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CANTWELL HOUSEHOLD SURVEY REPORT

FRANK F. ORTH & ASSOCIATES, INC.
UNDER CONTRACT TO
PULASKA-EBASCO
SUSITNA JOINT VENTURE

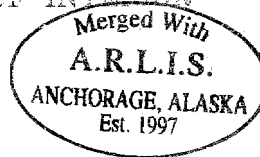
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SUSITNA HYDROELECTRIC PROJECT

CANTWELL HOUSEHOLD SURVEY REPORT

Report by

Frank Orth & Associates, Inc.

Under Contract to
Harza-Ebasco Susitna Joint Venture

Prepared for
Alaska Power Authority

Final Report
February 1984

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INTRODUCTION

Surveys of communities that are expected to be significantly affected by the construction and operation of the Susitna Hydroelectric Project were conducted as part of the Social Sciences Program to support the needs of the Alaska Power Authority. At present, the communities expected to be significantly affected by the construction and operation of the dam do not have much reported baseline economic and demographic information. In order to profile the communities and determine how they would respond to changes both before and during the construction and operation of the dam, a time-series data base on community trends is being developed to support the basis upon which impact projections are made. This household survey is designed to obtain information on demographic characteristics, employment, length of residency, housing characteristics, satisfaction with public services and facilities of residents living in Cantwell, and use by residents of fish and wildlife resources.

1.0 SUMMARY DISCUSSION OF MAJOR FINDINGS

Surveys of households in Cantwell were conducted during the period October 26, 1983 to October 31, 1983. An estimated 126 housing units existed in the survey defined area of Cantwell at that time. A total of 56 housing units were identified in the canvassed primary and secondary blocks of which 48 were successfully canvassed. Of the 48 housing units successfully canvassed, 20 were determined to be vacant and interviews were conducted with the remaining 28 households. An estimated 35 percent of the 81 households in Cantwell were interviewed.

- o A summary of demographic characteristics for Cantwell residents shows: 1) an estimated population size of 193 people; 2) an estimated average adult age of 43.7 years old; 3) an estimated sex distribution for adults in the sample of 63 percent male and 37 percent female; 4) approximately 18 percent of the adults sampled belong to a Native organization; 5) about 54 percent of the sample households contained married heads of household with the spouse present; 6) an estimated average household size of 2.38; and 7) 0.6 school-age children (5 to 17 years old) per household in the sample.

- o A summary of economic characteristics for Cantwell residents shows that: 1) 73 percent of all adults were in the labor force; 2) approximately 55 percent of all adults were either employed or self-employed; 3) the unemployment rate at the time of the survey was between 24 and 25 percent; 4) the largest industry sectors in terms of employment were federal, state and local government (about 26 percent), retail trade (over 23 percent), and services (about 19 percent), and construction (about 19 percent); and 5) about 69 percent of presently employed and recently unemployed adults in the sample at the time of the survey worked within 10 miles of Cantwell, over 2 percent of the sample worked on the North Slope, and almost 29 percent worked in other remote areas of Alaska or out-of-state.

- o A summary of housing characteristics for Cantwell residents shows that: 1) about 61 percent of the interviewed households lived in

owner-occupied dwelling units; 2) over 64 percent of all surveyed households lived in single-family dwellings, over 32 percent lived in mobile homes, and the remaining 4 percent lived in multi-family units; and 3) the vacancy rate in the sample was about 36 percent.

- o Over half of all replies received from Cantwell residents to questions about attitudes toward available public facilities and services in the community were classified as very satisfied or satisfied. For individual services, residents were most satisfied with ambulance (82 percent favorable) and state trooper protection (79 percent favorable). Residents expressed the most dissatisfaction with the solid waste or garbage disposal system (57 percent unfavorable) and the road system (29 percent unfavorable).
- o About 39 percent of the respondents lived outside Alaska prior to moving to Cantwell. Former Anchorage households made up over 17 percent of the Cantwell households in the sample, as did former Fairbanks households and Mat-Su Borough households. Frequently cited reasons for moving to Cantwell were to obtain a job (about 29 percent), for recreation opportunities (about 17 percent), and the availability of housing and availability of land (8 percent each).
- o Cantwell residents fish and hunt for recreation and food. About 67 percent of the population fishes and 56 percent hunt. About 13 percent (3) of the 24 households that fished in the sample, sought rainbow trout in the area that may be affected by the Susitna Hydroelectric Project. One percent of the total 1,093 fishing-days spent by Cantwell residents in the sample occurred in this area. Of the 21 sample households that hunted, 16 households hunted moose, 12 households sought caribou and ptarmigan, and 9 households went after rabbit in Area 1. Of the 817 hunter-days spent by Cantwell residents in the sample, 77 percent occurred in Area 1 and 8 percent in Area 2. Five households went after moose and caribou in Area 2, with fewer numbers going after all other species. About 13 percent of Cantwell residents trap. Of all trapping-days spent by Cantwell residents, 65 percent occurred in Area 1 and 29 percent occurred in Area 2. Important species in both areas include marten, lynx, wolf, red fox, and wolverine.

2.0 APPROACH AND METHODOLOGY

2.1 OVERVIEW

A number of steps were taken to determine the approach and methodology for the household survey in Cantwell. First, the major objectives and specific types of information needed to update the socioeconomic projections were identified. Next, a review of the literature on surveys was conducted. Third, the definitions of the populations for each of the three communities were determined.¹

A sampling frame and sampling methodology were selected.² The questions to be included in the interviews were then developed in conjunction with the formatting of the questionnaire. Finally, an interviewer guide was developed which laid out general guidelines for the interviewers and instructions on specific questions.

The questionnaire was extensively reviewed internally as well as by the Alaska Department of Community and Regional Affairs, the Alaska Department of Fish and Game, the Mat-Su Borough Planning Department, and Charlotte Thomas, an independent consultant. The survey instrument went through several iterations to reflect those review comments.

¹ In statistical theory, the population refers to the total universe of "data elements" about which the researcher wishes to generalize. In this case, the population refers to the households located, at the time of the survey, within specific geographic boundaries.

² A sampling frame is the comprehensive listing, of the population, from which the sample was chosen.

2.2 OBJECTIVES

The survey program was developed with the general objective that the results would enhance the following socioeconomic program activities:

1. Updating the data and assumptions on local baseline conditions.
2. Providing supplementary data that the Federal Energy Regulatory Commission requested after reviewing Exhibit E of the License Application for the Susitna project.
3. Refining and expanding the socioeconomic impact mitigation program and plan.
4. Comparing baseline data with information to be collected later as part of the socioeconomic impact monitoring program.

In addition, the project team adopted the following objectives relating to the design of the survey:

1. A methodologically sound approach that takes into account the rural nature of the area.
2. A data collection listing which is consistent to and complementary with other efforts/data bases such as the annual survey of population and housing conducted by the Mat-Su Borough Planning Department.
3. A survey instrument that can be used throughout project planning and construction.
4. A design that will facilitate tabulation.

The project team reviewed literature pertaining to statistical theory, sampling methodologies, the advantages and disadvantages of alternative

interview approaches, question formulation, questionnaire design, tabulation systems, and analytical techniques. In addition, the methodologies used in other surveys in Alaska were reviewed, including an Institute of Social and Economic Research survey used for the Tetrachemical Study in the Mat-Su Borough. Contacts were also made with individuals who have experience in conducting formal survey efforts in Alaska. Individuals contacted included Steve Langdon of the University of Alaska, Jack Kruse of the Institute of Social and Economic Research, and Don Dillman of Washington State University.

2.3 SAMPLING TECHNIQUE

Some of the considerations taken into account during this analysis included:

1. The need for a relatively large sample because of the small size of the population.
2. The significant percentage of residents in the Cantwell area that do not have phones.
3. The low density of housing units in many areas, and the significant percentage of residents that live away from direct road access.
4. The need for a high response rate, to avoid a skewed or unsuccessful survey.

It was believed that a representative sample of the preliminary population could best be obtained by using a face-to-face approach. Face-to-face approaches typically provide high response rates. In Cantwell, there were no disadvantages to using a face-to-face interview approach because the population was concentrated.

2.3.1 Sampling Frame

A listing of all housing units in the community, compiled by the Community of Cantwell, Inc. in 1982, provided the sampling frame in Cantwell. This sampling frame was considered to be the best available listing for the community at the time. Other possible listings, such as the phone book and voters registration records, were less comprehensive and would not provide a valid basis for the sampling. There is no local government in Cantwell or for the unorganized borough in which it is located, so an up-to-date listing of building permits and housing units was not available.

The use of the housing unit listing has the following limitations:

1. Some housing units are vacant.
2. The listing was about a year old.
3. Structures are classified by principal use; therefore, residences which are within or above commercial buildings may not be identified.

To compensate for the two most important of these limitations (#2 and #3), the sample was drawn in blocks. The interviewers were instructed to interview all housing units in the block, even if this unit did not appear on the listing. In order to limit the amount of time spent trying to locate residents in households that may not be occupied, the interviewer was instructed to attempt to contact a household up to three times, and then to list the unit as vacant or not-at-home, as appropriate. To facilitate the call-back process, a card was used by the interviewer that specified the next time a call would occur. If the respondent would not be home at that time, he or she was asked to state on the call-back card when they would be available and to leave the card out upon the interviewer's second call-back.

2.3.2 Sample Selection

A sample size of 30 percent of the housing units listed was established. The sample selection process used was similar to the process used by the Mat-Su Borough in its annual population surveys. The Community of Cantwell, Inc. provided a map (created in 1982) of known housing structures in the community which were grouped into blocks. The blocks were each assigned a number, and a sample of blocks was chosen using a random sample technique, as described below. All housing units in the designated blocks on the list were canvassed, in the block order listed.

A target number of successfully canvassed housing units was developed for the community. The primary blocks selected for the community contained more than the required 30 percent of housing units, in order to allow for unsuccessful interviews. However, a procedure was developed for canvassing secondary blocks in case the required number of successful interviews was not obtained.

