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HIGGINS, BRIAN
A SURVEY OF THE NONCONSUMPTIVE USE



A SURVEY OF THE NONCONSUMPTIVE USE
OF WILDLIFE IN THE NELSON AREA

by

Brian Higgins

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Presented to:

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ABSTRACT

This survey on the nonconsumptive use of wildlife is meant to identify wildlife user characteristics at an urban population sample. The survey was conducted wholly within the City of Nelson, B. C.

The need for a survey of this type stems from the fact that no previous surveys of wildlife user characteristics have been made in the Nelson area. This area is endowed with an abundant variety of wildlands under the jurisdiction of a number of management agencies. Identifying the types of people who use these wildlands and their preference of activities will help to compliment future land management strategies in the area.

In this study, 195 survey questionnaires were distributed to 195 randomly chosen households in the City of Nelson. From this distribution 94 responses were found usable. (Refer to the Methodology Section for further information on how the survey was conducted.)

Respondents were categorized as consumptive users, nonconsumptive users and nonparticipants. Characteristics discussed include socioeconomic background, activity preferences, distances travelled, expenditures in pursuit of wildlife activities and funding preferences for nonconsumptive management.

No attempts were made to compare respondents to a control group in this survey.

INTRODUCTION

There is a growing awareness among those who manage wildlife in the province of the nonconsumptive use of the resource by recreationists. A long term management goal as described by the B.C. Ministry of the Environment, Fish and Wildlife Branch (1979), emphasises the management of wildlife populations near urban centres and in areas of high outdoor recreational use for viewing and photography.

Nonconsumptive wildlife management is management which benefits people engaged in the nonextractive use of available wildlife resources. These people are engaged in recreational activities such as wildlife study, observation, photography or painting. Species involved can be either game or nongame. Deer, for example, are "game" animals whereas songbirds are "nongame".

In order to develop nonconsumptive management programs some basic research is needed. Hendee and Potter (1971) suggested that conditions under which nonconsumptive use takes place and identification of user characteristics is one place to begin. Toward this end a number of nonconsumptive use surveys have been undertaken in both Canada and the United States.

The survey results will provide wildlife managers with a starting point from which to make comparisons whereby trends in nonconsumptive wildlife use may be identified.

METHODOLOGY

Sampling

A survey population of 200 people was decided upon with the assistance of Selkirk College, Wildland Recreation Technology faculty. This number represents 1.3 percent of the Nelson area population. The sample size compares favorably with surveys done in the city of Kamloops (Selbee, 1974) and the state of Idaho (Belli, 1977) with sample sizes of 0.8 percent and 0.3 percent respectively.

The population sample was chosen from the list of households in the 1982 Nelson telephone directory (approx. 6200 individual phone numbers). The method used in choosing survey recipients consisted of drawing 4 and 5 digit numbers from a calculator. The digits corresponded to the page, column and row in the directory. For example, the number "15419" resulted in choosing an address on "Page 15, Column 4, Row 19". If the number corresponded to a business or a household without a street address it was discarded as it was felt that delivery and pickup of questionnaires in rural areas would be too time consuming and costly.

Questionnaires were distributed with the assistance of members of the Nelson Rod and Gun Club.

Questionnaire Design

The questionnaire was a 12 page booklet consisting of 23 questions.

A cover letter was attached explaining the purpose and significance of the survey. (See APPENDIX "A" for a complete text of the questionnaire.)

For the most part, questions took on a matrix format. This format was chosen because it is a method of getting a large amount of information by asking few questions. The most important questions, those questions

regarding consumptive/nonconsumptive use, were asked first. Questions of a socio-economic and demographic nature followed. This form of questionnaire was used successfully by Belli in 1977.

The following table (Table 1) is an indicator of public response to the survey. Of the 200 questionnaires delivered, 94 were returned and found useable, for a return rate of 47.0 percent. This compares favorably with the 53.6 percent return rate of the Idaho survey (Belli, 1977), but falls somewhat short of the 61.0 percent return achieved in the Kamloops survey (Selbee, 1974). A method used to generate a greater response will be found in "RECOMMENDATIONS".

Table 1. Questionnaire Returns for the Nelson Survey, 1982

| Questionnaires Printed | 2 | 200 |
|------------------------------|---|------------|
| Questionnaires Undeliverable | | 5 |
| Returnable Questionnaires | 1 | 195 |
| Returned Questionnaires | : | 101 |
| Useable Questionnaires | | 94 (47.0%) |

Data Analysis

Survey results were key punched onto data cards and computed on the Selkirk College IBM computer. Printouts indicated the number of persons and percentage of persons responding to each category as well as the number of persons and percentage of the sample who did not respond to a certain question.

Definitions

Nonconsumptive users were defined as those persons participating in activities in which man "uses" wildlife and in which the wildlife is not "consumed" in the strict sense. This would include seeing a deer from the highway as one drove by or observing birds from the kitchen window.

Consumptive users were defined as those persons engaging in activities such as hunting and fishing whose purpose is to consume the wildlife.

The survey did not identify "combination" users; those engaged in both consumptive and nonconsumptive activities.

Nonparticipants were those persons who indicated that they did not go into the field specifically for any activities listed. These respondents were not considered in the analysis of socio-economic characteristics.

FINDINGS AND DISCUSSION

This section will discuss findings from the general population survey. No generalizations of user preference or characteristics will be made. The data is presented in order to provide base data on wildlife user preference in the Nelson area. This data will serve as a starting point for further comparative studies.

SOCIO-ECONOMIC CHARACTERISTICS

Sex

There were no attempts made to break down the following statistics (Table 2) as to user group. It is expected that the majority of respondents to the survey would be male since telephone directories usually reflect the names of persons classified as heads of households (Belli, 1977).

