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Moose Hunter Economic Expenditure and Use
Survey, Southeast Alaska
By Ginny Fay and Michael Thomas

Habitat Technical Report 86-8



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Alaska Department of Fish & Game
Division of Habitat



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Alaska Department of Fish and Game
Divisions of Habitat, Game and Subsistence
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RESULTS OF THE 1984 MOOSE HUNTER EXPENDITURE AND USE SURVEY

Introduction

The moose hunter survey was a joint project of the Alaska Department of Fish and Game's (ADF&G) Divisions of Habitat, Game, and Subsistence. The primary purpose of the survey was to obtain resource use information for area planning efforts for the Tongass National Forest Land Management Plan revision scheduled for completion in 1990. The survey asked hunters how hunt area characteristics affected their selection of hunt areas. It also asked questions regarding hunters' age, household size, and income level, hunter travel modes and time, other activities done while hunting, and hunting trip expenditures.

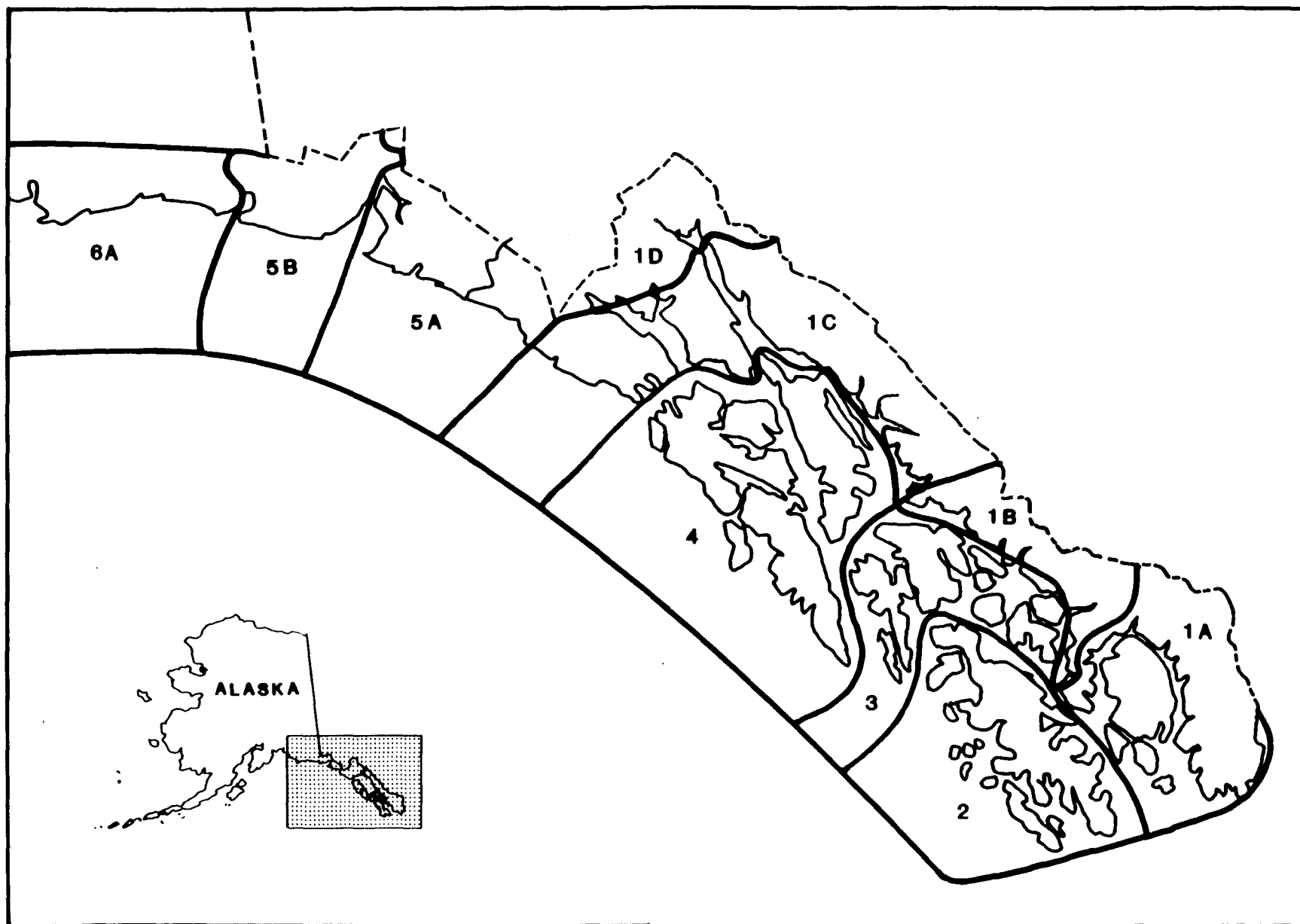
Background

In Southeast Alaska (map 1), moose populations are generally associated with mainland riparian habitats with abundant quantities of suitable forage such as willow (Salix spp.) and red osier dogwood (Cornus stolonifera). Throughout Southeast Alaska such habitats are limited and, consequently, most moose populations are small and often isolated. Because moose tend to occur in relatively discrete populations in Southeast Alaska, hunting regulations and the collection of harvest data have often been directed toward the management of specific populations (Doerr and Sigman 1986).

Moose hunting is extremely popular in the Southeast Region, and the public demand for quality moose hunting, in terms of both having a high probability of harvesting a moose and hunting in relatively uncrowded conditions, exceeds the available supply. Given the limited areas that can sustain a substantial harvest, restrictive hunting regulations and relatively low hunter success are common. Hunting regulations have generally become increasingly restrictive to protect populations because of increases in the demand for the opportunity to hunt (ibid.). During 1984, the majority of moose hunts in the Southeast Region were registration permit hunts. Exceptions to this were hunt number 901 in Berners Bay, which was a drawing permit hunt, and hunts on the Unuk and Stikine rivers which required hunters to obtain harvest tickets (table 1). For more background information on moose hunting in the Southeast Region, see Doerr and Sigman (1986).

Two basic benefits result from the use of wildlife resources -- economic impact and economic value. An economic impact is the answer to the question: "What is the economic activity generated by the use of the resource?" Economic value is the answer to the question: "How much value do people place on the resource?" These two benefits are distinct but they are not entirely separable. Neither type of benefit is more significant than the other but they answer two distinctly different questions (Rockland 1985).

Each question is important for different reasons. Public policy decisions are often based on economic impacts to communities and regions



Map 1. Game management units in southeast Alaska.

which translate into jobs, income, and tax receipts. In contrast, economic value is the value that people place on the resource. This concept is especially important to people who value the hunting experience and/or who value wildlife populations as a component of hunting or other outdoor experiences. Economic value, however, is more difficult to measure than economic impacts.

Values attributable to the moose resource occur to both users and nonusers of the resource. Users derive value from consumptive or nonconsumptive use of the resource, vicarious use (reading or watching films about the resource), and indirectly as a result of scientific studies or the preservation of ecological balance. Nonusers can benefit both from option and existence values. Option values include the opportunity to use the resource at some other time (eg. going hunting next year). Existence values include deriving pleasure from knowing that moose exist and are not extinct, bequest value (leaving moose for the enjoyment of future generations), and cultural values (the importance of moose in myth, legend, ceremony, religion or other aspects of culture). Cultural values can be associated with user's benefits as well as non-users' benefits. Figure one shows the relationship between different components of economic benefits and wildlife resources.

This survey provides information from hunters who reported hunting moose in Southeast Alaska during the 1984 season. Therefore, only values derived from reported consumptive use are included in this report. This survey did not address the economic impacts and values of nonconsumptive recreational and tourism values, option, bequest, and existence values, ecological and scientific values, or cultural values. Unlike economic assessments of market commodities which provide information on the potential economic impact and value of priced goods (this is more readily possible because an actual market exists), this project did not attempt to determine the value of moose hunting to potential users nor did it attempt to compute the economic value of an individual moose or its income-generating potential to the Southeast Region. To analyze the economic tradeoffs regarding moose use and habitat for land use planning and cost-benefit analyses, these other components of economic benefits must also be considered.

The questionnaire obtained data on the direct economic impacts of consumptive use of moose in the region. Direct economic impacts are the initial purchases (or expenditures) by the users of the resource. Direct impacts result in both indirect and induced impacts which further affect the economy. The survey also obtained a considerable amount of information regarding hunter demographics, hunting patterns, hunt area characteristics, and transportation modes. The latter three categories of information are directly pertinent for land use planning. These results answer questions on hunter demand for facilities such as developed anchorages, trails, and roads. Hunt area characteristics and hunter demographics provide information on the type of hunt being demanded and by whom. This is significant because hunters spend what they are able (subject to their incomes) and what is required (influenced by available access and transportation modes) to hunt a particular type of hunt (indicated by their response to hunt area characteristics). If hunt area characteristics in the region change

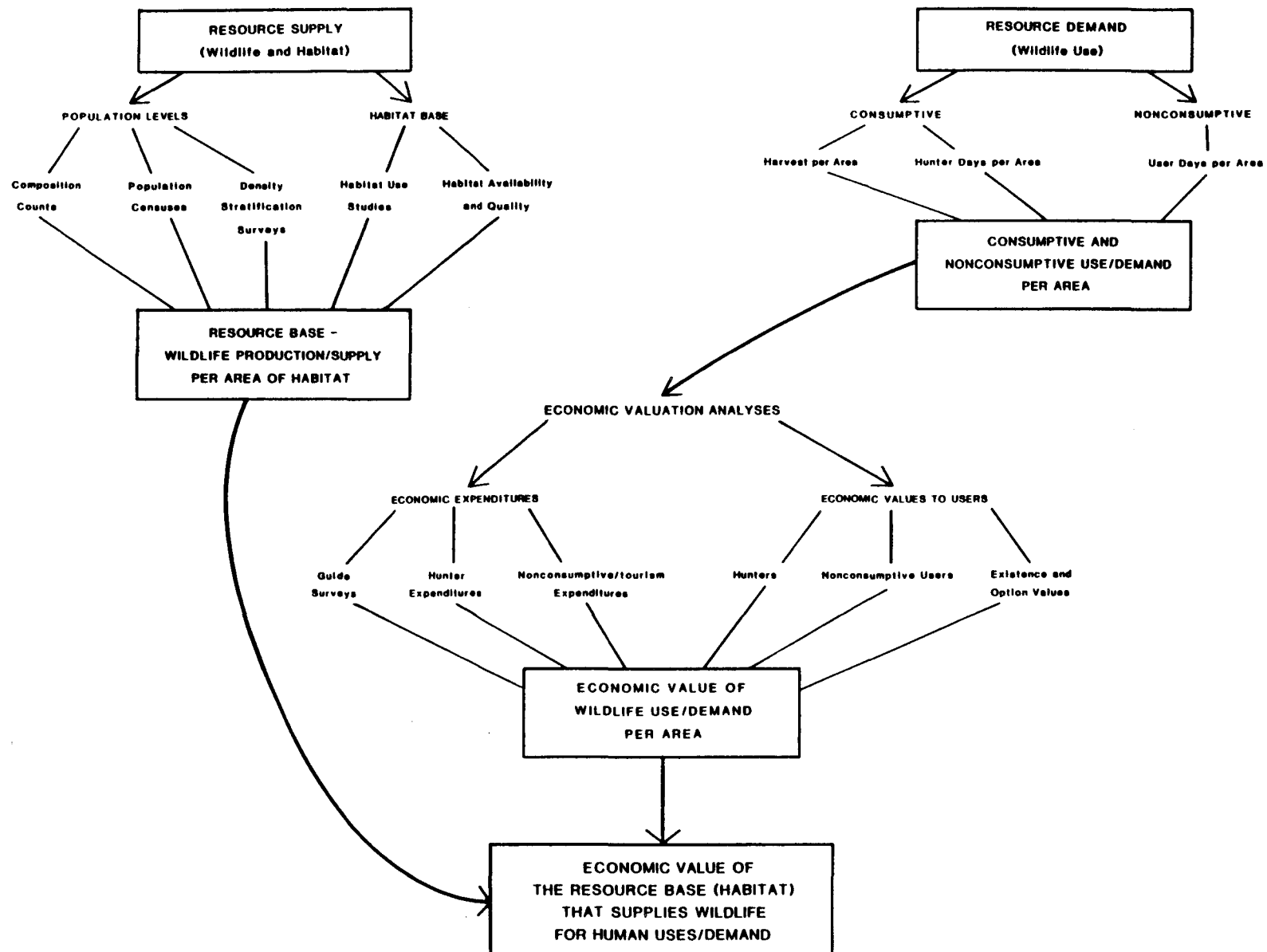


Figure 1. Interrelationship of major components of economic valuation analyses of demand and supply of wildlife for land use planning.

considerably, it can be expected that demand for certain areas and expenditures to hunt in these areas would also change.

Results of this project must be viewed in light of the biological status of moose populations, access to hunting areas, and the hunting regulations which prevailed at the time of the survey. These temporal conditions can significantly alter use patterns and influence the economic data regarding resource use. For example, area closures or use regulations, access restrictions, season lengths, and bag limits can all affect the measurable expenditures and values of hunting activities. Hunting regulations can also affect the size and characteristics of the population of hunters in a given area which can significantly alter the measurable economic results. Examples of this are area closures that limit the number of users (and thus, expenditures and measurable economic values) in specific areas or access restrictions that affect the cost (in terms of time or dollars) of hunting in specific areas and thus the numbers and income levels of resulting hunters in the area. The allocation of permits between resident and nonresident hunters (as in some brown bear hunts) is another example of how management policies and regulations can directly affect the results of economic studies.