If the interviewer was unable to meet the target number of households from within the primary block listings, for any of the reasons listed below, the interviewer was directed to canvass secondary blocks until the target was reached.

A housing unit was considered to be successfully canvassed if:

1. An interview occurred.
2. The unit was identified as vacant by a neighbor.
3. The interviewer attempted to call on the housing unit three times, at different times of day, was not able to find anyone at home and there was no evidence that the unit was currently occupied.

A housing unit was considered not successfully canvassed if:

1. The household declined to be interviewed.
2. The housing unit could not be located.
3. It was impossible to gain access to the housing unit.
4. It was clear that someone was living at the residence, even though 3 calls at the household were not sufficient to find a resident at home.

A cluster sampling technique, using random selection techniques within each cluster was deemed appropriate for sample selection in Cantwell because there was geographic stratification of the population. Two subgroups of the residents in Cantwell (Natives and non-Natives) were geographically concentrated in certain areas in the community. Three separate clusters of households were identified: 1) units clustered around the "old townsite," 2) housing near the junction of the Parks and Denali Highways, and 3) housing located along the Denali Highway to the east. To ensure the representativeness of the sample, blocks which accounted for 30 percent of the housing in each cluster were randomly selected using a random number table.

During the course of the survey, it was discovered that a large percentage of the housing in the sample of one of the clusters included vacant housing and non-residential structures, thus indicating a smaller population than first thought. The target sample size for this portion of Cantwell was increased to 60 percent (and residents living in secondary blocks were interviewed) in order to ensure the representativeness of the sample and to successfully canvass at least 30 percent of the existing housing units in the cluster.

For six months prior to the survey, Cantwell was a staging area for construction of the Anchorage-Fairbanks Intertie transmission line. The managers of the project lived in a project-specific mobile home park. However, the majority of workers on the Intertie project lived in one of the lodges in the community. They were not canvassed because of their

temporary status in Cantwell and because they are the subject of a construction worker survey which will be tabulated in early 1984. Thus, they are not heavily represented in the survey. Approximately 7 percent of the adults in the sample were working or had worked on the Intertie.

2.3.3 The Questionnaire

The survey instrument is 20 pages long. Four hand-out sheets were used to facilitate understanding of questions about employment status, industry of the employed, occupation, and attitudes about public facilities and services, and two maps were used to assist respondents in answering questions dependent upon geographic areas (most notably, questions pertaining to hunting, fishing, and trapping). A copy of the survey instrument is provided in Appendix B.

The field work was conducted between October 26, 1983 and November 2, 1983. The Cantwell interviewer completed 28 interviews in that time. The interviewer was familiarized with the substantive aspects of this questionnaire and reviewed basic interviewing techniques. In addition, this interviewer was given a written set of guidelines to follow should specific situations or questions arise. This information is contained in Appendix C.

The survey instrument was pre-tested in Cantwell on October 21-22, 1983. It was tested for its clarity, consistency, and logic of question ordering. It was also tested on Native and non-Native respondents and young and elderly residents to ensure comprehension by all of the respondents who were likely to be included in the sample. Modifications to the questionnaire were made as a result of the pre-test.

Completed questionnaires were checked each night for data problems or inconsistencies by the community interviewer.

3.0 ANALYSIS OF RESULTS

3.1 INTRODUCTION

Several conventions are followed throughout the analysis section to allow the reader quick and easy reference to the tables in Appendix A. Tables in the appendix are ordered in a sequence that corresponds to the way in which the questions appear in the survey instrument. Some responses will not appear in the appendix. Those responses not appearing at this time were not included because either they were contingent or secondary questions that received few responses or they are already incorporated in the text. Tables that appear in the text were referenced to a question that appears in the survey instrument. The instrument is presented as Appendix B.

Responses to the survey questions allow the researcher to derive sample statistics such as means or proportions. These statistics are used to generalize from the sample to the entire population. Sample statistics provide a point estimate of the true population parameter. However, due to sampling error, it would be an exceptional coincidence if the point estimate provided by the sample statistic were identical to the population parameter. A major weakness of point estimates is that they do not permit any expression of uncertainty about the sample statistic's ability to estimate the population parameter of interest. Uncertainty about estimating ability requires a procedure that calculates an interval about which one has a degree of certainty that the true population parameter is contained within a specified range.

Construction of confidence intervals was the technique employed to provide a degree of certainty about the sample statistic's ability to estimate the population parameter. The intervals are created about the sample statistic and require information about the probability of error that one is willing to accept, the size of the sample, the sampling distribution, and the sample statistic used as an estimator.

Smaller sample sizes, extreme values in the distribution of observations, and acceptable risks of error no larger than 10 percent led to several confidence intervals that were quite large for some of the sample statistics.

In calculating confidence intervals, the researcher determines the risk of error that is acceptable for the purposes of the research. A five percent probability of error that intervals constructed will not contain the true population parameter value is typically selected. Confidence levels are defined as one minus the probability of error. In this case, a 95 percent confidence interval procedure would be used. Construction of intervals using 95 percent confidence levels implies that in 95 out of 100 samples of the same size, the intervals constructed about the sample statistics would be expected to contain the population parameter value. In the other five intervals, the population parameter value would lie outside the interval constructed. In other words, by using this procedure we would be assured that the probability of any interval containing the population parameter value is 95 percent.

3.2 SURVEY RESULTS

3.2.1 Demographic Characteristics

Demographic characteristics that profile the population consist of age, sex, race, relationship to head of household, marital status, household size, number of school-age children, and size of the population.

3.2.1.1 Age. According to Table 1, children in Cantwell made up almost 24 percent of the persons in households while the elderly (65 or more years old) accounted for about 9 percent of the sample. There were fewer children and more elderly as a proportion of the Cantwell population as compared to the State. Recent State estimates (1982) show these proportions to have been 30 to 35 percent and 3 percent, respectively. Mean age of the sample was about 36 years while the median was 36 years. Similar values for the mean and median imply that the distribution of ages for the sample approximates a bell-shaped curve. In 1982, average age in Alaska was 27.6 years.

Adult inhabitants ranged in age from 19 years old to 75 years old. The median age of adults was 39 years old, and the mean age was 44 years.

Table 1
Age Distribution of Sample Residents

Age	Frequency Distribution	
	Number	Percent
0 - 4	3	4.5%
5 - 13	5	7.5%
14 - 17	8	11.9%
18 - 19	1	1.5%
20 - 29	10	14.9%
30 - 39	15	22.4%
40 - 49	7	10.4%
50 - 64	12	17.9%
65 +	6	9.0%
	<u>67</u>	<u>100.0%</u>
Median = 36.0		
Mean = 35.9		

Source: (Q27), Frank Orth & Associates, Inc., 1984.

3.2.1.2 Sex. About 63 percent of the adults in the sample were male, and 37 percent were female. The percentage of males in the 1982 State of Alaska population was between 52 and 53 percent. The true proportion for males in Cantwell, using a 95 percent confidence interval about the mean, would lie between 49 and 76 percent.

3.2.1.3 Member of Native Corporation. About 18 percent of the adults were members of a Native organization.

3.2.1.4 Household Relationships and Marital Status. About 51 percent (26) of the 51 adults in the sample stated that they were the head of household, and about 28 percent (14) were defined as spouses of the head of household. Six percent (3) of adults were defined as the parent of parent-in-law of the head of household, 8 percent (4) of the adults were defined as children of the head of household, and 4 percent (2) were classified as "other." Four percent of all adults were classified as non-related. The latter category represents a slightly smaller proportion of non-related households as compared to the State propor-

tion. The proportion of non-related individuals in households in the entire state during 1980 was estimated at almost 5 percent of all persons in households.

The average age of heads of household was about 42 years old. The defined heads of household in Cantwell were estimated to be about 81 percent male (21) and over 19 percent female (5). Two households had no clearly defined head.

The responses to questions about relationship to head of household indicated that about 55 percent of the adults in the sample were married and living with their spouses. A 95 percent confidence interval about the sample proportion is between 41 percent and 69 percent.

3.2.1.5 Household Size. Talkeetna had an average household size of 2.38 persons per household compared to the statewide average household size in 1980 of 2.93. The number of adults per household in Cantwell was estimated at 1.8.

3.2.1.6 School-Age Children. There were approximately 0.55 children per household in the sample. In total, the sample population was composed of about 5 percent pre-school children, about 8 percent primary school-age children, and about 12 percent secondary school-age children. Primary school-age children represented about 38 percent of total school-age children in the community.

The proportions of children per household were extended to the total estimated number of households that exist in Cantwell (81 households) to yield estimates of the total number of children in the community: 9 pre-school children, 14 primary school-age children, and 22 secondary school-age children. The estimate of 36 school-age children corresponds closely with the actual enrollment figures given for the Cantwell school of 32.

3.2.1.7 Population. There were 97 housing units in Cantwell during 1982. Based on 1983 survey results, the total was adjusted to 126 housing units in 1983. A vacancy rate of 35.7 percent was determined from sample results. The October vacancy rate was considered to be an approximate average for the year since, during the summer, many seasonal jobholders and householders are present in the area, causing vacancy rates to be lower than in October and, during January, those same seasonal jobholders and householders usually leave the area, causing the vacancy rates to be higher in Cantwell. Therefore, an overall occupancy rate for the community of 64.3 percent is considered accurate.

Multiplying the 126 housing units by the occupancy rate yields an estimated 81 occupied households in the community. Multiplying the number of households by the estimated average household size of 2.38 yields an estimated population of 193 people in Cantwell.

3.2.2 Economic Characteristics

Economic characteristics that profile the population consist of employment status, occupation status, industry of the employed, occupation of the unemployed, and the location of jobs. In addition, several characteristics can be combined from the household and business surveys to provide information on employment by place of work versus employment by place of residence, and commuting patterns.