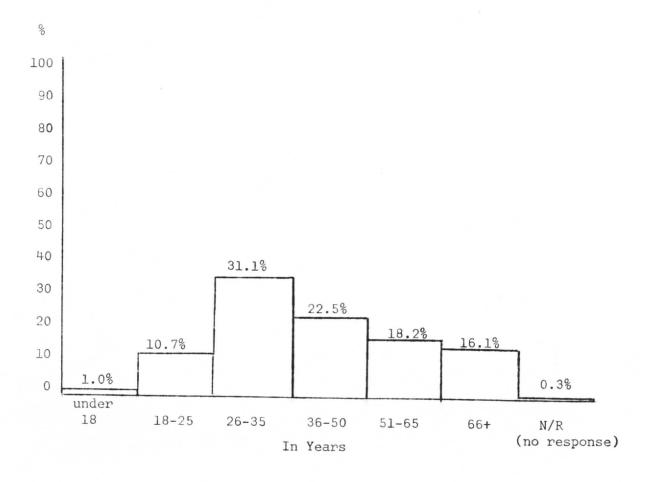
Table 2. Sex of Survey Respondents

| Sex | Number | % of Sample |
|-------------|--------|-------------|
| | | |
| Male | 57 | 60.6 |
| Female | 34 | 36.2 |
| No Response | 3 | 3.2 |

Age

The following figure illustrates the age distribution of the sample. The median age of the sample is 44.0 years.

Figure 1. Age Distribution of the Sample

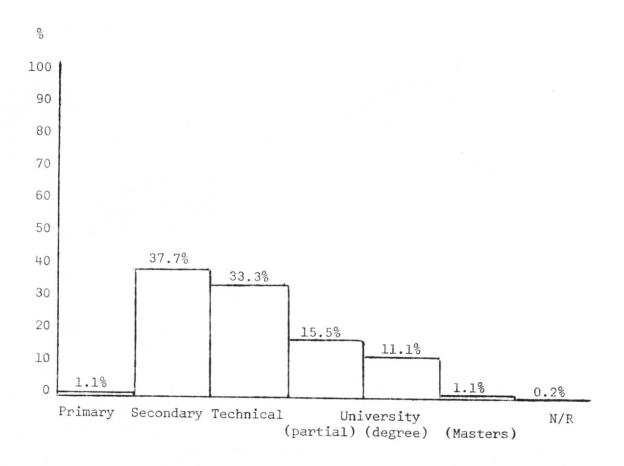


Education

A high school diploma was the highest degree of scholastic achievement attained by 37.7 percent of the sample. This was closely followed by a large group who had achieved a technical diploma (See Figure 2).

Belli (1977) reported that as levels of education increased there was a greater percentage of nonconsumptive users represented.

Figure 2. Educational Achievement of the Sample



Occupation

Table 3 describes the occupations of those people responding to the survey. Ten persons (10.5%) preferred not to indicate their occupation.

A large percentage (44.6%) of respondents indicated that their occupations were in the Technical - Professional field. This is in keeping with the fact that Nelson is the governmental centre of the West Kootenays.

Governmental work consistently provides jobs in the technical and professional fields.

Table 3. Occupation of the Sample

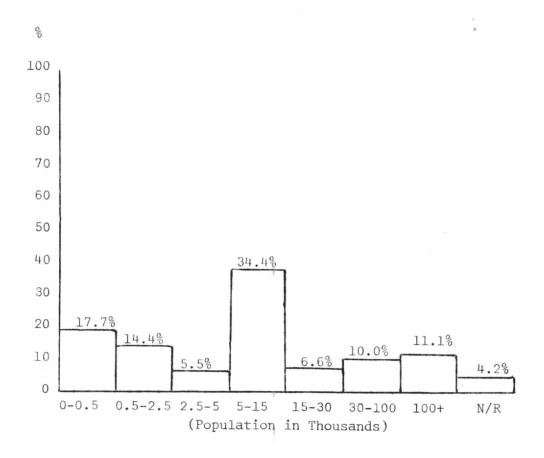
| Occupation | % of Sample | Number |
|------------------|-------------|--------|
| | | |
| Semi-skilled | 8.2 | 7 |
| Sales | 1.1 | 1 |
| Student | 3.5 | 3 |
| Home | 15.2 | 13 |
| Labor | 8.2 | 7 |
| Craft | 11.7 | 10 |
| Manager | 7.0 | 6 |
| Technical | 18.8 | 16 |
| Professional | 25.8 | 22 |
| Non-Participants | 10.5 | 10 |
| | | |

Early Residence

The great majority of survey respondents indicated that they grew up in a rural or small town environment. Fazio (1977) found that most consumptive users had their early residence in a rural setting.

(See Figure 3)

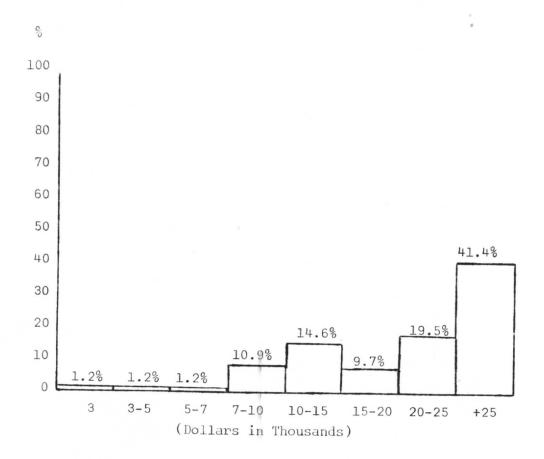
Figure 3. Population of Community Where Respondents Grew Up



Income

Total family incomes in excess of \$20,000 were reported by 60.9 percent of the sample (See Figure 4). Almost 14.0 percent of questionnaire respondents refused to respond to this question. Some respondents were of the opinion that their salary level was no one's business but their own.