Methodology

The questionnaire was designed by Division of Game biometrician, Michael Thomas, and Division of Habitat biologist, Marilyn Sigman, in consultation with Alaska Commercial Fisheries Entry Commission economist, Benjamin Muse, and U.S. Forest Service economist, Virginia Worthington. The format and design followed the Total Design Method described by Dillman (1978). Area biologists and resource managers in the ADF&G Divisions of Game, Habitat, and Subsistence reviewed the survey in draft form. Members of the public pre-tested the survey. A copy of the survey is attached in appendix one.

In 1984, moose hunters were required by regulation to obtain permits for permit hunts or harvest tickets for hunts in the Stikine and Unuk rivers, and return harvest reports regardless of whether they hunted. The estimated return rate for permit harvest reports under this regulation is over 90% (Zimmerman pers. comm.). The return rate for harvest ticket reports is usually about 70% (ibid.). The attached questionnaire was sent to the total population of moose hunters who indicated on harvest reports that they had hunted moose during the 1984 season. Therefore, the expenditure and use results for the Stikine and Unuk hunt areas are probably underrepresented relative to the permit hunts in the Southeast Region. The hunt numbers in this report are the regulatory hunt numbers. Table 1 and map 1 briefly describe the location of the 1984 hunt areas.

A total of 1,283 moose hunting permits were issued for the 1984 hunting season; 1,249 (97%) permits were issued to Alaska residents and 34 (3%) were issued to nonresidents. Residents used 841 (67%) and nonresidents used 30 (88%) of the issued permits. A total of 250 hunters returned harvest tickets reports for the Stikine and Unuk river hunts. Of the 1,121 permit and harvest tickets reportedly used, 33 were for hunters who obtained more than one permit or harvest ticket. To avoid burdening

hunters who obtained multiple permits/harvest tickets, only one economic questionnaire was sent to each unique hunter.

A total of 238 harvest ticket holders and 850 permit holders (1,088 moose hunters) were sent questionnaires in early April 1985. A reminder postcard was mailed one week later. Twelve surveys were returned as undeliverable. A second mailing of the survey to nonrespondents occurred in early June. Of the 1,076 moose hunters sampled, 581 completed and returned their survey for a response rate of 54%. Initially, 423 hunters, or 39% of all hunters surveyed, responded after the first mailing of the survey and reminder postcard; an additional 158, or 15%, responded after the mailing of the second survey. Response rates by hunt areas and communities are presented in tables two and three, respectively. The response rates of Haines and Yakutat were both lower than the regional average. This pattern was similar for the goat hunter economic survey which was sent at approximately the same time (Fay and Thomas 1986b).

During June 1985 following the second mailing of the survey, a major regulatory change occurred as a result of a court ruling on the Alaska state subsistence law. This change required hunters to provide affidavits to the ADF&G concerning their customary and traditional use of game, their length of local residency, and the availability of alternative resources in order to establish which users should have hunting priority under the terms of the state subsistence law. This may have influenced the willingness of hunters to provide economic information to the department even though the department had no intention of using survey results to establish priority rights for hunting. For this reason, as well as budgetary considerations, no third mailing occurred to increase the response rate. Because almost all responses to the second mailing had already been received, this change in regulations did not affect the results of this survey.

After the survey questionnaires were returned, they were coded, keypunched, and loaded into an IBM 3081K computer for summary and analysis. Means and summary statistics were computed for survey questions as appropriate. Response rates averaged 54% (tables 2 and 3) which prevented the reporting of reliable standard errors of our estimates.

Classical sampling literature suggests measures of variation on samples with less than a 95% response rate can be seriously misleading (Cochran 1963). The concern with nonresponse is that nonrespondents might represent a different population of hunters than respondents and thus result in a nonresponse bias. One method to determine nonresponse bias is to test for significant trends in answers to specific questions over subsequent mailings. Another method involves sampling a portion of the nonrespondents and testing for differences with the original respondents. Available time and budget constraints for the project did not allow for subsampling nonrespondents. However, tests for trends in answers by mailings proved insignificant in past surveys of deer hunters, indicating that respondents could be treated as an unbiased sample of the total population. Yet, without the opportunity to sample the nonrespondents, estimates of precision would be misleading and have

therefore, not been made. Estimates of means and totals are general approximations of true values with no reliable measure of precision. For purposes of evaluating the relative importance of moose hunting to various sectors of the economy, general demographic composition of hunters, and characteristics important in choosing hunting sites, these estimates are more than adequate.

All means are the simple arithmetic averages of responding individuals. The number of responses for each question varied because all respondents did not answer all questions; calculations were made based on the number of actual responses. Totals have not been expanded for nonrespondents with the exception of the regionwide expenditure sample. Here the total was expanded for all hunters who reported hunting moose in 1984 by multiplying the sample total by the inverse of the response rate; providing an estimate of the total dollars moose hunting directly contributes to the regional economy. Because hunt area and community expenditure summaries only include the dollars of survey respondents, these figures should be considered under estimates for the hunt area and/or community.

Results

Hunting Patterns

Tables four through six show the number of hunting trips taken in each hunt area, the number of trips taken by community, and the number of trips taken in specific hunt areas by community of residence of the hunters. The maximum number of trips taken by hunters to any hunt area was four. The only areas that received four trips by hunters were Haines (hunt number 959), the Yakutat Forelands (hunt number 961), and the Stikine River. In terms of number of trips, these areas also received 31, 22, and 22%, respectively, of the reported moose hunting trips. Hunters who reported taking four moose hunting trips were from communities closest to these hunt areas (i.e. Haines, Yakutat, and Wrangell). The exception to this is one nonresident who took a fourth moose hunting trip (table 5). Approximately, 65% of the total number of hunting trips taken were first trips by hunters. Second trips accounted for another 17% (82% cumulatively). Hunters from five communities accounted for 84% of the total number of the sampled hunting trips. The breakdown for these five communities was as follows: Haines (21%), Juneau-Douglas (25%), Petersburg (10%), Wrangell (16%), and Yakutat (12%).

Moose hunters generally hunted the area(s) nearest their community of residence. Responding Haines hunters only hunted in the Haines area hunt number 959. Petersburg hunters almost exclusively hunted in the Thomas Bay (number 955) and Stikine River areas. Skagway respondents only hunted in hunt number 959. Wrangell responding hunters hunted almost exclusively in the Stikine River area. Yakutat hunters only hunted in the Yakutat and Malaspina Forelands (table 6).

Juneau-Douglas and Ketchikan responding hunters hunted in six different areas. Approximately half of the Juneau-Douglas and Ketchikan trips, however, were to areas relatively close to these communities. Nonresidents hunted in five different areas; other Alaska and Sitka residents reported hunting in four different areas (table 6).

The average number of hours spent by hunters travelling to moose hunting areas in the Southeast Region was 7.9. Travel time ranged from 3.5 hours (hunt number 901, Berners Bay) to 9.6 hours (Unuk River area) (table 7). The travel time to hunt areas tended to be more a result of the hunt area's distance from population centers than the predominant travel mode used to reach the travel area (tables 7 and 31). For selected towns in the Southeast Region, travel time ranged 3.8 hours for Skagway to 13.2 hours for Sitka (table 7). While primarily influenced by proximity, travel time was reduced for some hunters through the use of airplanes. Use of commercial airlines by "other Alaska" hunters decreased their average travel time to below that of some Southeast communities.

Table 8 shows the average number of days hunted in each area for each moose killed. Overall, the number of days hunted for each moose killed in the Southeast Region was relatively high (Doerr and Sigman 1986). The fewest number of hunter days for each moose killed was in hunt number 901, Berners Bay, which was the only permit drawing hunt in the region. The next shortest hunting time per moose was in the Malaspina Forelands. The longest average hunting times per moose were in the Stikine River area and the Haines area hunts. The second part of table 8 reflects this showing more hunting days per moose for hunters from Wrangell and Haines than for other Southeast Region residents. These were computed from the days reported hunted on the economic questionnaire and the kill data reported on the permit and the harvest ticket reports. The number of days spent hunting per moose killed reported on permit and harvest tickets for hunt numbers 959, 961, and 962 were approximately double those reported in the economic survey (Dinneford pers. comm). Two possible explanations for this discrepancy are as follows: 1) the smaller response rate of the economic survey resulted in a sampling of a subpopulation of more successful hunters or 2) the time lapse between when the hunts occurred and the economic questionnaire (approximately five to eight months) resulted in hunters forgetting or misreporting the number of days they spent hunting. The harvest reports were completed right after the hunts occurred and are, therefore, probably more accurate.

Hunters reported hunting other game species on a total of 211 (29%) of the sampled moose hunting trips (tables 9 and 10). Other species most commonly hunted were waterfowl (47 trips), black bear (23 trips), brown bear (19 trips), mountain goats (11 trips), grouse (10 trips), and Sitka black-tailed deer (7 trips). Some hunters reported a number of combinations of other species hunted; these are shown in table 9. Table 10 lists each species separately that was reported in combinations in table 9. The relative importance of other species hunted on moose trips, in terms of number of trips, is the same for both tables.

Hunt Site Characteristics

Moose hunters were asked if certain natural features of hunt areas influenced their selection of where to hunt. The results are presented in table eleven for the region as a whole and in tables 12-19 for specific hunts within the Southeast Region. For the region, game availability (moose) was considered very important by 68% and important by 29% of the responding hunters; only 2% indicated that moose availability did not matter. While the availability of game was considered important, the chance to get a trophy animal did not matter to 82% and was only important to 18% of the sampled moose hunters. The opportunity to hunt different species was important or very important to 58% of the sampled hunters; 42% responded that this hunt feature did not matter. The opportunity for other types of recreation (fishing and photography, for example) rated equally with the opportunity to hunt other game.

An undisturbed natural area was considered important or very important by 76% of the sampled hunters in the region; this characteristic did not matter to 24% of the sampled hunters. Scenery was important or very important to 54% of the sampled hunters but did not matter to 46%. Access by rivers or lakes was rated important or very important by 74% and considered unimportant to 25%.

A statistical test (chi-squared) was conducted to determine whether household income was a factor in hunters' motivation to hunt for meat and/or trophy moose. Results indicate no significant income effect ($p = 0.924$) is involved in hunters' motive to hunt for meat or trophy moose. Most of the hunters in the region were hunting for meat regardless of their household income; people hunting for trophy animals were as likely to have low incomes as high incomes.

Individual hunts followed most of these same general regional patterns. Some exceptions include: 1) The opportunity for other recreational opportunities was considered more important by Berner's Bay hunters (table 12); 2) river and lake access was considered more important for hunts accessed by boats (Berners Bay, Taku River, Unuk River, especially) (tables 12,14,18); 3) scenery was considered somewhat more important to Malaspina Forelands (hunt number 962) hunters (table 17); 4) and a natural boat anchorage or landing was considered relatively more important by hunters in the Stikine, Thomas Bay, Taku River, and Unuk River hunts.

In summary, surveyed moose hunters in the Southeast Region were most concerned about the availability of moose but whether the animal they harvested was a trophy moose was not an important factor in their choice of a hunt area. The majority of the hunters wanted to be in an undisturbed natural setting with the opportunity to hunt other animals and participate in other recreational activities; scenery was also considered important to approximately half of the hunters. Boat anchorages and boat access varied with the importance of boats as a primary travel mode to individual hunt areas.

The second question on the survey asked hunters how human activities that affect hunt area characteristics and features influence their selection of hunting sites. The wording of the question caused some confusion to respondents because the response options were "causes me to choose" or "causes me to avoid". It is possible, however, to "choose to avoid" so there was some ambiguity in the results (a small number of respondents indicated that they both avoided and chose an area based on a given characteristic). The results to this question for the Southeast Region are presented in table 20: results for individual hunt areas are presented in tables 21-28.

For a number of hunter area characteristics, approximately half of the sampled hunters indicated that they were indifferent. The remaining half were fairly equally divided between people who would avoid and select a site as a result of a given activity. Characteristics with this type of response included road access and developed boat anchorages. Characteristics that were strongly selected were how far hunters had to travel and lack of congestion. More hunters selected trail access and cabins than avoided them. Congestion was a characteristic that was strongly avoided. Characteristics that were avoided by approximately half of the surveyed hunters and avoided more than selected include developed campgrounds, clearcuts, new timber harvesting, log storage in bays, and mining activities.

Statistical analyses (chi-squared tests) were conducted to determine if household income affected hunter responses to hunt area characteristics. Household income does not appear to be a major factor influencing how hunters rated most hunt area features. Test results did, however, indicate that household income affected the selection of the following hunt area characteristics: trail access ($p = 0.015$), developed boat anchorage ($p = 0.032$), developed boat launch ($p = 0.025$). Trail access tended to be selected by lower income groups but avoided or did not matter to higher income groups. Developed boat anchorages and launches were more frequently selected by lower income hunters; developed boat launches did not matter to higher income hunters.

Statistical tests (chi-squared) also indicated that moose hunters (regardless of their income levels) respond differently to clearcut areas and new timber harvesting as a hunt area characteristic ($p = 0.005$). As compared to their responses regarding clearcuts, fewer hunters responded that recent timber harvesting was an important or very important reason for selecting a hunting area or that new logging did not matter to them. A greater number of hunters indicated that areas with new timber harvesting (harvested within 5-10 years old) were avoided compared to areas that have clearcuts (over 5-10 years old). Forty-four percent of all hunters said that clearcuts did not matter as a selection criteria while 40 percent listed clearcuts as an important or very important reason to avoid an area as compared to 40% and 53%, respectively, of the hunters who responded similarly concerning new timber harvesting.