3.2.2.1 Employment. All the adults in the sample were asked to describe their current employment status. According to Table 2, about 73 percent of adults in the sample (37) out of the 51 respondents described themselves as labor force participants which includes both employed and unemployed persons. Of the 37 adults, more than 76 percent were currently employed (or self-employed) and about 24 percent were unemployed but actively seeking work. Retired adults made up about 12 percent of the sample, homemakers made up close to 14 percent of the sample, and inactive unemployed accounted for 2 percent of the respondents.

Table 2
Employment Status

Category	Frequency Number	Distribution Percent
Employed or Self-Employed	28	54.9%
Retired	6	11.8%
Unemployed (Active)	9	17.6%
Unemployed (Inactive)	1	2.0%
Homemaker	7	13.7%
	<u>51</u>	<u>100.0%</u>

Source: (Q30), Frank Orth & Associates, Inc., 1984.

3.2.2.2 Hours Worked Per Week. Over 61 percent (27) of the respondents who were currently or recently employed were considered to be employed full-time. Full-time employment is defined as working at least 35 hours per week. About 18 percent worked less than 20 hours per week. Adults working between 20 and 34 hours accounted for over 20 percent of the sample. Results appear in Table 3.

Table 3
Hours Worked Per Week

Category	Frequency Number	Distribution Percent
0 - 9 Hours	3	6.8%
10 - 19 Hours	5	11.4%
20 - 29 Hours	8	18.2%
30 - 34 Hours	1	2.3%
35 or More Hours	<u>27</u>	<u>61.4%</u>
	44	100.1%
<u>Median = 35 or More Hours</u>		

Source: (Q36), Frank Orth & Associates, Inc., 1984.

3.2.2.3 Occupation and Industry. The primary occupation of respondents in the labor force was placed into categories used by the Alaska Department of Labor. Results appear in the Table 4 below. The occupation that represented the largest number of residents was the professional, technical, and managerial category.

Table 4
Primary Occupation

Category	Frequency Number	Distribution Percent
Professional, Technical, & Managers	9	22.5%
Clerical Workers and Sales Persons	5	12.5%
Service Workers	7	17.5%
Agriculture, Fishery and Forestry	3	7.5%
Machine Trades	2	5.0%
Benchwork	1	2.5%
Structural	3	7.5%
Recreation-Based Occupations	1	2.5%
Motor Freight and Transportation	4	10.0%
Mining	1	2.5%
Miscellaneous	4	10.0%
	<u>40</u>	<u>100.0%</u>

Source: (Q31), Frank Orth & Associates, Inc., 1984.

Secondary skills held by Cantwell residents were weighted toward the service occupation groups (about 26 percent), the service trades (about 23 percent), and the professional, technical, and managerial group (about 23 percent). Representing about 14 percent each of the 22 responses received to this question were the agriculture, fishery, and forestry occupations and structural trades. Other skills included machine trades, motor freight and transportation, mining, and miscellaneous.

Respondents were asked to identify the name of the establishment that they presently or most recently worked for. The establishments were subsequently classified into industry categories that are used by the Alaska Department of Labor. The largest industrial sector was the government, accounting for about 26 percent of the labor force. The second largest industry sector was retail trade, accounting for over 23 percent of the labor force. One reason for this is the effect of tourism during the summer.

Other large industry sectors were services and construction, each accounting for about 19 percent of the labor force. One reason for large number of jobs in the construction sector is related to the Intertie project. Agriculture, Forestry, and Commercial Fisheries accounted for about 7 percent of the total employment in the sample.

3.2.2.4 Location of Employment. According to Table 5, about 69 percent of the 45 currently employed residents and recently employed residents in the sample said that their job was located within 10 miles of their residence. Close to 2 percent had jobs on the North Slope. Almost 29 percent had jobs that were located outside of the Mat-Su Borough, Anchorage, Fairbanks, the North Slope, or the local area.

Table 5
Location of Principal Job

Category	Frequency Number	Distribution Percent
Local (Within 10 Miles)	31	68.9%
North Slope	1	2.2%
Elsewhere	13	28.9%
	<u>45</u>	<u>100.0%</u>

Source: (Q35), Frank Orth & Associates, Inc., 1984.

3.2.2.5 Business Ownership. Slightly more than 35 percent (18) of all adults in Cantwell owned a business. Many of these businesses were in the services sector and the retail trade sector. Services included hotels, guiding services, and air taxi services. In addition, retail trade business types consisted of service stations, taverns, restaurants and grocery stores.

3.2.2.6 Seasonality of Employment. The number of full-time employed adults varied from about 37 percent of the total 51 adults in October and November to 57 percent in August during 1983, as shown in Table 6. Comparing the peak and valley months of full-time employment during 1983

with average employment of about 24 adults shows that seasonal variations have ranged from 123 percent of average to as low as 81 percent.

Table 6
 Seasonality of Baseline Full-time Employment Patterns in Cantwell
 (As a Percent of All Adults and As a Percent of Average Full-time
 Employment)
 N = 51

Month	Baseline Full-time Employment		
	Number	Percent of Adults	Percent of Average*
October	19	37.3%	80.5
November	19	37.3%	80.5
December	20	39.2%	84.7
January	22	43.1%	93.2
February	22	43.1%	93.2
March	20	39.2%	84.7
April	21	41.2%	89.0
May	25	49.0%	105.9
June	28	54.9%	118.6
July	29	56.9%	122.9
August	29	56.9%	122.9
September	29	56.9%	122.9

* Average Monthly Full-time Employment = 23.6.

Source: (Q63 to Q74); Frank Orth & Associates, 1984.

3.2.2.7 Estimate of Total Employment in the Community. It was estimated that 1 adult per household was employed on average (28 employed residents divided by 28 households). Multiplying this by the estimated 81 occupied households in the survey defined area yields a total of 81 employees by place of residence. Place of work estimates can be obtained by adding the responses to employment from surveys of businesses, the public sector, and the Intertie construction worker survey. Place of work estimates for Cantwell are 185 jobs. Since about 69 percent of all residents work within 10 miles, 57 of the 81 employees by place of residence were estimated to work in Cantwell. Twenty-four commuted to jobs outside the area. Of the 185 jobs in Cantwell, 57 belonged to Cantwell residents and 128 were estimated to belong to non-residents.

3.2.2.8 Transportation And Travel. Information about travel behavior and preferences for commuting were obtained from respondents. Using the approximate mid-points of each classification in the frequency distribution tables, it was possible to develop an estimate of the amount of time respondents were spending traveling to work and the amount of time they were willing to spend traveling to work. The majority of respondents have been spending about 30 minutes per day traveling in their current or most recent job, according to Table 7.

Table 7
Average One-Way Daily Commute Time

Category	Frequency Distribution	
	Number	Percent
Less Than 30 Minutes	33	91.7%
31 to 60 Minutes	2	5.6%
1 Hour (And Some Minutes)	1	2.8%
	<u>36</u>	<u>100.1%</u>

Source: (Q52), Frank Orth & Associates, Inc., 1984.

An average of 3.1 round trips to work were made each week by residents of Cantwell, according to Table 8. Eleven respondents used more than one mode of transportation to get to work. The preferred mode of transportation was use of a personal motor vehicle. About 66 percent of the 35 respondents use such transportation to get to work, 40 percent travel on foot or use a bicycle to get to their place of employment, over 11 percent use some form of non-personal motor vehicle (usually employer-owned), and over 14 percent go to work by plane some the of time. The latter responses were divided between 1 airline pilot, 2 airport operators, and one guide.

Table 8
Number of Round Trips to Work Per Week

Category	Frequency Distribution	
	Number	Percent
Less Than One	3	7.5%
One	1	2.5%
Two	3	7.5%
Three	1	2.5%
Four	7	17.5%
Five	7	17.5%
Six	6	15.0%
Seven Or More	<u>12</u>	<u>30.0%</u>
	40	100.0%

Source: (Q53), Frank Orth & Associates, Inc., 1984.

On average, respondents were willing to travel up to 1 hour and 46 minutes a day to get to and from work. In jobs that require only one round trip per week, respondents would be willing to travel about 3 hours and 23 minutes each way to their job.

3.2.3 Housing Characteristics

Housing characteristics of interest in the survey include home ownership patterns, dwelling unit types, vacancy rates, and information on housing stock characteristics. A total of 28 responses were possible for household characteristics.

3.2.3.1 Type of Structure. Housing unit types were tabulated for households with which interviews were conducted. Results appear in Table 9. Of the 28 responses to this question, over 64 percent (18) of the households were living in single-family dwelling units, between 32 and 33 percent resided in mobile homes on single-family lots, and about 4 percent lived in multi-family dwelling units.

Table 9
Housing Type

Category	Frequency Number	Distribution Percent
Single Family	18	64.3%
Multi-Family	1	3.6%
Mobile Home on S-F Lot	8	28.6%
Mobile Home In Mobile Home Park	1	3.6%
	<u>28</u>	<u>100.0%</u>

Source: (Q20), Frank Orth & Associates, Inc., 1984.

3.2.3.2 Ownership Characteristics. Over 60 percent (17) of the 28 households interviewed owned the dwelling unit that they lived in, while over 21 percent of the interviewed households contained renters. The remaining five housing units, comprising about 18 percent of the sample, were owned by businesses, which used them to house their employees. A 95 percent confidence interval about the sample ownership proportion implies that the true proportion would lie between 43 and 79 percent.

3.2.3.3 Vacancy Rates. A vacancy rate was tabulated for all 56 housing units that were in the sample blocks. About 36 percent (20) of the housing units were determined to be vacant in the sample blocks at the time the survey was taken. A ninety-five percent confidence about the sample proportion for vacancy rate implies that the true proportion would lie between 23 percent and 48 percent.

3.2.3.4 Housing Characteristics. Each household in the sample was asked whether five characteristics existed in the household. The percentage responding positively to each characteristic is shown below in Table 10.

Table 10
Housing Characteristics
N = 28

Category	Frequency Number	Distribution Percent
Cold Running Water	19	67.8%
Hot Running Water	17	60.7%
Septic Tank	22	78.5%
Telephone	17	60.7%
Electricity	20	71.4%

Source: (Q22), Frank Orth & Associates, Inc., 1984.