Figure 4. Total Family Income, 1982



RESPONDENT PARTICIPATION AND PREFERENCE

Type and Frequency of Consumptive Wildlife Oriented Trips Afield

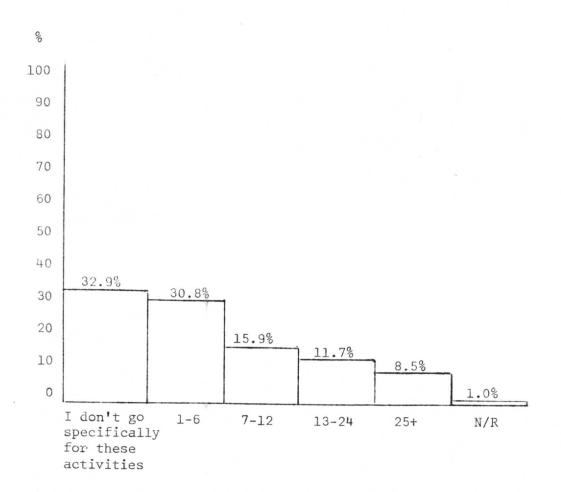
As was discussed in the methodology section, the user groups were categorized as nonconsumptive, consumptive or nonparticipant. Identification of each user group was based on survey question "A" (See APPENDIX A") which determined the type of wildlife oriented field trips respondents engaged in. Those who responded positively to the hunting and fishing sections (having participated at least once a year), were classified as

consumptive users. Nonconsumptive users could not be compared to consumptive users because membership in one group precluded membership in the other.

The frequency of each type (Fishing/Hunting) of trip was measured by the number of trips per year in which respondents participated.

(See Figure 5)

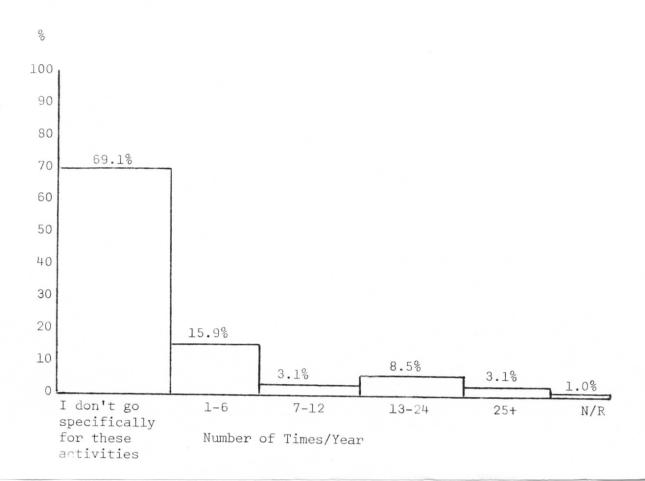
Figure 5. Participation in Consumptive Wildlife Oriented Activity (Fishing)



Participation in fishing was indicated by 66.9 percent of respondents. The mode for this group was 1-6 trips afield per year (N=29). Participation in fishing dropped off substantially above 6 trips afield per year. Of the 63 respondents who fished, males comprised 69.8 percent of the total.

Consumptive use in the hunting category (See Figure 6) was 30.6 percent (N=29) of the population sample. Participation dropped off considerably above 6 trips afield per year as in fishing. The survey did not determine the percentage of participants engaged in both hunting and fishing, so a crossover pattern of use is not forthcoming. It can be said, however, that activity in this user group is low with almost 70.0 percent of respondents abstaining.

Figure 6. Participation in Consumptive Wildlife Oriented Activity (Hunting)



Type and Frequency of Nonconsumptive Wildlife Oriented Trips Afield

Nonconsumptive users tend to be most interested in watching big game animals (40.6 percent of respondents) and watching birds (40.7 percent of respondents). The great majority of these respondents did not specifically go into the field to watch these animals more than 1-6 times per year.

A high percentage of repondents (44.3 percent, N=41) watch fish at least 1-6 times per year. This activity may be enjoyed by both consumptive and nonconsumptive users. "Watching" fish is part of the act of fishing and is also enjoyed by those merely walking alongside a lake or stream.

Bird watching remains a popular pastime as it can be enjoyed by both the urban dweller and wildlands traveller. Written comments on some questionnaires indicated that birding was a lifelong interest.

Little interest was shown in wildlife painting (2.1 percent of respondents, N=2), and only mild interest displayed towards nature crafts (19.0 percent of respondents, N=18); only 4.0 percent (N=4) participating more than 1-6 times per year.

Bird Watching in Town or Around the Home

Over 96.0 percent of respondents (N=90) indicated that they watched birds in town or around their homes. This percentage includes both the consumptive and the nonconsumptive user. Only 2.1 percent of respondents indicated that they had no interest whatsoever in watching birds. A semantic differential scale was used to measure the degree of participation. Respondents could rate their participation.

tion as never, very little, occasionally, some, frequently and very frequently. Thirty-eight percent of respondents "occasionally" watched birds, while 40.1 percent indicated that they "frequently" watched birds.

No effort was made to determine if bird observers actually studied birds by attempting to identify birds or by keeping a life list of birds.

Participation in Different Seasons

Seasonal participation in wildlife activities varied according to the type of activity and user group (See Table 4). However, trends for each activity were observed. Consumptive users (Fishing/Hunting) participated, as expected, in summer and fall respectively. Both fishing and hunting are regulated by law to certain seasons and although it is possible to fish or hunt for various species during any season of the year, the most popular seasons were predominant.

Table 4. Percentage of Participation by Nelson Consumptive/ Nonconsumptive User Groups in Wildlife Activities During the Seasons of the Year, 1982

| Users | Spring | Summer | Fall | Winter | |
|----------------------|--------|--------|------|--------|------|
| | | | | | |
| Consumptive Users | | | | | |
| Fishing | 13.1 | 78.7 | 4.9 | 3.3 | N=61 |
| Hunting | 0.0 | 6.3 | 93.7 | 0.0 | N=32 |
| | | | | | |
| Nonconsumptive Users | | | | | |
| Nature Crafts | 6.3 | 75.0 | 12.4 | 6.3 | N=16 |
| Wildlife Painting | 0.0 | 66.7 | 33.3 | 0.0 | N=3 |
| Wildlife Photography | 10.3 | 69.0 | 17.3 | 3.4 | N=29 |
| Watching Big Game | 17.6 | 61.8 | 20.6 | 0.0 | N=34 |
| Watching Small Game | 20.0 | 70.0 | 10.0 | 0.0 | N=30 |
| Watching Birds | 34.3 | 57.1 | 8.6 | 0.0 | N=35 |
| Watching Fish | 27.8 | 30.6 | 41.6 | 0.0 | N=36 |
| | | | | | |

Nonconsumptive users indulged in their favorite activities primarily during the summer. The mode, however, was not as pronounced as either hunting or fishing and there was considerable participation occuring in all seasons of the year. For example, 27.8 percent of those who watched fish did so in Spring; 30.6 percent in Summer and 41.6 percent in the Fall. Also, note that participation in wildlife photography knew no seasonal bounds. Since a person can participate in an activity during every season of the year, respondents

were allowed to respond for more than one season per activity. Therefore, each seasonal percentage is a percentage of the total user group which participated in an activity during the various seasons.