Hunter Demographics

For the region as a whole, the average responding moose hunter had hunted 15 years in Alaska; the median number of years was 12. The question, however, did not ask hunters for the number of years they specifically hunted moose. Table 29 presents the approximate distribution of sampled hunters by age group for the Southeast Region and by hunt area. The majority were in the 25 to 35 and 36 to 45 year old age groups. The average age and median category of the sampled hunters was 36 to 45 years of age.

The distribution of total household incomes of responding hunters is shown in table 30. The mean and median household income (before taxes) for the group was in the income category \$30,000 to \$39,999. For five of the eight moose hunting areas in the region, the average and/or median responding moose hunter household income category was above the survey regional average. These areas were hunt number 901, Berner's Bay (all Juneau-Douglas hunters (table 24)); hunt number 955, Thomas Bay (primarily Petersburg hunters); hunt number 956, Taku River (primarily Juneau-Douglas hunters); hunt number 961, the Yakutat Forelands (approximately 55% Yakutat, 25% Juneau-Douglas, 6% nonresident hunters); and hunt number 962, the Malaspina Forelands (primarily Ketchikan, Juneau-Douglas, Yakutat, and nonresident hunters). The median income category in hunt number 959 was below the questionnaire regional median.

The median taxable income for the Southeast Region based on 1980 U.S. Bureau of Census data was \$25,388. The relationship, however, between taxable income and gross (before taxes) household income in this survey is unknown because the number of wage earners in the sampled household is unknown. This discrepancy makes the survey income information less useful for planning purposes because it is not comparable to regional income figures. For planning, hunter income information could be used to anticipate changes in hunter numbers based on changes in income or shifts between hunt areas or types of access as a result of changes in income. While the survey income figures are not comparable to standardized income statistics, they are comparable to the income results for the mountain goat and deer surveys completed in the region. These results indicate that as a whole, the average mountain goat hunter's income was higher than moose or deer hunters but that average moose hunter incomes were above deer hunters (Fay and Thomas 1986a,b). The hunter survey results are internally consistent which means that comparison of incomes is valid between communities or hunt areas.

The average household size for sampled hunters in the region was 3.4. The average household size varied by hunt area (table 30). The U.S. Bureau of Census 1980 information reports that the average household size in the Southeast Region was 2.96 persons and the average family size was 3.32 persons. A household is defined as the number of unrelated persons occupying a given housing unit. A family is defined as the number of related persons living in a housing unit and must be at least two persons. Therefore, this survey's average household size is a combination of households and families, as defined by the U.S. Bureau of Census, and is larger than either of the most recently reported regional averages. Two possible explanations for the larger hunter respondents'

household size are that 1) the larger number of people provides greater incentive for harvesting wild meat while making hunting more cost effective and 2) people with families are more long-term residents of the region and hunt as part of the area's lifestyle.

Hunter Transportation and Access

Question three on the survey asked hunters about their transportation modes to the hunt area in which they hunted. Answers were categorized into travel modes for each hunting trip (i.e. all answers indicating the use of boats, e.g., "own boat", "friend's boat", were grouped in a "boat" mode response) and analyzed with respect to hunter community of origin. Table 31 displays the percentage of trips taken by moose hunter survey respondents from selected Southeast Alaska communities using specific modes of transportation or combinations of modes.

Boat travel was the mode of transportation reported most frequently by respondents from Juneau-Douglas (31%), Petersburg (70%), and Wrangell (91%). The use of a boat and car or truck combination was also reported by an additional percentage of Juneau-Douglas (2%) and Petersburg (8%) respondents. A significant percentage of Yakutat (22%) and Haines (39%) respondents used the boat and car or truck combination. The boat/vehicle combination most likely describes a trip where a boat was trailered by a truck or car to a boat launching area. The exception to this is hunters traveling to the Thomas Bay moose hunting area which is extensively and almost exclusively used by Petersburg residents (Doerr and Sigman 1986). Vehicles are frequently transported by boat to hunt moose from the roads in the Thomas Bay area. When the two responses are combined (boat with boat and truck or car), they account for travel by 55% of the Haines respondents, 33% of the Juneau-Douglas respondents, 78% of the Petersburg respondents, 91% of the Wrangell respondents, and 32% of the Yakutat respondents.

Cars or trucks were reported as the mode of transportation used most frequently by Yakutat respondents (39%) and by a high percentage of Haines respondents (37%).

Airplanes were reported as a major mode of transportation used by Juneau-Douglas (17%) and Yakutat (13%) respondents. Only Haines respondents (7%) reported hunting for moose solely by walking. Boat and airplane combinations were used by Juneau-Douglas (15%), Petersburg (7%), and by Yakutat (6%) respondents. Juneau-Douglas respondents (13%) reported using a combination of car or truck and ferry. This combination would have been used to travel to the Haines area because Haines is the only moose hunting area accessible by ferry where travel by plane or boat would not be required. Nine percent of Juneau-Douglas respondents reported using a combination of boat, car or truck, and ferry which would provide access to moose hunting areas by boat from Haines, Petersburg, and/or Wrangell.

The use of access modes by survey respondents appears to primarily be influenced by the level of participation of particular communities in each hunt area and the transportation systems available to hunters in their community of residence. As described in the report on moose

harvest patterns (Doerr and Sigman 1986), moose hunters generally hunt the moose herd nearest their community of residence. Thus, Petersburg and Wrangell hunters use boat transportation to access the Stikine River and Thomas Bay hunting areas. Haines hunters use boats, trucks or cars, and foot transportation to access the Haines hunting area which includes road access paralleling the Chilkat River drainage, several developed boat launch sites, and residential development within autumn moose range.

Yakutat hunters also use a variety of transportation modes to hunt the Yakutat and Malaspina Forelands. Yakutat respondents reported a higher percentage of plane access than Haines respondents (who also have road accessed moose hunting areas) as a result of the availability of several remote landing strips developed in the Yakutat area and wheel plane access along the Foreland beaches. Mills and Firman (1986) describe the shift toward use of highway vehicles for moose hunting that has occurred in the Yakutat area following construction of the highway across a portion of the forelands. Their report also analyses the relationship between hunter access modes and success.

Approximately 45% of the moose hunting trips made by Juneau-Douglas respondents during the 1984 season were to the Taku River (hunt number 956). This is reflected in the reported use of boats (31%) and planes (17%) and boat/plane combinations (15%). Juneau-Douglas moose hunters, however, also hunted the Haines and Yakutat areas which was again reflected in the reported boat/plane combination (which included use of commercial airlines and charter and private planes).

Hunter Expenditures

Questions seven and nine on the survey asked hunters what their 1984 expenditures were in a variety of categories. The types of expenses in question seven are examples of variable costs because they vary or are able to be changed with the number of trips or the duration of trips. The exception to this is the license and tag fees category which is a fixed cost that must be paid in order to hunt and does not vary with the amount of hunting activity that occurs. In contrast, the expenditure categories in question nine are for durable equipment or capital goods which can be used over a number of years and for purposes other than hunting moose. Equipment expenses are fixed in that the cost of a rifle remains the same regardless of how many times it is used (ammunition and cleaning would be the variable costs) but the costs would be prorated or accounted for over the number of times and/or years it is used.

Costs of equipment in expenditure surveys pose problems because it is difficult for respondents to account for the costs of items used repeatedly and for different purposes. Also, the relative lifetime and variety of other activities the equipment are used for may vary considerably between users. For these reasons, it is especially important that questions regarding equipment costs be carefully designed and worded.

The problem of equipment being used a number of years is accounted for by only a portion of users purchasing these items in the survey year.

For example, if rifles on average are used for ten years, then 10% of the survey sample would report rifle expenditures in 1984. These expenditures would accurately portray costs for the entire group. Similarly, if tents are on average used five years, then 20% of the sample would have tent expenditures listed under the "camping equipment" category. The moose questionnaire's wording of the equipment costs asked only for 1984 expenses but did not ask what portion of use was attributable to moose hunting. If a large portion of the respondents used equipment for other activities, equipment costs will overestimate expenditures directly attributable to moose hunting. This problem was remedied in the deer hunter questionnaire by asking hunters to indicate the portion of equipment use that was for deer hunting (Fay and Thomas 1986a).

Tables 32 to 50 provide the results of the expenditure questions by expense categories. These results are presented for the region, by hunt area, and by selected communities. The selection of communities is based on having an adequate sample size to make the results meaningful. Within these tables, average expenditures are presented in two ways. One is the average cost for all responding hunters (referred to as "all"), the other is the average cost for the responding hunters who used a particular category (referred to as "users"). The total expenditures per hunt area are based on the number of hunters who hunted in an area and answered at least one expenditure category on the survey. The expenditures by hunt area and selected communities are for a sample of hunters and, therefore, are not the actual total expenditures. Because response rates varied by hunt areas and communities (tables 2 and 3), this should be taken into consideration when using these results.

Table 51 summarizes the average moose hunter expenditures per hunt area, per hunter day, per trip, and for the Southeast Region. Average costs per day was \$196 for the region as a whole and ranged from approximately \$108 in hunt number 959 to \$710 in hunt number 962. Major factors influencing average expenditures per day in a hunt area were the type of transportation required to access the area and the percentage of nonresidents and other Alaskans who hunted in the area because, in part, they had higher transportation costs than residents of the region. The number of trips taken was influenced by the relative average costs of hunting at a particular hunt area (tables 4 and 45).

Moose hunters in the Southeast Region who responded to the expenditure question on the survey spent an estimated \$423,914 in direct expenses to hunt moose in 1984. When this value is expanded from sampled hunters to the total population of 1984 hunters who obtained permits and/or harvest tickets and hunted, the direct hunter expenditures totalled \$831,204. The total economic impact on the regional or local economies can exceed these direct expenditures because hunter purchases may result in further expenditures by businesses.

In order to evaluate the effects of these expenditures, it is helpful to look at the Southeast Alaska regional economy. Rogers (1985) described the economy of the region as a colony of the continental United States and Japan. Most of its land is under public ownership (the U.S. Forest

Service and the State of Alaska) and its land and marine resources under public management. Its economic system produces raw or semi-processed materials from its natural resources for export, provides state government services for the rest of the State of Alaska, and offers scenic and recreational resources for enjoyment of its residents and tourists. It is far from self-sufficient. Virtually all of the goods required by its residents and the supplies and equipment and most of the capital required by its industries must be imported from outside the region. Given the simplicity of the system being represented, overly elaborate models (e.g., input/output) are not appropriate (Rogers 1985).

A simple and useful model to describe this type of regional economy is an "export-base" model. This model was used in studies for the Tongass Land Management Plan (Rogers 1978) and the Alaska National Interest Lands Conservation Act section .706b review (Rogers 1985). Using this traditional export-base model, total employment (i.e., economic market activity) is divided into three categories- the basic, support, and local/state government sectors (the federal government is assumed to be part of the basic sector) (ibid.). Non-market or mixed-cash components of the regional economy introduce further considerations which were not considered by this survey but should be in cost-benefit analyses of land and resource uses. For more information on these aspects of local economies see Wolfe and Walker 1986.

The basic sector of the regional economy is comprised primarily of commodity-producing industries. In Southeast Alaska this includes fish harvesting and processing, logging and forest products, mineral extraction, and tourism. Other manufacturing for regional consumption, however, would be considered part of the support sector (a bakery producing bread, for example). Employment in the support sector (which is retail and wholesale trade, transportation, communication, utilities, finance, insurance, real estate, and services) is directly a function of total employment in the basic, government, and support sectors. The degree to which changes in one sector result in growth or expansion in other sectors in the economy depends on "leakages" in the economy; the effect of growth or decline is called the multiplier effect. The size of the multiplier is dependent on the amount of leakage of dollars out of the regional economy.

Because the Southeast Alaska regional economy is primarily an import-export economy, these leakages tend to be fairly large and dollars leave the region after relatively few rounds of spending. For example, if a pay raise results in out-of-state vacation using an out-of-state transportation means, the region receives little benefit from this additional income. In contrast, if the person buys a boat and goes fishing in the region, a larger portion of the dollars remains within the regional economy. The boat, however, if manufactured elsewhere and imported to the region, creates a partial leakage because its wholesale value was paid out of the region. The profits made and wages paid by the local business which sold the boat, however, can result in further rounds of local spending.

Moose hunting activity in the Southeast Region is part of the basic tourism industry. However, no reliable or useable hard data exist for

making accurate estimates of tourism employment (Roger 1985) and the multiplier effects of moose hunting to the regional economy. The total economic effects of moose hunter expenditures on the regional economy may exceed direct expenditures because hunter purchases result in further expenditures by businesses. The extent to which this subsequent indirect and induced economic activity remains in Southeast Alaska as opposed to "leaking out" of the region or state is uncertain.

Because moose hunting attracts people to the region, especially nonresident hunters, a portion of the dollars spent on moose hunting is a direct influx of receipts into the regional economy. It can be argued that moose hunting expenditures by residents of the region inject no "new" dollars and their expenditures would be funnelled into substitute goods or activities given changes in the opportunity to moose hunt. This would especially be true for expenditure categories such as groceries because people buy food and eat regardless of their activities.

Expenditures by resident hunters would only be insignificant to the regional economy if, within the region, there existed perfect substitutes for moose hunting to which hunters would shift their expenditures. It is possible that substitutes for moose hunting do not exist or that substitutes would result in a net flow of dollars out of the region (hunting in other parts of Alaska or Canada or purchase of meat imported from out-of-state, for example). If the substitutes for resident moose hunting result in the export of dollars from the region, then spending by resident hunters would not be an insignificant recycling of dollars but a significant input to the regional economy. This project did not determine substitutes for moose hunting in the region. In this regard, the economic effects (or impact) of changes in the opportunity to hunt moose in Southeast Alaska is uncertain.