Households were also asked about the type of fuel they use to heat their dwelling. Of the 28 responses received, over 46 percent (13) said they relied primarily on oil, about 29 percent (8) said they relied primarily on wood, over 7 percent (2) said they relied on kerosene or coal, and about 18 percent (5) relied on other fuel sources. Other fuel sources included some form of electric heat.

3.2.4 Resident Attitudes About Public Facilities and Services

Inhabitants of Cantwell were asked to rank their level of satisfaction (which included five options) with available facilities and services. Respondents could also answer with no opinion. In addition, no response was considered as not applicable since many services were not immediately available to respondents. Twenty-eight responses were obtained for most of these questions, except for mental health services which received three and outdoor recreation facilities which received 26. Results appear in Table 11.

Most of the 13 services included in the survey instrument were locally available to residents of Cantwell. One exception was mental health

services. This service was obtained from outside the area. In addition, medical care and services besides ambulance and social services were only locally available in limited quantities.

Ambulance received the highest percentage of positive responses (82 percent), followed by state trooper protection (79 percent), and libraries (68 percent). Over 57 percent of the respondents were dissatisfied or very dissatisfied with the solid waste or garbage disposal facility, and cited poor disposal procedures, unsanitary conditions, minimal maintenance, and wind blown debris as reasons. The road system also received a high number of unfavorable responses (29 percent) because of problems related to infrequent maintenance and the quality of the maintenance when it is performed. Outdoor recreation facilities also received a high percentage of dissatisfied responses (15 percent), mainly due to the limited number of such facilities near Cantwell.

Table 11
Levels of Satisfaction with Selected Public Facilities and Services*
N = 28

Facility or Service	Very Satis- fied	Satisfied	Neither Satis- fied nor Dis satisfied	Dissat- isfied	Very Dis- satisfied	No Opin- ion
State Trooper Pro- tection	25.0%	53.6%	10.7%	3.6%	7.1%	0.0%
Schools	25.0%	32.1%	14.3%	3.6%	3.6%	21.4%
Fire Protection	21.4%	42.9%	14.3%	3.6%	3.6%	14.3%
Solid Waste or Garbage Disposal	3.6%	25.0%	10.7%	28.6%	28.6%	3.6%
Ambulance	28.6%	53.6%	0.0%	7.1%	0.0%	10.7%
Other Medical Care & Services	14.3%	53.6%	17.9%	7.1%	0.0%	7.1%
Road System	21.4%	35.7%	14.3%	21.4%	7.1%	0.0%
Other Transportation	7.1%	35.7%	21.4%	14.3%	7.1%	14.3%
Mental Health Services	0.0%	0.0%	0.0%	33.3%	33.3%	33.3%
Social Services	3.6%	28.6%	25.0%	3.6%	3.6%	35.7%
Libraries	35.7%	32.1%	3.6%	10.7%	0.0%	17.9%
Indoor Recreation Facilities	25.0%	32.1%	21.4%	10.7%	3.6%	7.1%
Outdoor Recreation Facilities	15.4%	42.3%	15.4%	15.4%	0.0%	11.5%

* The percentages in this table all add up to 100 percent except for some minor differences due to rounding.

Source: (Q23), Frank Orth & Associates, Inc., 1984.

Respondents were also asked to rank their levels of satisfaction with their water supply and wastewater systems. As shown in Table 12, most respondents were satisfied with their water quantity (about 97 percent) and somewhat less were satisfied with water quality (82 percent) and their septic tank system (74 percent). The source of the water for almost 93 percent of Cantwell residents was from the ground. Only 7 percent received their drinking water from surface sources.

Table 12
Levels of Satisfaction with Water and Wastewater Treatment Systems

Water Characteristic	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied	No Opinion	Total
Water Quantity	53.6%	42.9%	0.0%	3.6%	0.0%	0.0%	100.0%
Water Quality	53.6%	28.6%	7.1%	7.1%	3.6%	0.0%	100.0%
Septic Tank	29.6%	44.4%	3.7%	7.4%	7.4%	7.4%	100.0%

Source: (Q24), Frank Orth & Associates, Inc., 1984.

3.2.5 Residency and Settlement Patterns

Residency and settlement pattern characteristics include seasonality of residents, length of residency, and reasons for choosing to settle in Cantwell.

3.2.5.1 Residency and Seasonality. It is important to differentiate between the population of a community at a certain point in time from the number of residents in the community because the State of Alaska distributes certain types of grants to local governments on the basis of the number of people who qualify as residents. The State of Alaska defines a

resident as one who lives in a community more than six months of the year or four or more days a week on an annual basis.

Accordingly, questions similar to those in the Mat-Su Borough survey of population and housing were asked of respondents about the amount of time spent in Cantwell. Two residents in the sample of 51 adults answered that they usually work outside of Cantwell in one-week work/one-week home or two-week work/two-week home schedules, and thus would not qualify with the residency requirement of living in Cantwell four days a week or more. About 4 percent of all adult inhabitants would not be classified as residents based on this criterion.

Seasonal variations are important factors in explaining the number of year-round residents and in estimating the demand on public facilities and services in the community. The survey data suggest that only 76 percent of the population living in the community in October 1983 were there year-round according to Table 13.

The monthly difference in the number of adult inhabitants who live in Cantwell throughout the year was identified in the sample results. The number of adults living in Cantwell in October 1982 to January 1983 was equal to about 85 percent of the number living in the community in September of 1983. Because seasonality of residence was directly related to the seasonality of employment, it is likely that seasonal residents are also those with summer jobs. The loss in jobs after the summer 1982 tourist season, followed by an expansion of jobs in the tourist-related industrial sectors and on the Intertie construction project were probably responsible for some of the variation in seasonal residence patterns.

Table 13
Seasonality of Adult Residents
N = 51

Category	Number	Percent
October	39	76.5%
November	39	76.5%
December	39	76.5%
January	39	76.5%
February	40	78.4%
March	40	78.4%
April	40	78.4%
May	42	82.4%
June	42	82.4%
July	41	80.4%
August	42	82.4%
September	46	90.2%
Monthly Averages Within Quarter		
First Quarter	39.0	
Second Quarter	39.7	
Third Quarter	41.3	
Fourth Quarter	43.0	

Source: (Q5), Frank Orth & Associates, Inc., 1984.

The trend in seasonal residence noted above does reflect an influx of population related to the Intertie construction project, rather than usual seasonal fluctuations. The Intertie project began hiring employees in Cantwell in the Spring of 1983. In the autumn, employment had begun to increase. The effect of the Intertie on the length of residency can be seen in Table 14; these figures show that about 22 percent of the adult inhabitants interviewed in Cantwell have lived in the community for less than 2 years, with almost 18 percent having moved into the community in the six months prior to the survey. Of the 9 residents who arrived within the last six months, 44 percent (4) were new residents who were working on the Intertie. These four residents contributed to the variations shown in seasonal residence patterns over the last 12 months.

Table 14
Length of Residence

Category	Frequency Distribution	
	Number	Percent
Less than 6 Months	9	17.6%
6 Months to Less Than 2 Years	2	3.9%
2 - 5 Years	7	13.7%
6 - 9 Years	12	23.5%
10+ Years	21	41.2%
	<u>51</u>	<u>99.9%</u>

Median = 8.0 years

Source: (Q26); Frank Orth & Associates, Inc., 1984.

3.2.5.2 Prior Location of Residence. Respondents were asked to state where they lived prior to moving to Cantwell and why they chose to move to Cantwell. About 39 percent of residents (9) lived out-of-state before moving to Cantwell, according to Table 15. Other sources of in-migrants included the communities in the Mat-Su Borough (17 percent), Anchorage (17 percent), and other communities in the Railbelt (17 percent), excluding the Mat-Su Borough, Anchorage, and Fairbanks. Other locations in Alaska including Fairbanks and remote areas accounted for about 9 percent of the in-migrants in Cantwell.

Table 15
Prior Location of the Household

Category	Frequency Distribution	
	Number	Percent
A Community in the Mat-Su Borough	4	17.4%
Anchorage	4	17.4%
Fairbanks	1	4.3%
Other Railbelt	4	17.4%
Other Alaska	1	4.3%
Out-Of-State	9	39.1%
	<u>23</u>	<u>99.9%</u>

Source: (Q17), Frank Orth & Associates, Inc., 1984.

3.2.5.3 Reasons For Moving. As shown in Table 16, the most frequently cited reasons for moving to Cantwell were related to obtaining a job (29 percent), the proximity to work (17 percent), the availability of housing (8 percent), and the availability of land (8 percent). Other reasons which accounted for 25 percent of the respondents' answers include dislike of urban environment, scenic beauty of area, peace and quiet, job transfer, and positive attitudes toward urban living. Four households had always lived in Cantwell.

Table 16
Reasons for Moving to Present Location

Category	Frequency Distribution	
	Number	Percent
To Obtain a Job	7	29.2%
To Set Up a Business	1	4.2%
Availability of Land, Land Disposal, Homestead Opportunity	2	8.3%
Availability of Housing	2	8.3%
Recreation--Hunting/Fishing/Outdoor Rec.	1	4.2%
Proximity To Work	4	16.7%
Quality of Life	1	4.2%
Other	6	25.0%
	<u>24</u>	<u>100.1%</u>

Source: (Q18a and b), Frank Orth & Associates, Inc., 1984.

Additional reasons for moving, as shown in Table 17, were weighted heavily toward different reasons including recreation (14 percent), friends or relatives living nearby (14 percent), and "other" (43 percent). Similar to the primary reason for moving to Talkeetna, scenic beauty and positive attitude toward rural lifestyle were cited frequently under this category. The element of chance, seeking adventure, and affection for the type of people living here were also cited as reasons for moving.