Distances Travelled

A large number of both consumptive and nonconsumptive users indicated that they did not travel to participate specifically in any of the listed activities. For example, non-participants totalled 32.9 percent, 69.1 percent, and 66.2 percent for the fishing, hunting and wildlife photography categories respectively.

Of those consumptive users responding, the majority of those who fished (81.0 percent, N=51) travelled under 200 kilometres. Hunters travelled further to participate with 45.5 percent (N=15) travelling 80-200 kilometres and 33.3 percent travelling in excess of 200 kilometres.

Nonconsumptive users primarily travelled eighty kilometres or less, one way, in pursuit of their activities. Of those who watched big game 30.3 percent travelled between 80 and 200 kilometres. Of those who photographed wildlife, 30.0 percent travelled between 80 and 200 kilometres.

Types of Land Areas Utilized

Respondents were asked to indicate which of 11 possible areas under different ownership and method of management they most often frequented to participate in wildlife oriented activities. Areas

listed ranged from city, provincial and national parks to commercial forests, wildlife refuges, fish hatcheries and private land. The most frequent destination of every user group was Crown land. This was not unexpected since much of B.C. is administered by provincial agencies (B.C. Forest Service, B.C. Fish and Wildlife Branch). Over 40 percent of fishing and 52.0 percent of hunting was done on Crown land.

Among nonconsumptive users, 45.0 percent of photographers and 30.0 percent of those who watched big game did so in the National Parks.

Bird watchers predominantly used private land (backyards) for viewing.

Provincial Parks received the most widespread use among non-consumptive users. All categories of use were represented within Provincial Parks with the viewing of small game (24.0 percent of respondents) being the favorite pastime. Provincial Parks are easily accessible to the public, offering a variety of landscapes from highway rest stops and picnic areas to mountainous backcountry terrain.

Regional parks were used primarily by those who fished, as well as photographers and big and small game watchers. A low response to the use of regional parks (5.3 percent) suggests that recreationists may not be aware of their existence to any great extent. Other areas infrequently used by nonconsumptive recreationists were timber company land (leased), game farms, fish hatcheries and city parks.

For consumptive users the most infrequently used areas were naturally game farms, fish hatcheries and wildlife refuges where consumptive use is disallowed, followed by National Parks (fishing permitted) and Provincial Parks.

No attempt was made to determine why destinations were selected, but undoubtedly opportunity was a leading factor. It is logical for people to go to the more easily reached destinations. The close proximity of several provincial parks receiving high use among nonconsumptive users.

Group Participation

Seventeen percent of respondents said that they participated in wildlife oriented activities alone. Thirty-four percent of respondents said they participated with 2 other persons, while 9.7 percent associated with 5 or more persons. Very few respondents reported participation with an organized group despite the fact that many outdoor groups and associations exist in the Nelson area. Only 4.5 percent (N=4) of respondents participated in a group and only 1 person indicated the type of activity he or she was involved in (snow-mobile club).

Preference of Type of Activity and Species

Survey respondents were asked to rank the top 3 activities in which they participated (Table 5). Ranking was accomplished by combining first and second choice percentages.

Table 5. Combined First and Second Choice Selections of Wildlife Oriented Activities (Nonconsumptive)

| Watching Birds Afield | Rank 4 | Percent 6.3 |
|--|-----------|-------------|
| Watching Birds in Town or Around Home | 1 | 11.0 |
| Watching Big Game | 3 | 7.3 |
| Wildlife Painting | 7 | 1.0 |
| Wildlife Photography | 2 | 9.5 |
| Watching Small Game | 5 | 4.2 |
| Watching Fish | 6 | 2.6 |

The first choice of those respondents in the nonconsumptive category was watching birds at home or in town, followed by wildlife photography and watching big game. The last choice of respondents was painting wildlife with a combined percentage of 1.0.

Respondents were also asked to select from a list of four wildlife categories (big game, small game, birds and fish) that group they would most prefer to watch, photograph or paint if they could find them. The first choice for all users was watching big game (56.1 percent). This choice was consistent with the high ranking given to watching big game in Table 5. The next choice of users was birds, followed by small game and then fish. Since no attempt was made to differentiate between consumptive and nonconsumptive users in the general survey, we may assume that both groups hold the observation of big game in high regard. This could suggest potential conflict of interest between observers and hunters in some areas. It is easy to see how

conflicts could occur between those desiring to observe an animal and those desiring to kill it.

Combined Outdoor Recreational and Wildlife Oriented Activities

An attempt was made to measure combined recreational and wildlife oriented activities. People frequently participate primarily in one form of outdoor recreation and while doing so get an opportunity to partake in wildlife oriented activities. Respondents were asked to indicate which activities they combined by marking a matrix of 14 recreational activities and nine wildlife oriented activities (APPENDIX "A", "G"). The results are shown in Table 6.

Camping was combined with all types of wildlife oriented activities by more people than any other outdoor recreational activity.

Over 36.0 percent of the respondents said they combine fishing and camping, and over 22.0 percent photograph wildlife while camping.

Picnicking and pleasure driving were the next most often combined activities. Fishing was combined with picnicking by 27.0 percent of the respondents and with bird watching by 25.0 percent. Pleasure driving and bird watching were combined by 23.6 percent of the respondents. Driving was combined with photography and watching big game by 21.0 percent of the respondents.