It is important to note that hunter expenditures do not equal the value hunters place on the resource. Expenditure data underestimate value because it is assumed that people will buy a good or service if the benefits exceed the costs. Expenditures provide information on the input into the economy made by hunting activities but are less than the value and the benefits to hunters of hunting moose.

For land use planning and cost-benefit analysis for alternative uses of lands and waters, the economic expenditure information in this report accounts for a portion of the benefits to the regional economy and to consumptive users of moose populations in the Southeast Region. Therefore, to fully assess trade-offs involved with enhancement or loss of moose hunting opportunities in the region, other benefits of the use of the moose resource not included in this report also need to be analyzed and considered.

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Table 1. Location, Season Length, and Bag Limits for 1984 Moose Hunts in Southeast Alaska.

Hunt No.	Location	Season	Bag Limit
-	Unit 1(A)	Sept.15-Oct.15	One bull (Harvest ticket hunt)
-	Unit 1(B), South of the LeConte glacier	Sept.15-Oct.15	One bull (Harvest ticket hunt)
955	Unit 1(B), North of the LeConte glacier	Oct.1-Oct.15	One bull with at on at least 3 lines least 1 antler, registration permit only.
901	Unit 1(C), Berners Bay drainages only	Sept.15-Oct.15	One antlerless moose by drawing permit only. Up to 15 permits will be issued at the discretion of the department.
956	Unit 1(C), except Berners Bay	Sept.15-Oct.15	One bull by permit registration only.
959	Unit 1(D)	Sept.15-Sept.30	One bull by registration permit only. Up to 35 bulls may be taken.
-	Unit 2, 3 and 4	No open season	
961	Unit 5(A), except Nunatak Bench	Oct.15-Nov.15	One bull by registration permit only, 50 bulls may be taken.
960	Unit 5(A), Nunatak Bench	Nov.15-Feb.15	One bull by registration permit only, 10 moose may be taken.
962	Unit 5(B)	Sept.1-Oct.31	One bull by registration permit only, 25 bulls may be taken

Source: ADF&G 1984

Table 2. Response Rates for the 1984 Southeast Alaska Moose Hunter Economic Survey by Hunt Area.

<u>Response Rates by City and Hunt Number for Moose Hunters</u>								
Hunt No.	Permit Respondents	Permit Non- Respondents	Ticket Respondents	Ticket Non- Respondents	Total Permit	Total Ticket	Undel.	Response Rate
901	8	7	0	0	15	0	1	0.57
955	39	54	0	0	93	0	1	0.42
956	81	50	0	0	131	0	4	0.64
959	168	181	0	0	349	0	2	0.48
961	123	110	0	0	233	0	1	0.53
962	19	31	0	0	50	0	0	0.38
Unuk River	0	0	25	15	0	40	2	0.66
Stikine River	0	0	118	92	0	210	1	0.56
TOTAL	438	433	143	107	871	250	12	0.52

Table 3. Response Rates for the 1984 Southeast Alaska Moose Hunter Economic Survey by Hunter Community of Origin.

Response Rates by City and Hunt Number for Moose Hunters								
City	Permit Respondents	Permit Non-Respondents	Ticket Respondents	Ticket Non-Respondents	Total Permit	Total Ticket	Undel.	Response Rate
Craig	1	0	2	4	1	6	0	0.43
Elfin Cove	2	0	0	0	2	0	0	1.00
Gustavus	1	0	0	0	1	0	0	1.00
Haines	110	139	0	0	249	0	1	0.44
Hoonah	3	0	0	0	3	0	0	1.00
Juneau	166	96	1	1	262	2	5	0.64
Ketchikan	15	11	13	12	26	25	0	0.55
Klawock	0	0	6	1	0	7	1	1.00
Metlakatla	0	0	4	1	0	5	1	1.00
Petersburg	38	49	29	15	87	44	1	0.52
Point Baker	0	1	0	0	1	0	0	0.00
Sitka	9	8	5	0	17	5	1	0.67
Skagway	9	6	0	0	15	0	0	0.60
Wrangell	2	2	78	73	4	151	1	0.52
Yakutat	58	99	0	0	157	0	0	0.37
Other S.E.	0	0	3	0	0	3	0	1.00
Other Alaska	8	8	1	0	16	1	1	0.56
Non-resident	16	14	1	0	30	1	0	0.55
TOTAL	438	433	143	107	871	250	12	0.52

Table 4. Number of Individual Hunters Reporting 1, 2, 3, or 4 Hunting Trips by Moose Hunt Area in Southeast Alaska, 1984

Hunt Area	Number of Hunters				Total No. of Trips
	1 Trip	2 Trips	3 Trips	4 Trips	
Berners Bay (#901)	6	2	0	0	10
Thomas Bay (#955)	35	3	0	0	41
Taku River (#956)	66	9	2	0	90
Haines (#959)	130	18	5	10	221
Yakutat Foreland (#961)	95	16	3	5	156
Malaspina Forelands (#962)	17	1	0	0	19
Unuk River	24	1	0	0	26
Stikine River	96	10	7	5	157
Total	469	60	17	20	720

Table 5. Number of Individual Hunters Reporting 1, 2, 3, or 4 Moose Hunting Trips in Southeast Alaska by Community, 1984 (n=578)

Community	Number of Hunters				Total No. of Trips
	1 Trip	2 Trips	3 Trips	4 Trips	
Craig	3	0	0	0	3
Elfin Cove	21	1	0	0	3
Gustavus	1	0	0	0	1
Haines	77	13	5	9	154
Hoonah	3	0	0	0	3
Juneau-Douglas	141	18	2	0	183
Ketchikan/Ward Cove	30	3	0	0	33
Klawock	5	0	0	0	5
Metlakatla	4	0	0	0	4
Petersburg	52	5	4	0	74
Sitka	14	1	0	0	16
Skagway	8	1	0	0	10
Wrangell	72	6	3	5	113
Yakutat	36	12	3	5	89
Other Alaska	9	0	0	0	9
Nonresident	16	0	0	1	20
Total	469	60	17	20	720

Table 6. Number of Reported Hunting Trips by Moose Hunt Area in Southeast Alaska by Community, 1984 (n=578)

Community	Berners Bay (#901)	Thomas Bay (#955)	Taku River (#956)	Haines (#959)	Yakutat Foreland (#961)	Malaspina (#962)	Unuk River	Stikine River	Total
Craig	--	--	--	1	--	--	2	--	3
Elfin Cove	--	--	3	--	--	--	--	--	3
Gustavus	--	--	1	--	--	--	--	--	1
Haines	--	--	--	154	--	--	--	--	154
Hoonah	--	--	--	--	3	--	--	--	3
Juneau-Douglas	10	--	82	47	40	3	--	1	183
Ketchikan	--	2	1	--	3	9	15	3	33
Klawock	--	--	--	--	--	--	5	--	5
Metlakatla	--	--	--	--	--	--	3	1	4
Petersburg	--	39	--	--	1	--	--	34	74
Sitka	--	--	2	1	7	--	--	6	16
Skagway	--	--	--	10	--	--	--	--	10
Wrangell	--	--	--	--	2	--	--	111	113
Yakutat	--	--	--	--	86	3	--	--	89
Other Alaska	--	--	--	3	4	1	--	1	9
Nonresident	--	--	1	5	10	3	1	--	20
Total	10	41	90	221	156	19	26	157	720

Table 7. Average Time Spent Travelling to Moose Hunting Areas by Hunt Area and Selected Communities, 1984.

Hunt Area/Community	Average Hours Travelled
HUNT AREA	
901 (Berners Bay) n=8	3.5
955 (Thomas Bay) n=39	4.4
956 (Taku River) n=77	4.9
959 (Haines Area) n=161	7.6
961 (Yakutat Forelands) n=121	6.1
962 (Malaspina Forelands) n=18	7.9
Unuk River n=25	9.6
Stikine River n=117	8.1
COMMUNITY OF RESIDENCE OF HUNTER	
Haines n=103	7.4
Juneau-Douglas n=163	5.6
Ketchikan n=27	8.5
Petersburg n=67	6.4
Sitka n=14	13.2
Skagway n=9	3.8
Wrangell n=78	7.6
Yakutat n=56	5.2
Rest of Southeast n=22	8.5
Other Alaska n=9	7.1
Nonresidents n=18	10.4
Southeast Regional Average	7.9

Table 8. Moose per Day Hunted* for Moose Hunting Areas and Selected Communities in Southeast Alaska, 1984.

Hunt Area/Community	Moose Per Day Hunted	Average Hunter Days Per Moose
HUNT AREA		
901 (Berners Bay) n=8	0.54	1.85
955 (Thomas Bay) n=39	0.11	9.09
956 (Taku River) n=77	0.09	11.11
959 (Haines Area) n=161	0.04	25.00
961 (Yakutat Forelands) n=121	0.08	12.50
962 (Malaspina Forelands) n=18	0.16	6.25
Unuk River n=25	0.05	20.00
Stikine River n=117	0.03	33.33
COMMUNITY OF RESIDENCE OF HUNTER		
Haines n=103	0.04	25.00
Juneau-Douglas n=163	0.09	11.11
Ketchikan n=27	0.05	20.00
Petersburg n=67	0.07	14.29
Sitka n=14	0.21	4.76
Wrangell n=78	0.03	33.33
Yakutat n=56	0.09	11.11
Rest of Southeast n=22	0.09	11.11
Other Alaska n=9	0.02	50.00
Nonresidents n=18	0.05	20.00

* Based on hunter economic survey reported days and harvest report kill data.

Table 9. Other Animals Reported Hunted During Moose Hunting Trips, 1984

Animals Hunted	No. of Trips	(% Total Trips) ^a
Sitka Black-tailed Deer	7	(1)
Black Bear	23	(3)
Brown Bear	19	(3)
Mountain Goat	11	(2)
Grouse	10	(1)
Waterfowl	47	(6)
Wolf	3	*
Other ^b	1	*
Deer, Black Bear	2	*
Deer, Goat	1	*
Deer, Waterfowl	9	*
Deer, Black Bear, Brown Bear	2	*
Deer, Black Bear, Waterfowl	1	*
Deer, Black Bear, Grouse	2	*
Deer, Brown Bear, Waterfowl	2	*
Deer, Goat, Waterfowl	1	*
Deer, Grouse, Waterfowl	2	*
Deer, Grouse, Wolf	1	*
Deer, Black Bear, Brown Bear, Waterfowl	1	*
Deer, Black Bear, Goat, Grouse, Waterfowl, Other	2	*
Deer, Black Bear, Brown Bear, Goat, Wolf	1	*
Black Bear, Brown Bear	5	*
Black Bear, Goat	1	*
Black Bear, Grouse	4	*
Black Bear, Waterfowl	5	*
Black Bear, Brown Bear, Goat	2	*
Black Bear, Brown Bear, Grouse	4	*
Black Bear, Brown Bear, Other	1	*
Black Bear, Brown Bear, Wolf	1	*
Black Bear, Grouse, Waterfowl	2	*
Black Bear, Grouse, Other	1	*
Black Bear, Brown Bear, Goat, Grouse	1	*
Black Bear, Brown Bear, Goat, Waterfowl	1	*
Black Bear, Brown Bear, Grouse, Waterfowl	4	*
Black Bear, Goat, Grouse, Waterfowl	1	*
Black Bear, Grouse, Wolf, Coyote	3	*
Black Bear, Grouse, Waterfowl, Coyote	1	*
Black Bear, Grouse, Waterfowl, Other	1	*
Black Bear, Goat	1	*
Brown Bear, Goat	1	*
Brown Bear, Grouse	1	*
Brown Bear, Waterfowl	8	*
Brown Bear, Wolf	1	*
Brown Bear, Goat, Waterfowl	1	*

(Continued)

Table 9. (Continued)

Animals Hunted	No. of Trips	(% Total Trips) ^a
Goat, Grouse	1	*
Goat, Waterfowl	2	*
Grouse, Waterfowl	6	*
Grouse, Wolf	1	*
Grouse, Waterfowl, Other	1	*
Waterfowl, Wolf	1	*

^a The total number of reported trips was 720 by all hunters.

^b Other means the type of animal hunted was unspecified, except that it was not a deer, black bear, brown bear, goat, grouse, or waterfowl.

* Less than 1%.

Table 10. Other Animals Reported Hunted During Moose Hunting Trips, 1984 (Listing each animal separately when 2 or more animals were reported hunted)

Animals Hunted	No. of Trips	(% Total Trips) ^a
Deer	33	(5)
Black Bear	72	(10)
Brown Bear	56	(8)
Mountain Goat	24	(3)
Grouse	41	(6)
Waterfowl	99	(14)
Wolf	9	(1)
Coyote	4	(1)
Other	7	(1)

* The total number of reported trips was 720 by all hunters.