Table 17
Additional Reasons for Moving to Present Location

Category	Frequency Number	Distribution Percent
To Obtain A Job	1	7.1%
Availability of Land/Land Disposal/ Homestead Opportunity	1	7.1%
Recreation--Hunting/Fishing/Outdoor Rec.	2	14.3%
Friend or Relatives Nearby	2	14.3%
School System	1	7.1%
Proximity To Work	1	7.1%
Other	6	42.9%
	<u>14</u>	<u>99.9%</u>

Source: (Q17, Q18), Frank Orth & Associates, Inc., 1984.

3.2.6 Fish and Wildlife Resource Use

These questions were asked of households so that questions related to frequency distributions could contain a total of 28 responses. The percentages and calculations in this section should be used with a great deal of caution, as it is highly speculative to base conclusions on fish and wildlife use on data collected for a twelve month period from one point in time.

3.2.6.1 Fishing Activity. The average number of people per household who fish was estimated at 1.6 persons per household. Based on an estimated number of 81 occupied households, there are about 130 people in Cantwell who fish. About 86 percent of the households had at least one person who fishes.

There were a total of 1,093 person-days spent by the 45 people in the sample who fish, and 1 percent of the days (11) were spent in Area 1 (see Map 1 in Appendix B).

Data on the species sought by people who fish in Area 1 were gathered from responses to questions about person-days spent fishing in Area 1 and what species were sought. In the sample, the households that fish were

most likely to fish for rainbow trout, (13 percent), salmon (4 percent) especially silver and king, and grayling, burbot, or dolly varden (4 percent each), as shown in Table 18. Percentages represent the number of households that fished in Area 1 for a species in the past twelve months, out of the total number of households in the sample who responded that they fish in Area 1.

Table 18
Households That Fish in Area 1 by Species Sought
N = 24

Category	Number	Percent
Salmon:	1	4.2%
Red or Sockeye	0	0.0%
Pink or Humpy	0	0.0%
Silver or Coho	1	4.2%
Chum or Dog	0	0.0%
King or Chinook	1	4.2%
Grayling	1	4.2%
Rainbow Trout	3	12.5%
Burbot	1	4.2%
Dolly Varden	1	4.2%

Source: (Q61); Frank Orth & Associates, 1984.

As shown in Table 19, one-half of the 24 households that fish responded that their primary reason is sport and recreation. About 42 percent stated that their main reason for fishing was food. Four percent indicated that obtaining income was their main reason. The remaining 4 percent gave a combination of reasons, including food and sport, as the main reason for fishing. No respondents mentioned fishing for cultural reasons.

Table 19
Main Reason For Fishing

Category	Frequency Distribution	
	Number	Percent
Food	10	41.7%
Sports & Recreation	12	50.0%
Money/Income	1	4.2%
Other	1	4.2%
	24	100.0%

Source: (Q58), Frank Orth & Associates, Inc., 1984.

Answers to the question about the percentage of protein supplied from fishing activities give an idea of the extent to which local residents rely on fishing for food. Of the three households responding to the question, about 33 percent said that none of their protein needs were met by fishing and about 67 percent of the households said that up to one quarter of their protein needs during the last year were met by fishing activities. Because of the small number of responses to this question, caution should be exercised in using responses to this question. Results appear in Table 20.

Table 20
Fish as a Percent of Annual Protein Needs

Category	Frequency Distribution	
	Number	Percent
None	1	33.3%
Less Than One Quarter	2	66.7%
	3	100.0%

Source: (Q62), Frank Orth & Associates, Inc., 1984.

A final question about the importance of fishing in Area 1 for recreation was asked of the twenty households. Of the 14 households responding, 43 percent (6) stated that Area 1 was important or very important to their recreational fishing activities. About 43 percent of the households answered that Area 1 was not so important for recreation and over 14 percent (2) responded that Area 1 was unimportant.

3.2.6.2 Hunting Activity. Approximately 75 percent of the households contain people that hunt. The average number of people per household who hunt was estimated at 1.32 persons per household. Based on an estimated number of 81 occupied households, there were an estimated 107 people in Cantwell who hunt. A 95 percent confidence interval about the sample mean of 1.32 implies that the true mean would lie between 0.9 and 1.7.

There were a total of 817 person-days spent by the 37 people in the sample who hunt; 77 percent of the days (629) were spent in Area 1 and 8 percent (65) of the days were spent in Area 2 (see Map 2 in Appendix B). In all, 85 percent of all person-days were spent in either Area 1 or 2. Area 1 represents those areas within 10 miles of the Parks Highway and Denali Highway corridors. Area 2 represents the area that would be made more accessible if an access road is built from the Denali Highway to the project site.

The distribution of species sought by people in Cantwell who hunt in Area 1 was gathered from responses to questions about person-days spent hunting in Area 1 and Area 2 and what species were sought. In addition, the total harvest by species was also asked of households. Harvest information has been summarized in Table 21 for Area 1 and Area 2.

Table 21
Harvest Count For Sample Household For Area 1 and 2 by Species

Species	Area 1 1983 Harvest Count	Area 2 1983 Harvest Count
Moose	1	0
Caribou	9	1
Rabbit	62	3
Spruce Hen	20	0
Red Fox	3	0
Ptarmigan	201	214
Squirrel	12	0
Wolverine	2	0

Source: (Q72a to 1, Q73a to 1), Frank Orth & Associates, Inc., 1984.

None of the 21 households in the sample that hunt in Area 1 or Area 2 did so for cultural reasons, according to Table 22. About 90 percent hunted primarily for food and approximately 10 percent hunted primarily for sport. The importance of food to households that hunt was borne out by the number of subsistence permits issued by the Alaska Department of Fish and Game. About 49 percent (18) of the 37 sample respondents that hunt had subsistence permits.

Table 22
Main Reason For Hunting

Category	Frequency Number	Distribution Percent
Food	19	90.5%
Sports & Recreation	<u>2</u>	<u>9.5%</u>
	21	100.0%

Source: (Q67), Frank Orth & Associates, Inc., 1984.

Answers to the question about the percentage of protein supplied from hunting activities revealed a substantial reliance upon hunting in the last year to support protein needs. According to Table 23, about 32 percent (6) of the 19 responding households said that less than one-quarter of their protein needs during the last year were met by hunting activities, about 16 percent (3) said that between one-quarter and one-half of their protein needs were met by hunting activities in the last year, about 11 percent (2) received one-half of their protein needs from hunting activities, and about 16 percent (3) received more than one-half of their protein needs from these activities. However, more than 26 percent (5) said that none of their protein needs were met by hunting during the last year. This means that several households which hunted primarily for food, according to Table 22, were unsuccessful in obtaining meat from hunting activities last year.

Table 23
Game as a Percent of Annual Protein Needs

Category	Frequency Number	Distribution Percent
None	5	26.3%
Less Than One Quarter	6	31.6%
One Quarter To One Half	3	15.8%
About One Half	2	10.5%
One Half to Three Quarters	2	10.5%
More Than Three Quarters	<u>1</u>	<u>5.3%</u>
	19	100.0%

Source: (Q75), Frank Orth & Associates, Inc., 1984.

A final question about the importance of hunting in Areas 1 and 2 for recreation was answered by the 13 households that indicated they hunt for sport. About 85 percent (11) of these respondents (representing 39.2 percent of the overall sample of 28 households) stated that Areas 1 and 2 were very important or important to their recreational hunting activities. The other 15 percent (2) of the respondents indicated that Areas 1 and 2 were not so important to their recreational hunting activities.

3.2.6.3 Trapping Activities. Slightly more than 21 percent of the households in the sample contained people who trap. The average number of people per household who trap was estimated at 0.32 persons per household. Based on an estimated number of 81 occupied households, there may be about 26 people who live in Cantwell who trap. A ninety-five percent confidence about the sample mean for people per household who trap implies that the true mean would lie between 0.07 people and 0.57 people per household in 95 out of 100 samples of size 28 drawn from the population.

There were a total of 311 person-days spent trapping by the 9 people in the sample who trap. Sixty-five percent (202) of the person-days were spent in Area 1 and 29 percent (90) of those days were spent in Area 2 (see Map 2 in Appendix B). In all, 94 percent of all the person-days spent trapping occurred in either Area 1 or Area 2.

The species sought by people in Cantwell who trap in Area 1 was gathered from responses to questions about person-days spent trapping in Area 1 and Area 2 and what species were sought. In addition, the total harvest by species was also asked of households. Harvest information has been summarized in Table 24.

Table 24
Harvest Count For Sample Households For Area 1 And Area 2 by Species

Species	Area 1 1983 Harvest Count	Area 2 1983 Harvest Count
Marten	0	40
Lynx	1	13
Mink	8	4
Muskrat	20	0
Wolverine	2	4
Red Fox	11	67
Silver Fox	0	1
Wolf	0	1

Source: (Q72a to 1, Q73a to 1), Frank Orth & Associates, Inc., 1984.

Fifty percent of the six households (3) that responded to questions about the main reason for trapping stated that recreation was the primary reason for trapping. One-third of the households gave "other" as the reason for trapping. "Other" included a combination of reasons such as income with cultural reasons or personal consumption. According to Table 25, the remaining respondent said that trapping for income was the primary reason.

Table 25
Main Reason For Trapping

Category	Frequency Number	Distribution Percent
Sports/Recreation	3	50.0%
Money/Income	1	16.7%
Other	2	33.3%
	<u>6</u>	<u>100.0%</u>

Source: (Q80), Frank Orth & Associates, Inc., 1984.

Five respondents answered the question about the percentage of income gained from trapping activities, and two indicated that they had gained no income from trapping during the previous 12 months. The other three respondents received less than one quarter of their annual income from such activities. Results appear in Table 26.

Table 26
Trapping as a Percent of Yearly Income

Category	Frequency Number	Distribution Percent
None	2	40.0%
Less Than One Quarter	3	60.0%
	<u>2</u>	<u>100.0%</u>

Source: (Q87), Frank Orth & Associates, Inc., 1984.