The least combined outdoor recreational activities were the winter sports of cross-country skiing, snow-shoeing and snowmobiling. In addition, motorboating, horseback riding and motorcycling were rarely combined with other activities. Widdlife painting was the least combined activity with a maximum of 4.0 percent (N=1) saying that he or she combined painting with backpacking.

Table 6. Percentage of Respondents Pursuing Combinations of Outdoor Recreational and Wildlife Oriented Activities in Nelson, 1982

| | | | | | | Watching | 7 | |
|-----------------------|---------------|---------|-------------------|---------------|---------------|---------------|---------------|------|
| Activity Activity | Fishing | Hunting | Wildlife Painting | Photography | Big Game | Small Game | Birds | Fish |
| | | | | | | | | |
| Camping | 36.2 | 12.0 | 0.0 | 22.4 | 3.4 | 10.3 | 6.8 | 0.0 |
| Picnicking * | 27.0 | 4.1 | 0.0 | 12.5 | 6.2 | 14.5 | 25.0 | 2.0 |
| Backpacking | 12.0 | 20.0 | 4.0 | 24.0 | 12.0 | 8.0 | 16.0 | 0.0 |
| Pleasure Driving | 13.1 | 0.0 | 2.6 | 21.0 | 21.0 | 13.1 | 23.6 | 2.6 |
| Day Hiking | 9.0 | 9.0 | 3.0 | 42.4 | 9.0 | 15.1 | 6.0 | 3.0 |
| Nature Walks | 0.0 | 0.0 | 0.0 | 22.2 | 3.7 | 11.1 | 40.7 | 11.1 |
| Motorboating | 74.0 | 3,7 | 0.0 | 7.4 | 3.7 | 0.0 | 7.5 | 3.7 |
| Non-Motoring | 66.6 | 8.3 | 0.0 | 8.3 | 0.0 | 0.0 | 8.3 | 8.3 |
| Notorcycling | 42.8 (N=1) | 0.0 | 0.0 | 42.8 (N=3) | 14.2 (N=1) | 0.0 | 0.0 | 0.0 |
| Four Wheel Driving | 15.0 | 35.0 | 0.0 | 20.0 | 20.0 | 5.0 | 5.0 | 0.0 |
| Cross- Country Skiing | ll.l (N=1) | 0.0 | 0.0 | 0.0 | 33.3 (N=3) | 33.3 (N=3) | 22.2 | 0.0 |
| Snowshoeing | 20.0 (N=1) | 0.0 | 0.0 | 20.0 | 40.0 | 0.0 | 20.0 | 0.0 |
| Snowmobing | 50.0 (N=2) | 0.0 | 0.0 | 25.0 (N=1) | 0.0 | 0.0 | 25.0 | 0.0 |
| Horseback Riding | 9.0 | 18.1 | 0.0 | 18.1 | 18.1 | 0.0 | 36.3 (N=4) | 0.0 |

When frequency of combination was measured (Table 7) pleasure driving (89.6 percent, N=62). picnicking (85,3 percent, N=59) and camping (79.8 percent, N=56) led the list. Snowmobiling (16.0 percent, N=8), horseback riding (28.0 percent, N=14) and motorcycling (30.7 percent, N=15) were at the bottom of the list.

Table 7. Participation by Nelson Residents in Miscellaneous Recreational Activities When Also Engaging in Nonconsumptive Wildlife Activities

| Activity | Amount of Participation | (N) |
|----------------------|-------------------------|-----|
| Camping | 79.8 | 56 |
| Picnicking | 85.3 | 59 |
| Backpacking | 65.3 | 40 |
| Pleasure Driving | 89.6 | 62 |
| Day Hiking | 75.5 | 46 |
| Nature Walks | 75.0 | 51 |
| Motorboating | 57.7 | 34 |
| Non-Motorboating | 47.0 | 23 |
| Motorcycling | 30.7 | 15 |
| Four Wheel Drive | 53.6 | 30 |
| Cross-Country Skiing | 38.0 | 22 |
| Snowshoeing | 32.1 | 17 |
| Snowmobiling | 16.0 | 8 |
| Horseback Riding | 28.0 | 14 |

The high percentages of respondents who combined outdoor activities such as camping, picknicking and pleasure driving with wildlife-oriented activities suggests that the opportunity for observing wildlife may be an important factor in a person's decision to partake in those forms of recreation.

Expenditures on Equipment Used for Wildlife-Oriented Activities

Recipients were asked to indicate the amount of money they spent on equipment specifically used for wildlife-oriented activities (Table 8).

Over 54.0 percent of respondents bought equipment costing in excess of \$100.00.

Over 30.0 percent of respondents bought equipment costing in excess of four hundred dollars. Although we do not know what types of items were bought within any price range, it can be concluded that any expenditure at over one hundred dollars denotes a substantial amount of investment and involvement in an activity.

Table 8. Money Spent on Equipment Specifically for Wildlife-Oriented Activities

| Dollars | Percentage | (N) |
|---------|------------|-----|
| | | |
| 0 | 21.5 | 19 |
| 1-50 | 9.0 | 8 |
| 51-100 | 14.7 | 13 |
| 101-250 | 5.6 | 5 |
| 251-400 | 18.1 | 16 |
| 400+ | 30.6 | 27 |

Funding Preferences for Nonconsumptive Wildlife Management

Respondents were asked to indicate their preferences to the funding of nonconsumptive wildlife management programs by the B.C. Fish and Wildlife Branch. Presently the Branch does not have a nonconsumptive management program in place.

Four questions were asked. The first question asked respondents what percentage of the B.C. Fish and Wildlife budget should go towards nonconsumptive management. The results can be seen in Table 9. Most respondents indicated that 11.0 to 50.0 percent of the budget should be so alloted.