Table 11. The Relative Importance of Selected Natural Features to Moose Hunters in the Southeast Region, 1984 (n=564).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	68	29	2
Undisturbed natural area	34	42	24
Scenery	14	39	46
Chance to get a trophy animal	5	13	82
Natural boat anchorage or landing	19	35	46
Opportunity to hunt different animals	14	44	42
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	14	44	42
Access by rivers or lakes	32	42	25

Table 12. The Relative Importance of Selected Natural Features to Moose Hunters in Hunt #901 (Berners Bay Area), 1984 (n=7).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	86	14	--
Undisturbed natural area	14	43	43
Scenery	14	29	57
Chance to get a trophy animal	--	14	86
Natural boat anchorage or landing	29	14	57
Opportunity to hunt different animals	--	43	57
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	29	57	14
Access by rivers or lakes	29	57	14

Table 13. The Relative Importance of Selected Natural Features to Moose Hunters in Hunt #955 (Thomas Bay/LeConte Bay Area), 1984 (n=39).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	65	32	3
Undisturbed natural area	21	38	41
Scenery	3	54	43
Chance to get a trophy animal	3	14	84
Natural boat anchorage or landing	40	40	21
Opportunity to hunt different animals	19	35	46
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	16	35	49
Access by rivers or lakes	22	51	27

Table 14. The Relative Importance of Selected Natural features to Moose Hunters in Hunt #956 (Taku River Area), 1984 (n=78).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	61	37	3
Undisturbed natural area	39	45	17
Scenery	19	37	44
Chance to get a trophy animal	4	14	82
Natural boat anchorage or landing	30	37	33
Opportunity to hunt different animals	10	44	46
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	13	54	33
Access by rivers or lakes	53	34	13

Table 15. The Relative Importance of Selected Natural Features to Moose Hunters in Hunt #959 (Haines Area), 1984 (n=168).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	75	24	2
Undisturbed natural area	31	39	30
Scenery	12	33	55
Chance to get a trophy animal	4	12	85
Natural boat anchorage or landing	6	32	63
Opportunity to hunt different animals	19	43	37
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	17	33	50
Access by rivers or lakes	28	45	27

Table 16. The Relative Importance of Selected Natural Features to Moose Hunters in Hunt #961 (Yakutat Forelands), 1984 (n=123).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	79	19	2
Undisturbed natural area	34	47	19
Scenery	12	39	49
Chance to get a trophy animal	7	15	78
Natural boat anchorage or landing	9	29	62
Opportunity to hunt different animals	14	46	41
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	11	47	42
Access by rivers or lakes	18	43	39

Table 17. The Relative Importance of Selected Natural Features to Moose Hunters in Hunt #962 (Yakutat Bay/Malaspina Glacier Area), 1984 (n=19).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	72	28	--
Undisturbed natural area	33	44	22
Scenery	22	44	33
Chance to get a trophy animal	--	22	78
Natural boat anchorage or landing	33	28	39
Opportunity to hunt different animals	11	56	33
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	7	39	56
Access by rivers or lakes	28	44	28

Table 18. The Relative Importance of Selected Natural Features to Moose Hunters in the Unuk River Area Hunt, 1984 (n=25).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	40	52	8
Undisturbed natural area	50	33	17
Scenery	22	44	35
Chance to get a trophy animal	8	4	88
Natural boat anchorage or landing	30	35	35
Opportunity to hunt different animals	--	56	44
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	21	42	38
Access by rivers or lakes	25	58	17

Table 19. The Relative Importance of Selected Natural Features to Moose Hunters in the Stikine River Area Hunt, 1984 (n=119).

Natural Feature	% of Ratings		
	Very Important	Important	Does not matter
Game available	59	38	3
Undisturbed natural area	38	40	22
Scenery	16	44	40
Chance to get a trophy animal	5	14	81
Natural boat anchorage or landing	26	46	28
Opportunity to hunt different animals	12	44	44
Opportunity for other types of recreation besides hunting (clamming, fishing, photography, etc.)	15	51	34
Access by rivers or lakes	43	37	21

Table 20. Relative Importance of Selected Human Activities to Moose Hunters in the Southeast Region, 1984 (n=564).

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very Important</u>	<u>Important</u>		<u>Very Important</u>	<u>Important</u>
How far you have to travel	23	45	26	5	2
How many other people you think will be there					
a. So many that you will feel crowded	4	3	7	30	56
b. So few you can feel you're getting away from it all	44	37	17	2	1
Road access	8	22	42	13	15
Trail access	8	31	49	6	6
Developed campground	2	4	56	16	22
Cabins available	7	22	55	7	9
Developed boat anchorage	3	15	63	9	10
Developed boat launch area	2	10	66	9	12
Timber harvest activities					
a. Clearcuts	4	12	46	15	24
b. New logging	2	5	41	24	28
c. Log storage in a bay	1	3	61	16	18
Mining activities	1	3	56	21	20
Within one hours travel of a town, village or city	5	18	64	7	7

Table 21. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #901 (Berners Bay Area) (n=7)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does</u> <u>Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very</u> Important	Important		<u>Very</u> Important	Important
How far you have to travel	57	29	14	--	--
How many other people you think will be there					
a. So many that you will feel crowded	--	--	--	14	86
b. So few you can feel you're getting away from it all	43	29	29	--	--
Road access	--	14	71	--	14
Trail access	14	--	86	--	--
Developed campground	--	14	57	--	29
Cabins available	--	14	57	--	29
Developed boat anchorage	--	29	43	--	29
Developed boat launch area	14	14	57	14	--
Timber harvest activities					
a. Clearcuts	--	--	43	29	29
b. New logging	--	--	43	14	42
c. Log storage in a bay	--	--	43	29	29
Mining activities	--	--	50	33	17
Within one hours travel of a town, village or city	--	29	71	--	--

Table 22. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #955 (Thomas Bay Le Conte Bay Area) (n=39)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very Important</u>	<u>Important</u>		<u>Very Important</u>	<u>Important</u>
How far you have to travel	24	32	22	11	11
How many other people you think will be there					
a. So many that you will feel crowded	5	3	8	29	55
b. So few you can feel you're getting away from it all	32	44	18	--	3
Road access	8	29	45	11	8
Trail access	11	26	54	6	3
Developed campground	--	--	60	14	27
Cabins available	5	19	65	3	8
Developed boat anchorage	16	24	51	3	5
Developed boat launch area	3	3	86	3	6
Timber harvest activities					
a. Clearcuts	16	11	46	11	16
b. New logging	11	8	43	16	22
c. Log storage in a bay	8	3	65	19	5
Mining activities		3	64	22	11
Within one hours travel of a town, village or city	11	17	61	11	--

Table 23. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #956 (Taku River Area) (n=78)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does</u> <u>Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very</u> <u>Important</u>	<u>Important</u>		<u>Very</u> <u>Important</u>	<u>Important</u>
How far you have to travel	20	53	20	5	1
How many other people you think will be there					
a. So many that you will feel crowded	7	4	8	37	45
b. So few you can feel you're getting away from it all	43	34	16	7	--
Road access	4	12	42	18	24
Trail access	5	23	54	5	13
Developed campground	1	5	50	15	28
Cabins available	8	27	45	6	14
Developed boat anchorage	1	20	57	11	12
Developed boat launch area	--	19	55	10	16
Timber harvest activities					
a. Clearcuts	1	7	43	20	29
b. New logging	1	1	38	27	32
c. Log storage in a bay	--	3	50	24	23
Mining activities	--	1	54	22	22
Within one hours travel of a town, village or city	4	22	60	5	9

Table 24. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #959 (Haines Area) (n=168)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very Important</u>	<u>Important</u>		<u>Very Important</u>	<u>Important</u>
How far you have to travel	22	46	26	4	3
How many other people you think will be there					
a. So many that you will feel crowded	4	2	6	30	58
b. So few you can feel you're getting away from it all	46	34	19	1	--
Road access	17	35	33	8	8
Trail access	12	36	43	5	4
Developed campground	1	4	62	11	22
Cabins available	1	11	70	9	9
Developed boat anchorage	1	12	68	8	11
Developed boat launch area	2	15	63	8	12
Timber harvest activities					
a. Clearcuts	4	18	46	8	23
b. New logging	4	4	44	24	24
c. Log storage in a bay	1	1	69	11	17
Mining activities	1	5	59	17	18
Within one hours travel of a town, village or city	2	16	74	4	5

Table 25. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #961 (Yakutat Area) (n=123)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does</u> <u>Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very</u> Important	Important		<u>Very</u> Important	Important
How far you have to travel	22	47	23	7	1
How many other people you think will be there					
a. So many that you will feel crowded	3	5	3	27	61
b. So few you can feel you're getting away from it all	43	41	15	1	--
Road access	8	25	44	10	13
Trail access	7	40	45	6	3
Developed campground	5	3	54	24	13
Cabins available	11	25	51	8	4
Developed boat anchorage	3	9	74	8	7
Developed boat launch area	2	8	74	9	8
Timber harvest activities					
a. Clearcuts	3	11	41	17	27
b. New logging	2	7	36	25	31
c. Log storage in a bay	2	4	51	19	24
Mining activities	1	2	52	22	23
Within one hours travel of a town, village or city	7	23	55	9	7

Table 26. Relative Importance of Selected Human Activities to Moose Hunters in Hunt #962 (Yakutat Bay/Malaspina Glacier Area) (n=19)

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does</u> <u>Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very</u> Important	Important		<u>Very</u> Important	Important
How far you have to travel	22	33	44	--	--
How many other people you think will be there					
a. So many that you will feel crowded	6	--	--	47	47
b. So few you can feel you're getting away from it all	39	56	--	--	6
Road access	11	6	39	22	22
Trail access	6	22	50	11	11
Developed campground	--	--	44	22	33
Cabins available	11	11	67	--	11
Developed boat anchorage	--	6	67	11	17
Developed boat launch area	6	--	61	11	22
Timber harvest activities					
a. Clearcuts	--	11	39	33	17
b. New logging	--	11	28	44	17
c. Log storage in a bay	--	6	61	17	17
Mining activities	6	6	39	33	17
Within one hours travel of a town, village or city	--	--			
	7	23	77	6	6

Table 27. Relative Importance of Selected Human Activities to Moose Hunters in Unuk River Area Hunt (n=25).

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does</u> <u>Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very</u> Important	Important		<u>Very</u> Important	Important
How far you have to travel	17	42	38	4	--
How many other people you think will be there					
a. So many that you will feel crowded	--	5	14	27	55
b. So few you can feel you're getting away from it all	48	26	17	4	4
Road access	--	4	58	17	21
Trail access	--	13	63	17	8
Developed campground	--	4	46	29	21
Cabins available	--	17	63	13	8
Developed boat anchorage	12	12	56	16	4
Developed boat launch area	--	4	61	26	9
Timber harvest activities					
a. Clearcuts	4	4	46	21	25
b. New logging	--	4	42	25	29
c. Log storage in a bay	--	4	54	25	17
Mining activities	--	4	46	38	13
Within one hours travel of a town, village or city	--	4	70	9	17

Table 28. Relative Importance of Selected Human Activities to Moose Hunters in the Stikine River Area (n=119).

Human Activities	Percentage of Rating				
	<u>Causes Me To Choose</u>		<u>Does Not Matter</u>	<u>Causes Me To Avoid</u>	
	<u>Very Important</u>	<u>Important</u>		<u>Very Important</u>	<u>Important</u>
How far you have to travel	24	42	29	3	2
How many other people you think will be there					
a. So many that you will feel crowded	1	4	11	28	56
b. So few you can feel you're getting away from it all	45	36	19	1	--
Road access	1	14	48	18	19
Trail access	6	30	49	7	8
Developed campground	2	7	55	14	23
Cabins available	15	35	38	4	7
Developed boat anchorage	4	26	54	10	11
Developed boat launch area	5	6	66	10	14
Timber harvest activities					
a. Clearcuts	2	11	52	14	22
b. New logging	--	5	45	22	29
c. Log storage in a bay	--	4	70	12	14
Mining activities	--	2	61	16	22
Within one hours travel of a town, village or city	7	16	60	7	9

Table 29. Age Distribution of Sampled Moose Hunters in the Southeast Region and by Hunt Area, 1984 (n=578)

Age Category	Percentage								
	South- east Region	Berners Bay (#901)	Thomas Bay (#955)	Taku River (#956)	Haines (#959)	Yakutat Fore- lands (#961)	Malaspina Forelands (#962)	Unuk River	Stikine River
(1) Less than 25	11	0	0	12	14	10	5	4	15
(2) 25 to 35	32	38	26	33	36	32	26	44	29
(3) 36 to 45	25	25	36	25	20	23	47	40	27
(4) 46 to 55	14	38	13	17	13	17	5	8	14
(5) 56 to 65	11	0	18	7	12	16	16	0	9
(6) 66 to 75	3	0	8	4	5	2	0	0	4
(7) Over 75	1	0	0	1	0	1	0	4	3
Mean and Meadian Category	3	3	3	3	3	3	3	3	3

Table 30. Distribution of Total Family Income (before taxes) and Household size of Sampled Moose Hunters in the Southeast Region and by Hunt Area, 1984 (n=578).

Income Category	Southeast Region	Berners Bay (#901)	Thomas Bay (#955)	Percentage					
				Taku River (#956)	Haines (#959)	Yakutat Forelands (#961)	Malaspina Forelands (962)	Unuk River	Stikine River
(1) Less than \$10,000	10	0	0	8	17	5	0	0	15
(2) \$10,000 to \$19,999	13	0	15	5	16	12	6	14	15
(3) \$20,000 to \$29,999	16	25	9	17	17	13	6	24	19
(4) \$30,000 to \$39,999	17	25	12	11	17	17	13	10	23
(5) \$40,000 to \$49,999	14	13	9	13	12	13	31	29	15
(6) \$50,000 to \$59,999	13	12	18	10	12	18	19	19	7
(7) \$60,000 to \$69,999	6	13	6	16	3	10	0	5	2
(8) \$70,000 to \$79,999	4	0	12	8	2	3	19	0	1
(9) \$80,000 or more	7	12	15	2	4	10	6	0	4
Income Category:									
Mean	4	5	5	5	4	5	6	4	4
Median	4	5	6	5	3	5	5	5	4
Mean Household Size (Persons)	3.4	3.0	3.1	2.9	3.5	3.6	3.3	3.6	3.3

Table 31. Percentage of Trips Taken by Moose Hunter Survey Respondents Using Mode(s) of Transportation by Selected Communities of Residence in Southeast Alaska, 1984

Mode(s) Transportation	Haines	Juneau- Douglas	Petersburg	Wrangell	Yakutat	All
Boat	16	31	70	91	10	39
Car or Truck	37	*	0	*	39	12
Plane	0	7	4	0	13	9
Walking	7	0	0	0	0	2
Boat, Car or Truck	39	2	8	*	22	13
Boat, Plane	0	5	7	*	6	8
Car or Truck, Ferry	0	13	0	0	0	4
Car or Truck, Bicycle	0	*	*	0	0	2
Boat, Car, Ferry	0	9	0	0	0	3
Other Combination of Modes	2	7	10	*	10	8
Sample Size ^a	103(67)	162(89)	65(88)	77(68)	55(62)	564(64)

* Only 1 or 2 trips reported using this mode.