A final question about the importance of trapping in Areas 1 and 2 for recreation was asked of the 28 households. Of the 2 households responding, both stated that Areas 1 and 2 were very important or important to their recreational trapping activities.

3.2.7 Community Change

Households were asked if they had noticed any changes in their community since 1980. Over 96 percent (27) of the 28 respondent households answered in the affirmative and about 4 percent noticed no changes at all. Thirty different changes were cited by the survey respondents. The most noticeable change in Cantwell was the large increase in population. Thirteen of the 28 respondents mentioned this change. Related changes that were commonly mentioned include: 1) increase in employment opportunities from the Intertie, although several mentioned that few local hires were made; 2) increase in the number of new businesses; 3) changes in community facilities such as the new fire hall, new ambulance, expansion of the school, and the community center; and 4) increase in the number of new homes, primarily

U.S. Housing and Urban Development sponsored homes. In terms of the life-style effects on residents from the population increase, several additional changes were noticed. First, several respondents said that there was less interaction between people than before. Second, there was more fighting and drugs in town than before. Third, there was more traffic in town. Finally, road maintenance appeared to be getting worse according to several respondents.

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APPENDIX A

02/07/84

HOUSEHOLD SURVEY/CANTWELL
MEAN AND STANDARD DEVIATIONS

	MEAN AND STANDARD DEVIATION	
	MEAN	STAND DEV
ADULTS PER HOUSEHOLD	1.8	0.6
PRE-SCHOOL AGE CHILDREN	0.1	0.4
PRIMARY SCHOOL AGE CHILDREN	0.2	0.5
SECONDARY SCHOOL AGE CHILDREN	0.3	0.7
HOUSEHOLD AVERAGE	2.4	

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HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

		FREQUENCY DISTRIBUTION	
HSEHLDS WITH YEAR-ROUND RESID. STAYING LESS THAN 4 DAYS/WEEK		NUMBER	PERCENT
YES		02	7.1%
NO		26	92.9%
		---	-----
		28	100.0%

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HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

		FREQUENCY DISTRIBUTION	
HSEHOLDS WITH RESIDENTS OUTSIDE COMM. DURING LAST 12 MOS.		NUMBER	PERCENT
YES		11	39.3%
NO		17	60.7%
		---	-----
		28	100.0%

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HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
HOME OWNERSHIP		
OWN/BUYING	17	60.7%
RENT	06	21.4%
OTHER	05	17.9%
	---	-----
	28	100.0%

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HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

WATER SOURCE	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
SURFACE	02	7.1%
GROUND	26	92.9%
	---	-----
	28	100.0%

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HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

PRIMARY HEAT SOURCE	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
WOOD BURNING HEATER	08	28.6%
OIL HEATER	13	46.4%
PROPANE OR KEROSENE HEATERS	01	3.6%
COAL BURNING STOVE	01	3.6%
OTHER	05	17.9%
	---	-----
	28	- 100.1%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

RELATIONSHIP TO HEAD OF HOUSEHOLD	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
SPOUSE	14	27.5%
PARENT OR PARENT-IN-LAW	03	5.9%
SON OR DAUGHTER	04	7.8%
ROOMMATE OR FRIEND	02	3.9%
OTHER	02	3.9%
HEAD OF HOUSEHOLD	26	51.0%
	-----	-----
	51	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

AGE OF HEAD OF HOUSEHOLD

	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
18-19 YEARS	1	3.8%
20-44 YEARS	13	50.0%
45-64 YEARS	8	30.7%
65 + YEARS	<u>4</u>	<u>15.4%</u>
TOTAL	26	99.9%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
MEAN AND STANDARD DEVIATIONS

	MEAN AND STANDARD DEVIATION	
	MEAN	STAND DEV
LENGTH OF RESIDENCE (IN YEARS)	11.7	15.3
AGE	43.7	15.2

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

	FREQUENCY DISTRIBUTION	
SEX	NUMBER	PERCENT
MALE	32	62.7%
FEMALE	19	37.3%
	---	-----
	51	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

		FREQUENCY DISTRIBUTION	
NATIVE HERITAGE		NUMBER	PERCENT
YES		09	17.6%
NO		42	82.4%
		---	-----
		51	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

INDUSTRY CATAGORIES	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
AGRICULTURE, FORESTRY, & COMMERCIAL FISHERIES	03	7.0%
AGRICULTURE, FORESTRY, & COMMERCIAL FISHERIES	01	2.3%
CONSTRUCTION	08	18.6%
MANUFACTURING	01	2.3%
TRANSPORTATION, COMMUNICATION, & UTILITIES	01	2.3%
RETAIL TRADE	10	23.3%
SERVICES	08	18.6%
FEDERAL GOVERNMENT	07	16.3%
STATE GOVERNMENT	04	9.3%
	---	-----
	43	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

		FREQUENCY DISTRIBUTION	
BUSINESS OWNERSHIP		NUMBER	PERCENT
YES		18	35.3%
NO		33	64.7%
		---	-----
		51	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

PREFERENCE FOR AVERAGE DAILY COMMUTING TIME	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
LESS THAN 15 MINUTES	08	19.0%
15 TO 29 MINUTES	05	11.9%
30 TO 60 MINUTES	11	26.2%
1 HOUR	13	31.0%
2 HOURS	01	2.4%
NOT APPLICABLE	04	9.5%
	---	-----
	42	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

PREFERENCE FOR AVERAGE WEEKLY COMMUTE TIME	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
LESS THAN 30 MINUTES	05	11.9%
31 TO 60 MINUTES	03	7.1%
1 HOUR (AND SOME MINUTES)	02	4.8%
2 HOURS (AND SOME MINUTES)	05	11.9%
3 HOURS (AND SOME MINUTES)	04	9.5%
4 HOURS (AND SOME MINUTES)	05	11.9%
5 HOURS (AND SOME MINUTES)	05	11.9%
6 HOURS OR MORE	05	11.9%
NOT APPLICABLE	08	19.0%
	---	----
	42	99.9%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
MEAN AND STANDARD DEVIATIONS

		MEAN AND STANDARD DEVIATION	
		MEAN	STAND DEV
HOUSEHOLDS WITH	PEOPLE THAT FISH	1.6	1.1
HOUSEHOLDS WITH	PEOPLE THAT HUNT	1.3	1.1
HOUSEHOLDS WITH	PEOPLE THAT TRAP	0.3	0.7

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

DOES THE HOUSEHOLD CONTAIN PEOPLE THAT FISH?	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
YES	24	85.7%
NO	04	14.3%
	---	---
	28	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

HOUSEHOLDS WITH _____ PEOPLE THAT FISH	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
0	04	14.3%
1	10	35.7%
2	09	32.1%
3	03	10.7%
4	02	7.1%
	---	-----
	28	99.9%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

TOTAL PERSON DAYS/FISHING	1093.00
FREQUENCY OF USE OF AREA/FISHING	1.00 %

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

IMPORTANCE OF FISHING IN AREA 1-RECREATION	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
VERY IMPORTANT	02	14.3%
IMPORTANT	04	28.6%
NOT SO IMPORTANT	06	42.9%
UNIMPORTANT	02	14.3%
	---	-----
	14	100.1%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

DOES THE HOUSEHOLD CONTAIN PEOPLE THAT HUNT?	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
YES	21	75.0%
NO	07	25.0%
	---	----
	28	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

	HOUSEHOLDS WITH _____ PEOPLE THAT HUNT	FREQUENCY DISTRIBUTION	
		NUMBER	PERCENT
0		07	25.0%
1		09	32.1%
2		09	32.1%
3		02	7.1%
4		01	3.6%
		---	----
		28	99.9%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

TOTAL PERSON DAYS/HUNTING	817.00
% OF TOTAL PERSON DAYS HUNTING/AREA1	77.00 %
% OF TOTAL PERSON DAYS HUNTING/AREA2	8.00 %

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

OF HOUSEHOLDS HUNTING FOR (SPECIES) IN AREA 1
AS A PERCENT OF TOTAL HOUSEHOLDS THAT HUNT
N = 21

CATEGORY	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
MOOSE	16	76.2%
CARIBOU	12	57.1%
SHEEP	01	4.8%
BLACK BEAR	02	9.5%
WOLF	01	4.8%
PTARMIGAN	12	57.1%
GRIZZLY BEAR	2	9.5%
RABBIT	9	42.9%
SPRUCE HEN	6	28.6%
SQUIRREL	1	4.8%
RED FOX	1	4.8%
LYNX	1	4.8%
WOLVERINE	1	4.8%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

OF HOUSEHOLDS HUNTING FOR (SPECIES) IN AREA 2
AS A PERCENT OF TOTAL HOUSEHOLDS THAT HUNT
N = 21

CATEGORY	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
MOOSE	5	23.8%
CARIBOU	5	23.8%
BLACK BEAR	2	9.5%
WOLF	1	4.8%
PTARMIGAN	3	14.3%
RABBIT	2	9.5%
GRIZZLY BEAR	2	9.5%
SPRUCE HEN	1	4.8%
RED FOX	1	4.8%
LYNX	1	4.8%
WOLVERINE	1	4.8%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

IMPORTANCE OF HUNTING IN AREAS #1 AND #2- RECREATION	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
VERY IMPORTANT	10	76.9%
IMPORTANT	01	7.7%
NOT SO IMPORTANT	02	15.4%
	---	-----
	13	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

DOES THE HOUSEHOLD CONTAIN PEOPLE THAT TRAP?	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
YES	06	21.4%
NO	22	78.6%
	----	-----
	28	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

	HOUSEHOLDS WITH _____ PEOPLE THAT TRAP	FREQUENCY DISTRIBUTION	
		NUMBER	PERCENT
0		22	78.6%
1		03	10.7%
2		03	10.7%
		-----	-----
		28	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

TOTAL PERSON DAYS/TRAPPING	311.00
% OR TOTAL PERSON DAYS TRAPPING/AREA 1	65.00 %
% OF TOTAL PERSON DAYS TRAPPING/AREA 2	29.00 %