Table 9. Percentage of B.C. Fish and Wildlife Budget that Should Be Used for Nonconsumptive Management

| Percent of Budget | Percentage of Respondents in Favour | (N) |
|--|-------------------------------------|-----|
| A THE RESIDENCE OF THE PROPERTY OF THE PROPERT | | |
| 0 | 6.4 | 5 |
| 1-10 | 7.7 | 6 |
| 11-25 | 25.9 | 20 |
| 26-50 | 36.3 | 28 |
| 51-75 | 16.8 | 13 |
| 76-100 | 6.4 | 5 |

Next, respondents were asked if they felt that the provincial legislature should allocate money from the general fund to pay for the nonhunting and non-fishing part of the branch's budget. The majority said yes (78.0 percent, N = 64). Respondents were then asked to choose from a list of six possible methods of obtaining funds for nonconsumptive management. These ranged from special stamps to added charges on hunting and fishing licences. The first choice of respondents was the issue of a licence (23.6 percent, N = 18), donations next (21.0 percent, N - 16), and then, the imposition of an additional charge on hunting and fishing licences (19.7 percent, N = 15). The fact that donations were highly rated suggests a lack of support for government funding of a nonconsumptive management program.

Finally, respondents were asked how much they were willing to pay each year to support a nonconsumptive wildlife management program (See Table 10). One-third of respondents indicated that they would be willing to pay up to five dollars a year.

Table 10. Money Respondents Willing to Pay Yearly to Manage B.C. Fish and Wildlife for Nonconsumptive Uses

| \$ Willing to Pay | % of User Group | (N) |
|-------------------|-----------------|-----|
| | | |
| 0-5 | 33.3 | 27 |
| 5-10 | 23.4 | 19 |
| 10-20 | 27.1 | 22 |
| 20-30 | 11.1 | 9 |
| 30+ | 4.9 | 4 |

The responses to these four preference questions suggest that a large percentage of Nelson residents would support management of wildlife for nonconsumptive purposes but it would have to be funded primarily from the general fund by the legislature.

CONCLUSION

The respondents to the survey showed a high orientation towards birds. There was also a great attraction towards large mammals. These users were not inclined to travel long distances in order to view the species of their choice. Users tended to use Crown land heavily and engage in a wide variety of combined outdoor recreational activities, led by pleasure driving, picnicking and camping. It also appears that a significant number of people who fish and hunt also take part in a variety of nonconsumptive activities.

The data has established various patterns related to nonconsumptive use. The data can point to certain trends within the community, but it must be cautioned that trends change in time in response to what may now seem unrelated factors.

Factors to consider when discussing long-range management of wildlife for nonconsumptive purposes are increased urbanization in the Kootenays, changing attitudes towards wildlife use in general, and the effect of provincial economic policies on management priorities.

At present, the National Parks have guidelines for nonconsumptive use as stated in Parks Canada policy. In addition, the Canadian Wildlife Service operates wildlife sanctuaries in cooperation with private agencies. B.C. wildlife management agencies do not manage specifically for the nonconsumptive user.

More detailed information can only be assembled one step at a time.

This survey is part of the process of acquiring a better understanding of all aspects of nonconsumptive wildlife management for use by land managers and the public.

RECOMMENDATIONS

- 1. Conduct another survey of this type within three years so as to determine any changes in the public's attitude towards the topic of consumptive/nonconsumptive use of wildlife.
- 2. In future, the survey of a "pure" nonconsumptive group (Birding Society, Mountaineering Club) should be undertaken at the same time as a general survey for comparison.
- 3. Distribution of questionnaires should be by mail, including a stamped return envelope. This may serve to increase the percentage of returned surveys.

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APPENDIX "A"

A SURVEY OF THE NONCONSUMPTIVE USE OF WILDLIFE IN THE NELSON AREA

QUESTIONNAIRE



Selkirk College



Wildland Recreation Technology

February 6, 1982

Dear Nelson Resident:

You have been selected to help in a study on wildlife oriented recreation. Your reply to the attached questionnaire will be of great assistance to our research in determining the uses made of wildlife resources in the Nelson Region.

Don't let the length of our questionnaire frighten you. It only looks lengthy but it won't take very much time to fill out, and it may even be fun. Please think carefully about your answers. Your questionnaire will be picked up by a volunteer within the next ten days. Your reply will be kept strictly confidential.

If you have any problems in filling out the questionnaire please call 352-3973.

· Thank you,

Brian Higgins

Student

Wildland Recreation Technology

Selkirk College

Buar Higgins

14

Please check the box which best indicates how often you go into the field SPECIFICALLY to participate in the wildlife activities listed on the left. 2 1 3 Code: 4 5 column I don't go 1 - 6 7 - 1213 - 2425 or more * specifically times times times times a for these a year a year a year year activities Fishing 6 Hunting 7 Nature Crafts 8 Wildlife Painting 9 Wildlife Photography 10 Watching Big Game 11 Animals Watching Small 12 Game Animals Watching Birds 13 \Box

Watching Fish

B. Please check the box which best indicates the season or seasons of the year you most frequently go into the field SPECIFICALLY to participate in the listed activities.

| Code: | 1 | 2 | 3 | 4 | 5 | |
|--------------------------------|---|--------|--------|------|--------|--------|
| | I don't go afield SPECIFICALLY for these activities | Spring | Summer | Fall | Winter | column |
| FISHING | | | | | | 15 |
| HUNTING | | | | | | 16 |
| NATURE CRAFTS | | | | | | 17 |
| WILDLIFE PAINTING | | | | | | 18 |
| WILDLIFE PHOTOGRAPHY | | | | | | 19 |
| WATCHING BIG GAME ANIMALS | | | | | | 20 |
| WATCHING SMALL GAME ANIMALS | | | | | | 21 |
| WATCHING BIRDS | | | | | | 22 |
| WATCHING FISH | | | | | | 23 |

C. Check the box which best shows the average one-way distance you travel to participate $\underline{\sf SPECIFICALLY}$ IN THE LISTED ACTIVITIES.

| Code: | 1 | 2 | 3 | 4 | column |
|--------------------------------|------------------------|-------------------|----------------------|---------------------|--------|
| | I Don't Participate | 080 kilometres | 80-200 kilometres | 200 + kilometres | |
| FISHING | | | | Ċ | 24 |
| HUNTING | | | | | 25 |
| NATURE CRAFTS | | | | | 26 |
| PAINTING WILDLIFE | | | | | 27 |
| WILDLIFE PHOTOGRAPHY | | | | | 28 |
| WATCHING BIG GAME ANIMALS | | | | | 29 |
| WATCHING SMALL GAME ANIMALS | | | | | 30 |
| WATCHING BIRDS | | | | | 31 |
| WATCHING FISH | | | | | 32 |