^a Percentage of trips by respondents for which the mode(s) of transportation was reported as shown in brackets.

Table 32. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Southeast Alaska Region, 1984 (n=562)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	70.73	120.72	41,167	341
b. By charter boat	0.69	7.14	400	56
c. By private car or truck	18.98	45.64	11,044	242
d. By rental car or truck	0.89	8.63	521	60
e. By private plane (non-charter)	18.39	101.96	10,706	105
f. By air charter	30.62	153.64	17,822	116
g. By commercial airline	41.83	215.42	24,343	113
h. By ferry	8.76	54.26	5,100	94
i. By taxi or bus	0.07	0.82	40	49
j. Other	1.48	---	829	---
2. License and tag fees	24.38	24.38	13,704	562
3. Guiding services	15.81	139.39	9,200	66
4. Restaurants	11.14	42.41	6,488	153
5. Lodging	10.38	51.65	6,043	117
6. Groceries (includes beverages)	92.57	109.29	53,878	493
7. Taxidermy	11.32	83.42	6,590	79
8. Butchering	11.79	44.55	6,861	154
9. Ammunition	16.77	23.98	9,759	407
10. Film and developing	8.58	18.02	4,992	277
11. Equipment				
a. Guns, scope, camera gear, binoculars	161.52	284.87	94,006	330
b. Camping equipment	49.89	96.15	29,036	302
c. Clothing	47.15	80.24	27,441	342
d. Books and maps	3.68	10.15	2,142	211
e. Other	61.90	---	34,790	---
Total	754.30	---	423,914	562
Average per day	196.08	---	108,822	562
Average per trip	677.39	---	377,307	562
Total (expanded)*	756.31*	---	847,828*	1,121*

* Includes expansion for undersampling bias for harvest ticket hunts.

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 33. Estimated Moose Hunter (Respondent) Expenditures (\$) by Category for Berners Bay (Hunt #1), 1984 (n=8)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	99.38	113.57	795	7
b. By charter boat	---	---	---	---
c. By private car or truck	10.25	20.50	82	4
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	25.00	200.00	200	1
f. By air charter	---	---	---	---
g. By commercial airline	---	---	---	---
h. By ferry	57.75	406.00	406	1
i. By taxi or bus	---	---	---	---
j. Other	---	---	---	---
2. License and tag fees	12.00	12.00	96	8
3. Guiding services	---	---	---	---
4. Restaurants	1.88	15.00	15	1
5. Lodging	---	---	---	---
6. Groceries (includes beverages)	98.13	130.83	785	6
7. Taxidermy	---	---	---	---
8. Butchering	60.63	97.00	485	5
9. Ammunition	14.37	19.17	115	6
10. Film and developing	6.88	11.00	55	5
11. Equipment				
a. Guns, scope, camera gear, binoculars	147.50	590.00	1,180	2
b. Camping equipment	98.75	263.33	790	3
c. Clothing	47.50	126.67	380	3
d. Books and maps	3.38	13.50	27	2
e. Other	---	---	---	---
Total	676.38	---	5,411	8
Average per day	365.70	---	2,926	8
Average per trip	547.81	---	4,383	8

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 34. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Thomas Bay (Hunt #955), 1984 (n=39)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	57.43	74.67	2,240	30
b. By charter boat	5.13	100.00	200	2
c. By private car or truck	1.28	12.50	50	4
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	10.38	81.00	405	5
f. By air charter	20.77	202.50	810	4
g. By commercial airline	6.15	80.00	240	3
h. By ferry	---	---	---	---
i. By taxi or bus	---	---	---	---
j. Other	1.15	---	45	---
2. License and tag fees	12.00	12.00	468	39
3. Guiding services	---	---	---	---
4. Restaurants	---	---	---	---
5. Lodging	2.82	13.75	110	8
6. Groceries (includes beverages)	116.54	116.54	4,545	39
7. Taxidermy	2.56	16.67	100	6
8. Butchering	13.46	52.50	525	10
9. Ammunition	17.00	23.68	663	28
10. Film and developing	3.23	10.50	126	12
11. Equipment				
a. Guns, scope, camera gear, binoculars	167.82	327.50	6,545	0
b. Camping equipment	34.62	79.41	1,350	7
c. Clothing	17.31	45.00	675	5
d. Books and maps	1.28	4.17	50	2
e. Other	2.56	100.00	---	1
Total	493.51	---	19,247	39
Average per day	155.21	---	6,053	39
Average per trip	461.45	---	17,997	39

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 35. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Taku River (Hunt #956), 1984 (n=78)

Category	Average ^a (all)	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	87.83	112.92	7,114	63
b. By charter boat	---	---	---	---
c. By private car or truck	2.60	12.41	211	17
d. By rental car or truck	0.06	1.25	5	4
e. By private plane (non-charter)	33.64	170.31	2,725	16
f. By air charter	71.85	323.33	5,820	18
g. By commercial airline	10.86	176.00	880	5
h. By ferry	---	---	---	---
i. By taxi or bus	---	---	---	---
j. Other	---	---	---	---
2. License and tag fees	16.46	16.46	1,284	78
3. Guiding services	---	---	---	---
4. Restaurants	---	---	---	---
5. Lodging	0.12	1.67	10	6
6. Groceries (includes beverages)	103.67	113.47	8,397	74
7. Taxidermy	3.08	35.71	250	7
8. Butchering	23.05	74.68	1,867	25
9. Ammunition	16.60	22.05	1,345	61
10. Film and developing	9.60	18.09	778	43
11. Equipment				
a. Guns, scope, camera gear, binoculars	149.68	257.96	12,124	47
b. Camping equipment	54.00	95.09	4,374	46
c. Clothing	53.25	78.42	4,313	55
d. Books and maps	4.12	10.44	334	32
e. Other	87.63	---	6,835	---
Total	752.13	---	58,666	78
Average per day	191.87	---	14,582	78
Average per trip	663.91	---	50,457	78

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 36. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Haines Area (Hunt #959), 1984 (n=161)

Category	Average (all) ^a	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	15.72	37.74	2,642	70
b. By charter boat	---	---	---	---
c. By private car or truck	48.18	62.75	8,095	129
d. By rental car or truck	1.36	8.85	230	26
e. By private plane (non-charter)	3.09	20.80	520	25
f. By air charter	2.32	16.25	390	24
g. By commercial airline	10.12	70.83	1,700	24
h. By ferry	26.64	72.19	4,476	62
i. By taxi or bus	---	---	---	---
j. Other	0.13	---	22	---
2. License and tag fees	16.32	16.32	2,628	161
3. Guiding services	---	---	---	---
4. Restaurants	14.69	37.39	2,468	66
5. Lodging	8.56	35.98	1,439	40
6. Groceries (includes beverages)	58.78	80.28	9,875	123
7. Taxidermy	1.19	7.14	200	28
8. Butchering	5.21	23.02	875	38
9. Ammunition	15.14	23.77	2,543	107
10. Film and developing	5.46	13.89	917	66
11. Equipment				
a. Guns, scope, camera gear, binoculars	121.40	216.97	20,395	94
b. Camping equipment	30.24	61.27	5,081	83
c. Clothing	36.07	63.79	6,060	95
d. Books and maps	1.90	5.16	320	62
e. Other	17.12	---	2,756	---
Total	476.05	---	76,644	161
Average per day	108.41	---	17,129	158
Average per trip	405.93	---	64,949	160

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 37. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Yakutat Forelands (Hunt #961), 1984 (n=120)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	20.05	57.37	2,467	43
b. By charter boat	---	---	---	---
c. By private car or truck	19.52	36.94	2,401	65
d. By rental car or truck	2.33	15.89	286	18
e. By private plane (non-charter)	41.79	138.92	5,140	37
f. By air charter	53.92	157.90	6,632	42
g. By commercial airline	126.37	277.55	15,543	56
h. By ferry	0.08	0.85	11	13
i. By taxi or bus	---	---	---	---
j. Other	0.48	---	57	---
2. License and tag fees	41.00	41.00	4,920	120
3. Guiding services	---	---	---	---
4. Restaurants	24.88	62.45	3,060	49
5. Lodging	24.62	84.11	3,028	36
6. Groceries (includes beverages)	86.43	96.65	10,631	110
7. Taxidermy	17.11	110.79	2,105	19
8. Butchering	16.76	54.26	2,062	38
9. Ammunition	16.62	21.52	2,044	95
10. Film and developing	11.14	20.76	1,370	66
11. Equipment				
a. Guns, scope, camera gear, binoculars	178.62	300.96	21,970	93
b. Camping equipment	77.09	137.42	9,482	69
c. Clothing	61.08	92.75	7,513	81
d. Books and maps	7.67	20.09	944	47
e. Other	64.67	---	7,760	---
Total	945.22	---	113,426	120
Average per day	250.61	---	29,822	119
Average per trip	825.65	---	98,252	119

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 38. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Malaspina (Hunt #962), 1984 (n=18)

Category	Average ^a (all)	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	315.26	1,996.67	5,990	3
b. By charter boat	10.52	200.00	200	1
c. By private car or truck	1.15	22.00	22	1
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	71.05	225.00	1,350	6
f. By air charter	77.89	164.44	1,480	9
g. By commercial airline	197.90	470.00	3,760	8
h. By ferry	---	---	---	---
i. By taxi or bus	1.05	20.00	20	1
j. Other	8.33	150.00	150	1
2. License and tag fees	70.00	70.00	1,260	18
3. Guiding services	326.32	1,550.00	6,200	4
4. Restaurants	11.05	52.50	210	4
5. Lodging	13.16	83.33	250	5
6. Groceries (includes beverages)	95.79	113.75	1,820	6
7. Taxidermy	26.32	250.00	500	2
8. Butchering	8.94	28.33	170	6
9. Ammunition	19.42	23.06	369	9
10. Film and developing	14.94	18.93	284	10
11. Equipment				
a. Guns, scope, camera gear, binoculars	300.00	518.18	5,700	1
b. Camping equipment	51.58	98.00	980	10
c. Clothing	89.21	154.09	1,695	1
d. Books and maps	2.37	11.25	45	4
e. Other	2.78	50.00	50	1
Total	1,805.83	---	32,505	18
Average per day	710.31	---	12,786	18
Average per trip	1,774.67	---	31,944	18

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 39. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Unuk River 1984 (n=24)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	276.60	300.65	6,915	23
b. By charter boat	---	---	---	---
c. By private car or truck	1.00	8.33	25	3
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	10.00	62.50	250	4
f. By air charter	50.00	312.50	1,250	4
g. By commercial airline	48.00	400.00	1,200	3
h. By ferry	0.80	10.00	20	2
i. By taxi or bus	0.80	10.00	20	2
j. Other	---	---	---	---
2. License and tag fees	12.00	12.00	288	24
3. Guiding services	120.00	1,500.00	3,000	2
4. Restaurants	5.00	41.67	125	3
5. Lodging	4.00	50.00	100	2
6. Groceries (includes beverages)	81.43	130.95	2,750	21
7. Taxidermy	125.40	1,045.00	3,135	3
8. Butchering	2.72	17.00	68	4
9. Ammunition	31.28	37.24	782	21
10. Film and developing	17.72	26.06	443	17
11. Equipment				
a. Guns, scope, camera gear, binoculars	195.36	325.60	4,884	15
b. Camping equipment	24.20	46.54	605	13
c. Clothing	32.00	88.89	800	9
d. Books and maps	2.20	5.00	55	11
e. Other	68.58	---	1,645	2
Total	1,181.67	---	28,360	24
Average per day	217.35	---	5,216	24
Average per trip	1,165.17	---	27,964	24

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 40. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Stikine River 1984 (n=114)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	109.28	300.65	13,004	23
b. By charter boat	---	---	---	---
c. By private car or truck	1.33	8.33	158	3
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	0.97	62.50	116	4
f. By air charter	12.10	312.50	1,440	4
g. By commercial airline	8.57	400.00	1,020	3
h. By ferry	1.57	10.00	187	2
i. By taxi or bus	---	10.00	---	2
j. Other	4.87	---	555	---
2. License and tag fees	24.21	24.21	2,760	114
3. Guiding services	---	1,500.00	3,000	2
4. Restaurants	5.12	41.67	610	3
5. Lodging	9.29	50.00	1,106	2
6. Groceries (includes beverages)	126.68	130.95	15,075	21
7. Taxidermy	2.52	1,045.00	300	3
8. Butchering	6.80	17.00	809	4
9. Ammunition	15.95	37.24	1,898	21
10. Film and developing	8.56	26.06	1,019	17
11. Equipment				
a. Guns, scope, camera gear, binoculars	178.22	325.60	21,208	15
b. Camping equipment	53.56	46.53	6,374	13
c. Clothing	50.46	88.89	6,005	9
d. Books and maps	3.08	5.00	367	11
e. Other	137.23	---	15,644	---
Total	812.76	---	92,655	114
Average per day	185.78	---	20,993	113
Average per trip	744.37	---	84,113	113