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

OF HOUSEHOLDS TRAPPING FOR (SPECIES) IN AREA 1
AS A PERCENT OF TOTAL HOUSEHOLDS THAT TRAP
N = 6

CATEGORY	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
BEAVER	2	33.3%
MARTEN	1	16.7%
LYNX	3	50.0%
MINK	2	33.3%
MUSKRAT	1	16.7%
OTTER	1	16.7%
RED FOX	4	66.7%
WOLVERINE	3	50.0%
WOLF	3	50.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTIONS

OF HOUSEHOLDS TRAPPING FOR (SPECIES) IN AREA 2
AS A PERCENT OF TOTAL HOUSEHOLDS THAT TRAP
N = 6

CATEGORY	FREQUENCY DISTRIBUTION	
	NUMBER	PERCENT
MARTEN	1	16.7%
LYNX	4	66.7%
MINK	2	33.3%
RED FOX	4	66.7%
WOLVERINE	4	66.7%
WOLF	4	66.7%
SILVER FOX	1	16.7%
CROSS FOX	1	16.7%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

	FREQUENCY DISTRIBUTION NUMBER	PERCENT
IMPORTANCE OF TRAPPING IN AREAS #1 AND #2- RECREATION		
VERY IMPORTANT	01	50.0%
IMPORTANT	01	50.0%
	-----	-----
	02	100.0%

02/07/84

HOUSEHOLD SURVEY/CANTWELL
FREQUENCY DISTRIBUTION REPORTS

		FREQUENCY DISTRIBUTION	
ANY CHANGES NOTICED IN COMMUNITIES		NUMBER	PERCENT
NO		01	3.6%
YES		27	96.4%
		----	-----
		28	100.0%

APPENDIX B

Questionnaire #: _____

SUSITNA HYDROELECTRIC PROJECT
HOUSEHOLD SURVEY

Community: _____
Interviewer: _____
Date: _____

Location of Household:

Block #: _____ Housing Unit # (assigned, by interviewer): _____

First Contact Attempt:

Contact Made: 1. YES
2. NO

Comments:

Second Contact Attempt:

Contact Made: 1. YES
2. NO

Comments:

Third Contact Attempt:

Contact Made: 1. YES
2. NO

Comments:

Hello, my name is _____ and I am conducting a survey for the Alaska Power Authority (SHOW IDENTIFICATION). We would like you to participate in this survey. Your answers will be completely confidential and voluntary, and will be greatly appreciated.

This study is part of the Susitna Hydroelectric Project. Its purpose is to provide current information on the _____ area that can be used for project planning.

The questions are about housing, characteristics of the people in your household, hunting and fishing that you do, and recent changes in your community. IF THEY REQUEST MORE INFORMATION, SHOW SUSITNA BROCHURE OR APA LETTER.

I need to speak with someone 18 years or older that lives here. Would that be you?

The first set of questions will focus on the size of your household and the length of time that you have lived here.

Q-1 Are you the head of this household?

1. YES
2. NO
3. NO HEAD OF HOUSEHOLD

Q-2a How many adults (age 18 or older) live in this household?
IF THIS IS NOT CLEAR, SAY: I mean, all adults who consider this their permanent residence, including people that are not related to you.

FOR A CHILD THAT STAYS PART-TIME, RECORD AS A FRACTION IN QUESTIONS 2b-2d

Q-2b How many children under 5 years of age live in this household?

MAKE SURE THAT THE RESPONDENT INCLUDED INFANTS.

Q-2c How many children ages 5 through 11 live in this household?

Q-2d How many children ages 12 through 17 live in this household?

Q-3a Are there any household members that live here all year round, but usually stay here less than four days per week?

IF 1, ANSWER FOLLOWING QUESTION

1. YES
2. NO

Q-3b (IF 1) How many?

Q-4 Did you or other household members live outside _____ (Cantwell, Trapper Creek, or Talkeetna) sometime in the last 12 months?

IF YES, ANSWER QUESTIONS 5-16

1. YES
2. NO

Q:5-16 In which months during the last twelve months did you not live here?

How about the other adults in your household? Which months during the last twelve months did they not live here?

Respondent	Adult #2	Adult #3	Adult #4	Adult #5	Adult #6
5a ___ OCTOBER	5b ___ OCTOBER	5c ___ OCTOBER	5d ___ OCTOBER	5e ___ OCTOBER	5f ___ OCTOBER
6a ___ NOVEMBER	6b ___ NOVEMBER	6c ___ NOVEMBER	6d ___ NOVEMBER	6e ___ NOVEMBER	6f ___ NOVEMBER
7a ___ DECEMBER	7b ___ DECEMBER	7c ___ DECEMBER	7d ___ DECEMBER	7e ___ DECEMBER	7f ___ DECEMBER
8a ___ JANUARY	8b ___ JANUARY	8c ___ JANUARY	8d ___ JANUARY	8e ___ JANUARY	8f ___ JANUARY
9a ___ FEBRUARY	9b ___ FEBRUARY	9c ___ FEBRUARY	9d ___ FEBRUARY	9e ___ FEBRUARY	9f ___ FEBRUARY
10a ___ MARCH	10b ___ MARCH	10c ___ MARCH	10d ___ MARCH	10e ___ MARCH	10f ___ MARCH
11a ___ APRIL	11b ___ APRIL	11c ___ APRIL	11d ___ APRIL	11e ___ APRIL	11f ___ APRIL
12a ___ MAY	12b ___ MAY	12c ___ MAY	12d ___ MAY	12e ___ MAY	12f ___ MAY
13a ___ JUNE	13b ___ JUNE	13c ___ JUNE	13d ___ JUNE	13e ___ JUNE	13f ___ JUNE
14a ___ JULY	14b ___ JULY	14c ___ JULY	14d ___ JULY	14e ___ JULY	14f ___ JULY
15a ___ AUGUST	15b ___ AUGUST	15c ___ AUGUST	15d ___ AUGUST	15e ___ AUGUST	15f ___ AUGUST
16a ___ SEPTEMBER	16b ___ SEPTEMBER	16c ___ SEPTEMBER	16d ___ SEPTEMBER	16e ___ SEPTEMBER	16f ___ SEPTEMBER

Q-17 Where was your household located before it came to _____?
(Cantwell, Trapper Creek, or Talkeetna)

- a. TOWN/CITY: _____
- b. STATE: _____
- c. COUNTRY: _____
- d. ENTER CODE: _____

- 1. ANOTHER COMMUNITY IN THE MAT-SU BOROUGH
- 2. ANCHORAGE
- 3. FAIRBANKS
- 4. OTHER RAILBELT
- 5. OTHER ALASKA
- 6. OUT-OF-STATE

Q-18 What are the two most important reasons the household moved here?

- a. _____: Reason #1
- b. _____: Reason #2

- 1. TO OBTAIN A JOB
- 2. TO SET UP A BUSINESS
- 3. AVAILABILITY OF LAND/LAND DISPOSAL/HOMESTEAD OPPORTUNITY
- 4. AVAILABILITY OF HOUSING
- 5. RECREATION--HUNTING/FISHING/OUTDOOR RECREATION
- 6. INEXPENSIVE TO LIVE
- 7. BORN OR RAISED HERE
- 8. FRIENDS OR RELATIVES NEARBY
- 9. QUALITY OF HOUSING
- 10. SHOPPING FACILITIES
- 11. COMMUNITY SERVICES
- 12. SCHOOL SYSTEM
- 13. PROXIMITY TO WORK
- 14. QUALITY OF LIFE
- 15. OTHER _____

The next set of questions deal with the type of housing you live in.

Q-19 Does the household own or rent this dwelling?

- 1. OWN/BUYING IT
- 2. RENT
- 3. OTHER _____

Q-20 DO NOT ASK UNLESS IT IS NOT OBVIOUS
What type of home is this?

- _____
1. SINGLE FAMILY
 2. DUPLEX
 3. MULTIFAMILY BUILDING (BUILDING FOR THREE OR MORE FAMILIES)
 4. MOBILE HOME ON SINGLE FAMILY LOT
 5. MOBILE HOME IN MOBILE HOME PARK
 6. TRAVEL TRAILER
 7. ROOM/CABIN IN A LODGE
 8. TENT OR OTHER TENT-LIKE STRUCTURE
 9. OTHER _____

Q-21 Where do you get your water?

- _____
1. SURFACE
 2. GROUND

Q-22 Does the home you live in have:

- _____ a. Cold Running Water..... 1. YES 2. NO
- _____ b. Hot Running Water..... 1. YES 2. NO
- _____ c. Septic Tank..... 1. YES 2. NO
- _____ d. Telephone..... 1. YES 2. NO
- _____ e. Electricity..... 1. YES 2. NO
(HOOKUP OR GENERATOR) IF 1, ANSWER NEXT QUESTION

:
:
f. What is your main source of electricity?

- _____
1. MATANUSKA ELECTRIC ASSOCIATION
 2. GENERATOR
 3. BUY ELECTRICITY FROM NEIGHBOR/NEARBY BUSINESS
 4. OTHER _____

g. How do you heat your home?

WRITE DOWN MORE THAN ONE CODE, IF APPLICABLE.

- I. _____
- II. _____
- III. _____

1. WOOD-BURNING HEATER
2. OIL HEATER
3. GAS-FIRED HEATER
4. PROPANE OR KEROSENE HEATERS
5. COAL BURNING STOVE
6. OTHER _____

Q-23 I'd like to ask you to rank, on a scale of 1 to 7, your satisfaction with the following public facilities and services (SHEET A). Of course, some of these are provided by the state and some by the Mat-Su Borough (IF IN CANTWELL, SAY other governmental entities). NO FRACTIONAL SCORES.

IF 4 OR 5, ASK Why?