D. Check the box which best indicates where you most often go to participate in the wildlife oriented activities listed.

| | Column: | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |
|------|--------------------------------|--------------|------------|---------------|-----------------|-----------------|---------------------------|-----------|-----------------|-----------|---------------|-----------------|
| Code | | Private Land | Crown Land | National Park | Wildlife Refuge | Provincial Park | Regional District Park | City Park | Timber Co. Land | Game Farm | Fish Hatchery | Other (Specify) |
| 1 | FISHING | | | | | | | | | | | |
| 2 | HUNTING | | - 1 | | | | | | - | | - | |
| 3 | NATURE CRAFTS | | | | | | | | | - | | |
| 4 | WILDLIFE PAINTING | | | | | | | | + | - | - | |
| 5 | WILDLIFE PHOTOGRAPHY | | + | - | | - | - | - | + | + | + | |
| 6 | WATCHING BIG GAME ANIMALS | | | | | + | | + | | + | + | |
| 7 | WATCHING SMALL GAME ANIMALS | - | | | - | | | | | | - | |
| 8 , | WATCHING BIRDS | - | + | - | - | + | | | - | | | _ |
| 9 | WATCHING FISH | + | - | - | - | | | - | | + | - | |

| Never | Very Little | Occasionally | Some | Frequently | Very Frequently | |
|-------|-------------|--------------|------|------------|--------------------|--------------|
| | | | | | | Column 44 |

5

E. How often do you watch birds in town or around your house?

3

Code: 1

F. Of the activities in which you participate, rank the three you most prefer. For example, if you like to hunt, watch big game and photograph wildlife in that order check column 1 next to hunting, 2 next to watching big game animals and 3 next to wildlife photography.

| | | 1 | 2 | 3 | Column |
|-----------------------------------|-------|---|---|---|--------|
| Watching Birds (in the field) | | _ | | | 45 |
| Watching Birds (at home or in tow | vn) | _ | | | 46 |
| Fishing | | | | _ | 47 |
| Hunting | | | | | 48 |
| Nature Crafts | | | | | 49 |
| Wildlife Painting | | | | | 50 |
| Wildlife Photography | | | | | 51 |
| Watching Big Game Animals | | | | | 52 |
| Watching Small Game Animals | | - | | - | 53 |
| Watching Fish | | | | | 54 |
| | Code: | 1 | 2 | 3 | |

n

G. You can participate in wildlife oriented activities while primarily doing other types of recreation. Check the boxes which best describe the activities which you combine.

| | <u>0</u> | Other | Rec | reat | ion / | Acti | viti | es | | | | gu | | | | |
|------|--------------------------------|---------|------------|-------------|------------------|------------|-------------|---------------|-------------------|--------------|--------------------|----------------------|-------------|--------------|------------------|-----|
| Code | | Camping | Picnicking | Backpacking | Pleasure Driving | Day Hiking | Nature walk | Motor Boating | Non-motor Boating | Motorcycling | Four wheel driving | Cross country skiing | Snowshoeing | Snowmobiling | Horseback Riding | ı w |
| 1 | FISHING | | | | | | | | | | | | | | | |
| 2 | HUNTI NG | | | | | | | | | | - | | | | | |
| 3 | NATURE CRAFTS | | | | | | | | | | | | | | | |
| 4 | WILDLIFE PAINTING | | | | | | | | | | | | | | - | |
| 5 | WILDLIFE PHOTOGRAPHY | | | | | | | | | | | | | | | |
| 6 | WATCHING BIG GAME ANIMALS | | | | | | | | | | | | | | | |
| 7 | WATCHING SMALL GAME ANIMALS | | | | | | | | | | | | | | | |
| 8 | WATCHING BIRDS | | | | | | | | | | | | | | | |
| 9 | WATCHING FISH | | | | | | | | 1 | | 1 | | + | | | |
| | | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 |

H. How often do you participate in the recreation activities listed when they are combined with wildlife oriented activities? (Do not count hunting or fishing.) Mark the box which best indicates how often you participate in these activities. Do not count the times you do these activities when they are not combined with wildlife oriented activities.

| | Code | 1 | 2 | 3 | 4 | 5 | 6 |
|--------|----------------------|------------|-------------|--------------|------|------------|-----------------|
| Co1umn | | Not at all | Very Little | Occasionally | Some | Frequently | Very Frequently |
| 70 | CAMPING | | | | | | |
| 71 | PICNICKING | | | 1 | - | | |
| 6 | BACKPACKING | | | | | | |
| 7 | PLEASURE DRIVING | | | | | | |
| 8 | DAY HIKE | | | | | | |
| 9 | NATURE WALK | | | <u> </u> | | | |
| 10 | MOTORBOATING | | <u> </u> | | | | |
| 11 | NON-MOTOR BOATING | | | | | | |
| 12 . | MOTORCYCLING | | | | | | |
| 13 | FOUR-WHEEL DRIVING | | | | | | |
| 14 | CROSS-COUNTRY SKIING | | | | | | |
| 15 | SHOWSHOEING | | | | | | |
| 16 | SNOWMOBILING | | | | | | |
| 17 | HORSEBACK RIDING | | | | | | |
| 18 | OTHER (SPECIFY) | | | | | | |