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 41. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Other Alaska Hunters, 1984 (n=9)

Category	Average (all) ^a	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	3.89	11.67	35	3
b. By charter boat	---	---	---	---
c. By private car or truck	63.33	142.50	570	4
d. By rental car or truck	8.89	40.00	80	2
e. By private plane (non-charter)	13.89	41.67	125	3
f. By air charter	52.22	117.50	470	4
g. By commercial airline	113.89	170.83	1,025	6
h. By ferry	3.89	17.50	35	2
i. By taxi or bus	---	---	---	---
j. Other	---	---	---	---
2. License and tag fees	12.00	12.00	108	9
3. Guiding services	---	---	---	---
4. Restaurants	20.56	46.25	185	4
5. Lodging	11.11	50.00	100	2
6. Groceries (includes beverages)	77.22	86.88	695	8
7. Taxidermy	---	---	---	---
8. Butchering	---	---	---	---
9. Ammunition	15.89	20.43	143	7
10. Film and developing	11.00	14.14	99	7
11. Equipment				
a. Guns, scope, camera gear, binoculars	163.89	245.83	1,475	6
b. Camping equipment	76.67	86.25	690	8
c. Clothing	50.00	64.29	450	7
d. Books and maps	8.56	15.40	77	5
e. Other	---	---	---	---
Total	706.89	---	6,362	9
Average per day	171.99	---	1,548	9
Average per trip	706.89	---	6,362	9

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 42. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Haines Hunters, 1984 (n=104)

Category	Average (all) ^a	Average _b (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	15.25	31.64	1,677	53
b. By charter boat	---	---	---	---
c. By private car or truck	38.48	50.39	4,233	84
d. By rental car or truck	0.45	2.50	50	20
e. By private plane (non-charter)	0.27	14.71	250	17
f. By air charter	---	---	---	---
g. By commercial airline	---	---	---	---
h. By ferry	0.50	3.06	55	18
i. By taxi or bus	---	---	---	---
j. Other	0.12	---	12	---
2. License and tag fees	12.00	12.00	1,248	104
3. Guiding services	---	---	---	---
4. Restaurants	2.09	8.85	230	26
5. Lodging	0.73	3.64	80	22
6. Groceries (includes beverages)	38.60	55.87	4,246	76
7. Taxidermy	1.82	9.09	200	22
8. Butchering	4.27	16.79	470	28
9. Ammunition	13.85	21.77	1,524	70
10. Film and developing	3.15	8.65	346	40
11. Equipment				
a. Guns, scope, camera gear, binoculars	101.85	183.66	11,203	61
b. Camping equipment	26.78	52.61	2,946	56
c. Clothing	29.68	55.34	3,265	59
d. Books and maps	1.44	3.76	158	42
e. Other	12.77	---	1,328	---
Total	351.28	---	36,533	104
Average per day	73.98	---	7,472	101
Average per trip	285.10	---	29,365	103

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 43. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Juneau-Douglas Hunters, 1984 (n=163)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	53.35	100.10	8,909	89
b. By charter boat	---	---	---	---
c. By private car or truck	19.58	49.55	3,270	66
d. By rental car or truck	0.03	0.50	5	10
e. By private plane (non-charter)	40.24	168.00	6,720	40
f. By air charter	57.81	229.88	9,655	42
g. By commercial airline	32.10	144.89	5,361	37
h. By ferry	26.36	107.37	4,402	41
i. By taxi or bus	---	---	---	---
j. Other	0.06	10.00	10	1
2. License and tag fees	12.00	12.00	1,956	163
3. Guiding services	---	---	---	---
4. Restaurants	14.08	42.76	2,352	55
5. Lodging	12.14	63.34	2,027	32
6. Groceries (includes beverages)	105.65	117.62	17,643	150
7. Taxidermy	2.10	21.88	350	16
8. Butchering	24.32	71.26	4,062	57
9. Ammunition	16.62	22.75	2,775	122
10. Film and developing	9.56	17.94	1,597	89
11. Equipment				
a. Guns, scope, camera gear, binoculars	155.85	282.90	26,027	92
b. Camping equipment	52.22	99.10	8,721	88
c. Clothing	49.10	76.64	8,200	107
d. Books and maps	3.41	9.34	570	61
e. Other	57.10	---	9,308	---
Total	760.25	---	123,920	163
Average per day	189.41	---	80,495	161
Average per trip	678.40	---	109,223	161

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 44. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Ketchikan Hunters, 1984 (n=27)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	152.14	327.69	4,260	13
b. By charter boat	---	---	---	---
c. By private car or truck	0.71	20.00	20	1
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	48.21	225.00	1,350	6
f. By air charter	58.21	326.00	1,630	5
g. By commercial airline	59.61	278.17	1,669	6
h. By ferry	---	---	---	---
i. By taxi or bus	0.71	20.00	20	1
j. Other	5.56	150.00	150	1
2. License and tag fees	12.00	12.00	324	27
3. Guiding services	---	---	---	---
4. Restaurants	5.89	27.50	165	6
5. Lodging	5.18	48.33	145	3
6. Groceries (includes beverages)	124.57	139.52	3,488	25
7. Taxidermy	---	---	---	---
8. Butchering	2.14	20.00	60	3
9. Ammunition	22.89	29.14	641	22
10. Film and developing	12.39	19.28	347	18
11. Equipment				
a. Guns, scope, camera gear, binoculars	146.07	255.63	4,090	16
b. Camping equipment	28.04	52.33	785	15
c. Clothing	32.50	65.00	910	14
d. Books and maps	1.79	5.00	50	10
e. Other	63.89	---	1,725	---
Total	808.48	---	21,829	27
Average per day	166.46	---	4,495	27
Average per trip	767.67	---	20,727	27

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 45. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Non-Resident Hunters, 1984 (n=20)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	101.43	304.29	2,130	7
b. By charter boat	---	---	---	---
c. By private car or truck	26.52	69.63	557	8
d. By rental car or truck	2.38	25.00	50	2
e. By private plane (non-charter)	35.71	187.50	750	4
f. By air charter	52.38	157.14	1,100	7
g. By commercial airline	569.52	797.33	11,960	15
h. By ferry	0.95	10.00	20	2
i. By taxi or bus	---	---	---	---
j. Other	---	---	---	---
2. License and tag fees	360.00	360.00	7,200	20
3. Guiding services	295.24	1,550.00	6,200	4
4. Restaurants	99.52	174.17	2,090	12
5. Lodging	82.86	193.33	1,740	9
6. Groceries (includes beverages)	130.24	160.88	2,735	17
7. Taxidermy	31.43	220.00	660	3
8. Butchering	15.71	110.00	330	3
9. Ammunition	18.81	30.38	395	13
10. Film and developing	29.05	50.83	610	12
11. Equipment				
a. Guns, scope, camera gear, binoculars	271.43	356.25	5,700	16
b. Camping equipment	75.00	143.18	1,575	11
c. Clothing	155.95	181.94	3,275	18
d. Books and maps	29.29	102.50	615	6
e. Other	5.00	100.00	100	1
Total	2,489.60	---	49,792	20
Average per day	589.87	---	11,797	20
Average per trip	2,351.10	---	47,022	20

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 46. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Petersburg Hunters, 1984 (n=66)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	69.80	85.31	4,607	54
b. By charter boat	3.03	33.33	200	6
c. By private car or truck	2.05	12.27	135	11
d. By rental car or truck	---	---	---	3
e. By private plane (non-charter)	6.14	50.63	405	8
f. By air charter	18.94	156.25	1,250	8
g. By commercial airline	2.64	43.50	174	4
h. By ferry	---	---	---	3
i. By taxi or bus	---	---	---	3
j. Other	0.68	---	45	---
2. License and tag fees	12.00	12.00	792	66
3. Guiding services	---	---	---	7
4. Restaurants	5.76	34.55	380	11
5. Lodging	8.30	39.14	548	14
6. Groceries (includes beverages)	107.80	116.64	7,115	61
7. Taxidermy	1.52	10.00	100	10
8. Butchering	8.94	39.33	590	15
9. Ammunition	17.89	24.60	1,181	48
10. Film and developing	6.62	17.48	437	25
11. Equipment				
a. Guns, scope, camera gear, binoculars	295.91	488.25	19,530	40
b. Camping equipment	62.50	133.06	4,125	31
c. Clothing	48.03	96.06	3,170	33
d. Books and maps	3.44	9.08	227	25
e. Other	95.45	---	6,300	---
Total	777.44	---	51,311	66
Average per day	237.60	---	15,681	66
Average per trip	728.15	---	47,330	65

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 47. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Sitka Hunters, 1984 (n=13)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	25.00	50.00	350	7
b. By charter boat	---	---	---	---
c. By private car or truck	5.14	12.00	72	6
d. By rental car or truck	9.50	22.17	133	6
e. By private plane (non-charter)	11.86	23.71	166	7
f. By air charter	19.29	45.00	270	6
g. By commercial airline	127.00	197.56	1,778	9
h. By ferry	---	---	---	---
i. By taxi or bus	---	---	---	---
j. Other	---	---	---	---
2. License and tag fees	12.00	12.00	156	13
3. Guiding services	---	---	---	---
4. Restaurants	23.93	47.86	335	7
5. Lodging	32.71	65.43	458	7
6. Groceries (includes beverages)	82.14	88.46	1,150	13
7. Taxidermy	84.64	237.00	1,185	5
8. Butchering	9.29	18.57	130	7
9. Ammunition	9.64	21.92	285	13
10. Film and developing	222.50	13.50	135	10
11. Equipment				
a. Guns, scope, camera gear, binoculars	222.50	445.00	3,115	7
b. Camping equipment	113.93	159.50	1,595	10
c. Clothing	92.86	108.33	1,300	12
d. Books and maps	7.79	13.63	109	8
e. Other	10.77	---	140	---
Total	989.38	---	12,862	13
Average per day	405.27	---	5,269	13
Average per trip	980.54	---	12,747	13

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 48. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Skagway Hunters, 1984 (n=9)

Category	Average ^a (all)	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	7.22	16.25	65	4
b. By charter boat	---	---	---	1
c. By private car or truck	26.67	34.28	240	7
d. By rental car or truck	11.11	50.00	100	2
e. By private plane (non-charter)	---	---	---	1
f. By air charter	---	---	---	1
g. By commercial airline	---	---	---	1
h. By ferry	35.56	45.71	320	7
i. By taxi or bus	---	---	---	1
j. Other	---	---	---	---
2. License and tag fees	12.00	12.00	108	9
3. Guiding services	---	---	---	1
4. Restaurants	28.44	36.57	256	7
5. Lodging	26.33	59.25	237	4
6. Groceries (includes beverages)	71.11	91.43	640	7
7. Taxidermy	---	---	---	1
8. Butchering	---	---	---	1
9. Ammunition	10.89	16.33	98	6
10. Film and developing	1.11	5.00	10	2
11. Equipment				
a. Guns, scope, camera gear, binoculars	58.22	87.33	524	6
b. Camping equipment	---	---	---	3
c. Clothing	28.33	42.00	210	5
d. Books and maps	0.33	0.75	3	4
e. Other	15.56	---	140	---
Total	327.89	---	2,951	9
Average per day	102.91	---	926	9
Average per trip	324.11	---	2,917	9

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 49. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Wrangell Hunters, 1984 (n=74)

Category	Average (all) ^a	Average (users) ^b	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	103.68	120.71	8,087	67
b. By charter boat	---	---	---	---
c. By private car or truck	1.21	8.54	94	11
d. By rental car or truck	---	---	---	---
e. By private plane (non-charter)	0.64	8.33	50	6
f. By air charter	1.54	17.14	120	7
g. By commercial airline	3.21	41.67	250	6
h. By ferry	1.82	17.75	142	8
i. By taxi or bus	---	---	---	---
j. Other	7.50	---	555	---
2. License and tag fees	12.00	12.00	888	74
3. Guiding services	---	---	---	---
4. Restaurants	1.28	9.09	100	11
5. Lodging	5.36	29.86	418	14
6. Groceries (includes beverages)	129.41	144.20	10,094	70
7. Taxidermy	3.85	33.33	300	9
8. Butchering	9.54	33.82	744	22
9. Ammunition	14.96	25.93	1,167	45
10. Film and developing	7.96	17.25	621	47
11. Equipment				
a. Guns, scope, camera gear, binoculars	69.53	135.58	5,423	40
b. Camping equipment	33.71	64.12	2,629	41
c. Clothing	31.47	55.79	2,455	44
d. Books and maps	1.73	6.14	135	22
e. Other	126.27	---	9,344	---
Total	589.41	---	43,616	74
Average per day	110.44	---	8,062	73
Average per trip	529.80	---	39,205	74

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 50. Estimated Moose Hunter (Respondents) Expenditures (\$) by Category for Yakutat Hunters, 1984 (n=56)

Category	Average ^a (all)	Average ^b (users)	Total	No. of Users
1. Transportation (Roundtrip from home to hunting location)				
a. By private boat (non-charter)	135.03	279.71	7,832	28
b. By charter boat	3.45	40.00	200	5
c. By private car or truck	31.34	45.45	1,818	40
d. By rental car or truck	1.77	14.71	103	7
e. By private plane (non-charter)	5.86	48.57	340	7
f. By air charter	38.67	160.21	2,243	14
g. By commercial airline	---	---	---	4
h. By ferry	---	---	---	4
i. By taxi or bus	---	---	---	4
j. Other	1.02	---	57	3
2. License and tag fees	12.00	12.00	672	56
3. Guiding services	---	---	---	5
4. Restaurants	2.24	16.25	130	8
5. Lodging	.69	6.67	40	6
6. Groceries (includes beverages)	71.33	88.02	4,137	47
7. Taxidermy	7.93	65.71	460	7
8. Butchering	4.26	22.45	247	11
9. Ammunition	16.98	23.45	985	42
10. Film and developing	6.60	17.41	383	22
11. Equipment				
a. Guns, scope, camera gear, binoculars	174.91	317.03	10,145	32
b. Camping equipment	68.10	141.07	3,950	28
c. Clothing	41.74	80.70	2,421	30
d. Books and maps	1.90	6.11	110	18
e. Other	76.21	---	4,268	---
Total	795.38	---	44,541	56
Average per day	309.63	---	17,029	55
Average per trip	593.90	---	32,664	55

^a Average of all responding hunters.

