M R	University	D O T	University	Total Sponsors	Total University	Project Total
Personnel											
a. J. Rubin											
20 days @ $270	$2,275		$995		$786		$1,343		$5,400		$5,400
b. C. Morris											
22 days @ $184	$1,706		$746		$589		$1,007		$4,048		$4,048
c. S. Hart											
25 days @ $172	$1,812		$792		$626		$1,070		$4,300		$4,300
d. C. Boynton											
30 days @ $80	$1,011		$442		$349		$597		$2,400		$2,400
e. Interviewers											
134 days @ $86	$4,855		$2,124		$1,678		$2,867		$11,524		$11,524
f. Data Entry											
30 days @ $86	$1,087		$475		$376		$642		$2,580		$2,580
Fringe Benefits (a,b,c & d) @ 33.4%	$2,272		$994		$785		$1,342		$5,393		$5,393
Fringe Benefits (e & f)* @ 8.4%	$499		$218		$172		$295		$1,185		$1,185
Supplies/Materials	$632		$276		$218		$373		$1,500		$1,500
Telephone	$3,539		$1,548		$1,223		$2,090		$8,400		$8,400
Printing/Photocopy	$590		$258		$204		$348		$1,400		$1,400
Postage	$400		$175		$138		$236		$950		$950
Travel	$105		$46		$36		$62		$250		$250
Total Direct Cost	$20,785		$9,091		$7,182		$12,273		$49,330		$49,330
Indirect Cost @ 47%	$2,078	$7,690	$909	$3,364	$718	$2,657	$1,227	$4,541	$4,933	$18,252	$23,185
Total Project Cost	$22,863	$7,690	$10,000	$3,364	$7,900	$2,657	$13,500	$4,541	$54,263	$18,252	$72,515

* temporary non-faculty employees