| No. | Ι. | Check the ca or paint, if | tegory of wild you could fin | dlife w | hich y | ou wou | ld mos | t prefe | r to watch, | photograph |
|-------|----|------------------------------|---------------------------------|---------|--------|---------|---------|-------------|-------------|------------|
| | | | | | | Code | | ÷ | Column | |
| | | BIG GAME | | | | 1 | | | 19 | |
| | | SMALL GAME | . 🗆 | | | 2 | | | 13 | |
| | | BIRDS | | | | 3 | | | | |
| | | FISH | | | | | | | | |
| | | . 1011 | | | | 4 | | | | |
| | | | | | | | | | | |
| | J. | Do you usuall | y participate | in wil | ldlife | orient | ted act | tivities | with other | rs? |
| | | riease check | the box which | indica | ates h | ow many | · . | | | |
| | | | | | | | | | | |
| | | | SELF | | | | | | | |
| F) | | | ONLY | \Box | 2 | \Box | 4 | 5+ | Column | |
| sid . | | | | | | | _ | | 20 | |
| | | Code: | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | | | | | | | | | | |
| | К. | Do you usuall | v particinate | in wil | dlife | oriont | od aat | | | |
| | | organized gro | up? | 111 W11 | dille | orient | eu act | ivities | with an | |
| | | | | | | | | 1 | | |
| | | | YES | | | NO | C | olumn 21 | | |
| | | Code: | 1 | | | | | | | |
| | | dode. | 1 | | | 2 | | | | |
| | | If you place | : | | | | | | | |
| | | If yes, please | e give name of | group | | | | | | |
| | | What type of | group is it?_ | | | | | | | |
| | | | (Sn | nowmobi | le, Ga | rden C | lub, Yo | outh Gr | oup, etc.) | |
| | | | | | | | | | , | |
| | | | | | | | | | | |

Column

\$400+

| | | | | | | | , 🗆 | | Colum 22 |
|---|----|------------------------|---------------------|-----------------------|--------------------------|--------------|------------------------------|----------------------|--------------|
| | | Code: | 1 | 2 | 3 | 4 | 5 | | |
| | | | | | | | | | |
| | М. | How much cand wildli | of the B. | C. Fish arourposes of | nd Wildlif ther than | e budget sho | uld be used ishing? | to manage | fish |
| | | | 0% | 1 - 10% | 11 - 25% | 26 - 50% | 51 - 75% | 76 - 1009 | Co1um |
| | | Code: | 1 | 2 | 3 | 4 | 5 | 6 | 23 |
| 9 | | | | | | | | | |
| | | | | | | | | | |
| | N. | Should the for the nor | B.C. Gov hunting | vernment a | llocate mo ing part o | ney from the | e general fun nd wildlife | nd to pay budget? | |
| | | Code: | | YES | 1 | NO 2 | | | Column 24 |
| | | | | | | | | | |

L. Approximately how much money have you spent on equipment which you bought SPECIFICALLY for wildlife oriented activities. (Check Box)

\$101-250

\$251-400

\$51-100

\$1-50

\$0

| 0. | What other for activit | methods wor | uld you pref than hunting | fer to help g and fishin | pay for manag | ging wildli | fe |
|----|------------------------------------|--------------------|------------------------------|-----------------------------|---------------|----------------------------|--------------|
| | | | | | | Code | Column |
| | Licence | | | | | 1 | 24 |
| | Tax on Equi | pment | | | | 2 | |
| | Personalize | ed auto lice | ence plates | | | 3 | |
| | Donations [| | | | | 4 | |
| | Special Dec | al [| | | | 5 | |
| | Additional | charge on l | nunting and | fishing lic | ence [| 6 | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Р. | How much mo wildlife fo hunting or | r purposes | other than | ng to pay e hunting or | ach year to h | nelp manage o not count | e B.C.'s |
| | | \$0 ₇ 5 | \$5 - 10 | \$10 - 20 | \$20 - 30 | \$30+ | Column 26 |
| | Code: | 1 | 2 | 3 | 4 | 5 | |
| | | | | | | | |

Some questions about you...

| Q. | Please chec (Where you | k the pop | pulation of t st of the tim | the commun | ity in whi | ich you | grew up. | |
|-----------------------|---|---------------------|--------------------------------|----------------|-----------------------------------|----------------|----------|--------------|
| | 0 - 500 (rural) |] | 1 | 500 (sm | 1-15,000 mall city) | | 4 | Column 27 |
| | 500 - 2500 (small town |) 🗆 | 2 | 15, (me | 000-30,000 dium city) |) _□ | 5 | |
| | 2501-500 (large town |) 🗆 | 3 | 30, (1a | 001-100,00 rge city) | 00 🗆 | 6 | |
| | | 100,000 (very 1a | arge city) | 7 | | | | |
| R. | Sex: | | MALE 1 | FEM | ALE 2 | | | Column 28 |
| | | | | | | | | |
| s. | What is you | r age? | | | | | | |
| | Under 18 | 18-25 | 26-35 | 36-50 | 51-65 | 66+ | | Column 29 |
| Cod | e: 1 | 2 | 3 | 4 | 5 | 6 | | |
| т. | What is your | r occupat | ion? | | | | | |
| Cod | e: | | | Code: | | | | Column |
| 1 2 3 4 5 | Professional Technical Manager Craftsman Labourer | | | 7 Stu 8 Sal | emaker dent es i-Skilled | | | 30 |

| | | | | | Code | e | Colum |
|----|--------------------------|--|--------------------------|---------------------------|------------|-----------|---------------|
| | | Primary | | | 1 | | 31 |
| | | Secondary | | | 2 | | |
| | | Technical/Vocat | onal | | 3 | | |
| | | University (par | tial) | | 4 | | |
| | | University Degre | ee | | 5 | | |
| | | University (Mast | er, Ph.D.) | | 6 | | |
| ٧. | Check the total in Code: | ne box which best indi ncome of all people li | cates your ving in yo | TOTAL fami ur househol | ly income. | That is 1 | the Column |
| | 1 | under \$2,999 | 5 | \$10,000 - 1 | 1,999 | | 32 |
| | 2 | \$3,000 - 4,999 | 6 | \$15,000 - 19 | 9,999 | | |
| | 3 | □\$5,000 - 6,9 9 9 | 7 | \$20,000 - 24 | 1,999 | | |
| | 4 | ☐\$7,000 - 9,999 | 8 | \$25,000 and | over 🗌 | | |
| ₩. | If you w | ish to comment on the | survey, p | l e ase do so | here: | | |