^b Average of all responding hunters who had expenditures in this category.

Table 51. Estimated Moose Hunter (Respondents) Total and Average Expenditures (\$) for Hunt Areas in Southeast Alaska

Hunt Area	Average Per Day	Average Per Trip	Average Per Hunter	Total
1 (Berners Bay) n=8	365.70	547.81	676.38	5,411
55 (Thomas Bay) n=39	155.21	461.45	493.51	19,247
56 (Taku River) n=78	191.87	663.91	752.13	58,666
59 (Haines Area) n=161	108.41	405.93	476.06	76,644
61 (Yakutat Forelands) n=120	250.61	825.65	945.22	113,426
62 (Malaspina Forelands) n=18	710.31	1,774.67	1,805.83	32,505
81 (Unuk River) n=24	217.35	1,165.17	1,181.67	28,360
82 (Stikine River) n=114	185.78	744.37	812.76	92,655
Region	196.08	677.39	754.30	423,914
Total*	---	---	---	847,828*

* Includes expansion for undersampling bias for harvest ticket hunts and nonrespondents.

APPENDIX ONE

Southeast Alaska Moose Hunter Economic Survey



**Alaska Department of Fish and Game
April, 1985**

=====

We would like to know how you choose your moose hunting areas. This information is useful to us when trying to plan management of areas for the benefit of the public. We have tried to include most features which may be important in choosing a hunting site, however if we've overlooked some, please feel free to include them.

=====

Q-1 There are probably certain natural features that you look for when choosing a place to hunt. Below is a list of several features which may influence your choice. Please indicate how important each of these is to you. (Place an X on the appropriate line)

<u>FEATURES</u>	<u>VERY</u>		<u>DOES NOT</u>
	<u>IMPORTANT</u>	<u>IMPORTANT</u>	
1. Game available	_____	_____	_____
2. Undisturbed natural area	_____	_____	_____
3. Scenery	_____	_____	_____
4. Chance to get a trophy animal	_____	_____	_____
5. Natural boat anchorage or landing	_____	_____	_____
6. Opportunity to hunt different animals	_____	_____	_____
7. Opportunity for other types of recreation besides hunting (clanning, fishing, photography, etc.)	_____	_____	_____
8. Access by rivers or lakes	_____	_____	_____
9. Other (specify) _____	_____	_____	_____

Q-2 There are many things that human activity can do to change a site, for better or worse. Below is a list of many features that often change as the result of the activity of other humans besides yourself. Please indicate whether these features cause you to avoid or select a hunting site, and just how important a role they play in making the decision. (Place an X on the appropriate line)

<u>OTHER CHARACTERISTICS</u>	<u>CAUSES ME TO CHOOSE</u>		<u>DOES NOT</u>		<u>CAUSES ME TO AVOID</u>	
	<u>VERY</u>	<u>IMPORTANT</u>	<u>MATTER</u>	<u>IMPORTANT</u>	<u>VERY</u>	<u>IMPORTANT</u>
1. How far you have to travel	_____	_____	_____	_____	_____	_____
2. How many other people you think will be there	_____	_____	_____	_____	_____	_____
a. So many that you will feel crowded	_____	_____	_____	_____	_____	_____
b. So few you can feel you're getting away from it all	_____	_____	_____	_____	_____	_____
3. Road access	_____	_____	_____	_____	_____	_____
4. Trail access	_____	_____	_____	_____	_____	_____
5. Developed campground	_____	_____	_____	_____	_____	_____
6. Cabins available	_____	_____	_____	_____	_____	_____
7. Developed boat anchorage	_____	_____	_____	_____	_____	_____
8. Developed boat launch area	_____	_____	_____	_____	_____	_____
9. Timber harvest activities	_____	_____	_____	_____	_____	_____
a. Clearcuts	_____	_____	_____	_____	_____	_____
b. New logging	_____	_____	_____	_____	_____	_____
c. Log storage in a bay	_____	_____	_____	_____	_____	_____
10. Mining activities	_____	_____	_____	_____	_____	_____
11. Within one hours travel of a town, village or city	_____	_____	_____	_____	_____	_____
12. Other (specify) _____	_____	_____	_____	_____	_____	_____



Now, we'd like to know more about your hunt or hunts.

Q-3 For each moose hunting trip you took in 1984 please fill out the blanks below to list where you hunted, how much you estimate it cost you to travel, how you traveled both to your hunting area and while hunting, how many hours you spent traveling to and from your hunting area, and how many days you were actually hunting. For your cost of travel and your type of travel, just list the appropriate numbers from the list below the blanks. For hours of travel time and days of hunting time just fill the blank with a number. Fill out a new line for each trip that you took.

TRIP	Where you hunted (see below and choose one)	How much money you spent on travel from home to where you started walking (see below and choose one)	How you traveled (see below and choose as many as apply)	Hours of time spent traveling (Enter a number)	Days spent hunting moose (Enter a number, count whole days and portions of a day as one)
SAMPLE	3	11	31, 26	9 hours	2
1					
2					
3					
4					

- | | | |
|------------------------|---------------------|-------------------------|
| 1. St. James Bay, | 7. \$0 - 49 | 23. Your own boat |
| William Henry Bay, or | 8. \$50 - 99 | 24. Boat of a friend |
| Endicott River area | 9. \$100 - 149 | 25. Charter boat |
| 2. Yakutat area | 10. \$150 - 199 | 26. Truck or car |
| 3. Chilkat or Chilkoot | 11. \$200 - 249 | 27. Your own plane |
| River drainages | 12. \$250 - 299 | 28. Plane of a friend |
| 4. Stikine or Unuk | 13. \$300 - 349 | 29. Air charter |
| River area | 14. \$350 - 399 | 30. Commercial airlines |
| 5. Thomas Bay | 15. \$400 - 449 | 31. Ferry |
| area | 16. \$450 - 499 | 32. Other (specify) |
| 6. Other (specify) | 17. \$500 - 599 | |
| | 18. \$600 - 699 | |
| | 19. \$700 - 799 | |
| | 20. \$800 - 899 | |
| | 21. \$900 - 999 | |
| | 22. \$1000 and over | |

Q-4 Which statement would you say best describes the main reason for your 1984 moose hunt? (Please circle the letter for your answer)

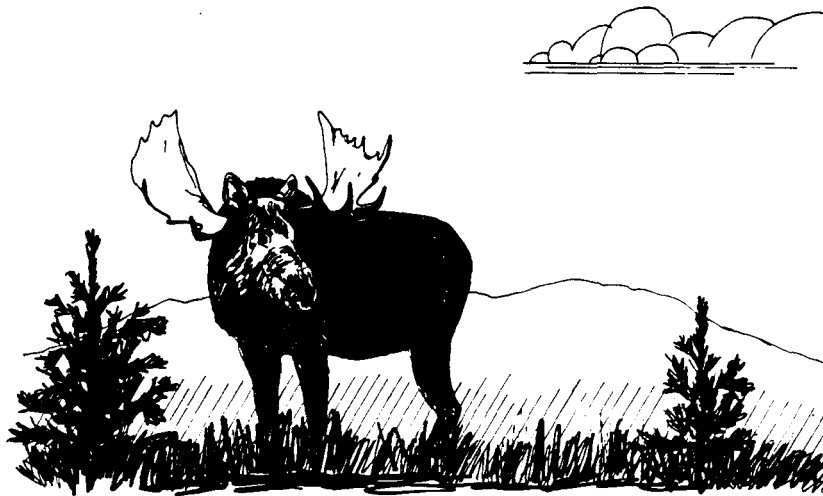
- A. I was hunting for a trophy animal.
- B. I was hunting for meat.
- C. Trophy and meat were equally important.
- D. None of the above (please specify) _____

Q-5 Did you spend time fishing while on your moose hunting trip? ____ YES ____ NO

Q-6 Did you hunt other animals while on your moose hunting trip? ____ YES ____ NO

If YES, fill out your moose hunting area from the list in Question 4 and circle other animals you hunted there.

<u>Area</u>				
_____	a. Deer	b. Black Bear	c. Brown Bear	d. Goat
	e. Grouse	f. Waterfowl	g. Other _____	
_____	a. Deer	b. Black Bear	c. Brown Bear	d. Goat
	e. Grouse	f. Waterfowl	g. Other _____	
_____	a. Deer	b. Black Bear	c. Brown Bear	d. Goat
	e. Grouse	f. Waterfowl	g. Other _____	
_____	a. Deer	b. Black Bear	c. Brown Bear	d. Goat
	e. Grouse	f. Waterfowl	g. Other _____	



To demonstrate the importance of moose hunting to the economy, we need to know what moose hunters buy or pay for as part of hunting. We would like to ask you to estimate what you spent in 1984 on moose hunting. If you also hunted other animals or fished while on your hunting trip, try to estimate your costs only for the part of the trip that you spent moose hunting. (For example, if your trip lasted 4 days, but you went fishing one day and didn't spend any time moose hunting on that day, count only 3/4 of your total trip costs.) Also, if you hunted with someone else, count only your share of the trip costs.

Q-7 For ALL your moose hunting in Southeast in 1984, what is your estimate of how much you spent in 1984 on each of these types of costs?

1. Transportation (roundtrip from home to hunting location)
INCLUDE actual trip costs for gas, tickets, rental fees, etc. but
DO NOT include the cost of maintenance.
 - a. By private boat (non-charter).....\$ _____
 - b. By charter boat.....\$ _____
 - c. By private car or truck.....\$ _____
 - d. By rental car or truck.....\$ _____
 - e. By private plane (non-charter)....\$ _____
 - f. By air charter.....\$ _____
 - g. By commercial airline.....\$ _____
 - h. By ferry.....\$ _____
 - i. By taxi or bus.....\$ _____
 - j. Other _____ ...\$ _____
2. License and tag fees.....\$ _____
3. Guiding services.....\$ _____
4. Restaurants.....\$ _____
5. Lodging.....\$ _____
6. Groceries (include beverages).....\$ _____
7. Taxidermy.....\$ _____
8. Butchering.....\$ _____
9. Ammunition.....\$ _____
10. Film and developing.....\$ _____

Q-8 Did you share trip costs with others? _____ YES _____ NO

Q-9 Some things that you use for moose hunting can be used for many years. You may also use them for other trips or at home. What did you spend in 1984 on each of the following types of items that you used while moose hunting? List the total cost of new items regardless of whether you used these items other ways.

1. Guns, scope, camera gear, binoculars...\$ _____
2. Camping equipment.....\$ _____
3. Clothing.....\$ _____
4. Books and maps.....\$ _____
5. Misc. other (feel free to specify)
_____.....\$ _____
_____.....\$ _____

In addition to what you spent on moose hunting, we would also like to know what you spent on ALL YOUR HUNTING in Southeast Alaska.

Q-10 About how much did you spend in 1984 on all your Southeastern Alaska hunting trips for moose and other animals in 1984? (Include transportation and other costs such as new camping gear, rifles, foods, etc., but do not include the purchase of an airplane, boat, or car.)

- | | |
|---------------------|---------------------|
| 1. less than \$500 | 4. \$1,500 to 1,999 |
| 2. \$500 to 599 | 5. \$2,000 to 2,499 |
| 3. \$1,000 to 1,499 | 6. \$2,500 or more |

Q-11 What percent of this money was spent in Southeast Alaska?

- | | | | |
|-------------|--------------|--------------|---------------|
| 1. 0 to 25% | 2. 25 to 49% | 3. 50 to 74% | 4. 75 to 100% |
|-------------|--------------|--------------|---------------|

Finally, we would like to know a little more about you.

Q-12 How many years have you hunted in Alaska? _____ YEARS

Q-13 What is the name of the city, town, village or place where you lived when you went
on your moose hunting trip(s) in 1984? _____

Q-14 How old are you?

- | | |
|-----------------|-------------|
| 1. less than 25 | 5. 56 to 65 |
| 2. 25 to 35 | 6. 66 to 75 |
| 3. 36 to 45 | 7. over 75 |
| 4. 46 to 55 | |

Q-15 About what was your total family income (before taxes) in 1984?

- | | |
|-------------------------|-------------------------|
| 1. less than \$10,000 | 6. \$50,000 to \$59,999 |
| 2. \$10,000 to \$19,999 | 7. \$60,000 to \$69,999 |
| 3. \$20,000 to \$29,999 | 8. \$70,000 to \$79,999 |
| 4. \$30,000 to \$39,999 | 9. \$80,000 or more |
| 5. \$40,000 to \$49,999 | |

Q-16 How many persons besides yourself live in your household? _____

COMMENTS

Thank you for your contribution in completing this survey.

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