- a. _____ State Trooper protection _____

- b. _____ Schools _____

- c. _____ Fire Protection _____

- d. _____ Solid Waste or Garbage disposal _____

- e. _____ Ambulance _____

- f. _____ Other Medical Care & Services _____

- g. _____ Road System _____

- h. _____ Other transportation (Railroad, airports) _____

- i. _____ Mental Health Services _____

- j. _____ Social Services (GIVE EXAMPLES) _____
Mental Health, Alcohol Treatment _____
- k. _____ Libraries _____

- l. _____ Indoor Recreation Facilities _____

- m. _____ Outdoor Recreation Facilities _____

Q-24 How do you rate, on a scale of 1 to 7, your water and waste water treatment system?

- a. _____ Quantity of Water _____

- b. _____ Water Quality _____

- c. _____ Septic Tank or Other Sewage System _____

This next section contains questions about employment. I'll be asking you questions about each adult that lives in your household. You said there were ___ adults. Let's begin with yourself.

	<u>Respondent</u>	<u>Adult #2 in Hsehd</u>	<u>Adult #3 in Hsehd</u>
First Name	_____	_____	_____
Q-25 What is your relationship to the head of household?	a _____ 1. SPOUSE 2. PARENT OR PARENT IN-LAW 3. SON OR DAUGHTER 4. GRANDPARENT 5. ROOMMATE OR FRIEND 6. OTHER _____	b _____ 1. SPOUSE 2. PARENT OR PARENT IN-LAW 3. SON OR DAUGHTER 4. GRANDPARENT 5. ROOMMATE OR FRIEND 6. OTHER _____	c _____ 1. SPOUSE 2. PARENT OR PARENT IN-LAW 3. SON OR DAUGHTER 4. GRANDPARENT 5. ROOMMATE OR FRIEND 6. OTHER _____
Q-26 How long has (USE FIRST NAME) lived in _____? (INSERT COMMUNITY NAME)	a _____	b _____	c _____
Q-27 What is your age?	a _____	b _____	c _____
Q-28 Is that person male or female?	a _____ 1. Male 2. Female	b _____ 1. Male 2. Female	c _____ 1. Male 2. Female
Q-29 Are you a member of a native, regional, or village Corporation?	a _____ 1. YES 2. NO	b _____ 1. YES 2. NO	c _____ 1. YES 2. NO
Q-30 Which category best describes your present employment status? (SHEET B)	a _____ 1. Employed or self-employed 2. Retired 3. Unemp. (active) 4. Unemp. (inactive) 5. Homemaker 6. Student 7. Disabled	b _____ 1. Employed or self-employed 2. Retired 3. Unemp. (active) 4. Unemp. (inactive) 5. Homemaker 6. Student 7. Disabled	c _____ 1. Employed or self-employed 2. Retired 3. Unemp. (active) 4. Unemp. (inactive) 5. Homemaker 6. Student 7. Disabled
Q-31 What do you do for a living (primary occupation)?	a. _____	b. _____	c. _____
INTERVIEWER PUTS INTO CATEGORY (SHEET D)	a. _____	b. _____	c. _____

Adult #4 in Hsehd

Adult #5 in Hsehd

Adult #6 in Hsehd

First Name

d _____

e _____

f _____

Q-25 What is your relationship to the head of household?

d _____

- 1. SPOUSE
- 2. PARENT OR PARENT IN-LAW
- 3. SON OR DAUGHTER
- 4. GRANDPARENT
- 5. ROOMMATE OR FRIEND
- 6. OTHER _____

e _____

- 1. SPOUSE
- 2. PARENT OR PARENT IN-LAW
- 3. SON OR DAUGHTER
- 4. GRANDPARENT
- 5. ROOMMATE OR FRIEND
- 6. OTHER _____

f _____

- 1. SPOUSE
- 2. PARENT OR PARENT IN-LAW
- 3. SON OR DAUGHTER
- 4. GRANDPARENT
- 5. ROOMMATE OR FRIEND
- 6. OTHER _____

Q-26 How long has (USE FIRST NAME) lived in _____? (INSERT COMMUNITY NAME)

d _____

e _____

f _____

Q-27 What is your age?

d _____

e _____

f _____

Q-28 Is that person male or female?

d _____

- 1. Male
- 2. Female

e _____

- 1. Male
- 2. Female

f _____

- 1. Male
- 2. Female

Q-29 Are you a member of a native, regional, or village Corporation?

d _____

- 1. YES
- 2. NO

e _____

- 1. YES
- 2. NO

f _____

- 1. YES
- 2. NO

Q-30 Which category best describes your present employment status? (SHEET B)

d _____

- 1. Employed or self-employed
- 2. Retired
- 3. Unemp. (active)
- 4. Unemp. (inactive)
- 5. Homemaker
- 6. Student
- 7. Disabled

e _____

- 1. Employed or self-employed
- 2. Retired
- 3. Unemp. (active)
- 4. Unemp. (inactive)
- 5. Homemaker
- 6. Student
- 7. Disabled

f _____

- 1. Employed or or self-employed
- 2. Retired
- 3. Unemp. (active)
- 4. Unemp. (inactive)
- 5. Homemaker
- 6. Student
- 7. Disabled

Q-31 What do you do for a living (primary occupation)?

d. _____

e. _____

f. _____

INTERVIEWER PUTS INTO CATEGORY (SHEET D)

d. _____

e. _____

f. _____

Respondent

Adult #2 in Hsehd

Adult #3 in Hsehd

Q-32 Is there anything else you do for a living (secondary occupation)?

- a. _____
1. YES
 2. NO

- b. _____
1. YES
 2. NO

- c. _____
1. YES
 2. NO

Q-33 IF YES TO Q-32, what else do you do for a living?

a. _____

b. _____

c. _____

INTERVIEWER PUTS INTO CATEGORY (SHEET D)

a. _____

b. _____

c. _____

Q-34 Who do you work for now or most recently?

a. _____

b. _____

c. _____

INTERVIEWER PUTS INTO CATEGORY (SHEET C)

a. _____

b. _____

c. _____

IF THEY HAVE MORE THAN ONE EMPLOYER, ANSWER FOR PRINCIPAL JOB.

Q-35 Where is/was your principal/last job located? [Is it within 10 miles of your home?]

- a. _____
1. Local(w/in 10 mi)
 2. Other Mat-Su
 3. Anchorage
 4. Fairbanks
 5. North Slope
 6. Elsewhere

- b. _____
1. Local(w/in 10mi)
 2. Other Mat-Su
 3. Anchorage
 4. Fairbanks
 5. North Slope
 6. Elsewhere

- c. _____
1. Local(w/in 10 mi)
 2. Other Mat-Su
 3. Anchorage
 4. Fairbanks
 5. North Slope
 6. Elsewhere

Q-36 About how many hours per week do/did you work?

- a. _____
1. 0-9
 2. 10-19
 3. 20-29
 4. 30-34
 5. 35 or more

- b. _____
1. 0-9
 2. 10-19
 3. 20-29
 4. 30-34
 5. 35 or more

- c. _____
1. 0-9
 2. 10-19
 3. 20-29
 4. 30-34
 5. 35 or more

Q-37 If you are working part-time (34 hours or less per week), would you be interested in working full-time?

- a. _____
1. YES
 2. NO
 3. POSSIBLY

- b. _____
1. YES
 2. NO
 3. POSSIBLY

- c. _____
1. YES
 2. NO
 3. POSSIBLY

Adult #4 in Hsehd

Adult #5 in Hsehd

Adult #6 in Hsehd

Q-32 Is there anything else you do for a living (secondary occupation)?

d. _____
1. YES
2. NO

e. _____
1. YES
2. NO

f. _____
1. YES
2. NO

Q-33 IF YES TO Q-32, what else do you do for a living?

d. _____

e. _____

f. _____

INTERVIEWER PUTS INTO CATEGORY (SHEET D)

d. _____

e. _____

f. _____

Q-34 Who do you work for now or most recently?

d. _____

e. _____

f. _____

INTERVIEWER PUTS INTO CATEGORY (SHEET C)

d. _____

e. _____

f. _____

IF THEY HAVE MORE THAN ONE EMPLOYER, ANSWER FOR PRINCIPAL JOB

Q-35 Where is/was your principal/last job located? [Is it within 10 miles of your home?]

d. _____
1. Local(w/in 10 mi)
2. Other Mat-Su
3. Anchorage
4. Fairbanks
5. North Slope
6. Elsewhere

e. _____
1. Local(w/in 10mi)
2. Other Mat-Su
3. Anchorage
4. Fairbanks
5. North Slope
6. Elsewhere

f. _____
1. Local(w/in 10 mi)
2. Other Mat-Su
3. Anchorage
4. Fairbanks
5. North Slope
6. Elsewhere

Q-36 About how many hours per week do/did you work?

d. _____
1. 0-9
2. 10-19
3. 20-29
4. 30-34
5. 35 or more

e. _____
1. 0-9
2. 10-19
3. 20-29
4. 30-34
5. 35 or more

f. _____
1. 0-9
2. 10-19
3. 20-29
4. 30-34
5. 35 or more

Q-37 If you are working part-time (34 hours or less per week), would you be interested in working full-time?

d. _____
1. YES
2. NO
3. POSSIBLY

e. _____
1. YES
2. NO
3. POSSIBLY

f. _____
1. YES
2. NO
3. POSSIBLY

WORKING OR UNEMPLOYED, ASK THE FOLLOWING QUESTIONS

	<u>Respondent</u>	<u>Adult #2 in Hsehd</u>	<u>Adult #3 in Hsehd</u>
38-49 During which of the past twelve calendar months were you employed or self- employed full-time?	38a ___ OCTOBER	38b ___ OCTOBER	38c ___ OCTOBER
	39a ___ NOVEMBER	39b ___ NOVEMBER	39c ___ NOVEMBER
	40a ___ DECEMBER	40b ___ DECEMBER	40c ___ DECEMBER
	41a ___ JANUARY	41b ___ JANUARY	41c ___ JANUARY
	42a ___ FEBRUARY	42b ___ FEBRUARY	42c ___ FEBRUARY
	43a ___ MARCH	43b ___ MARCH	43c ___ MARCH
	44a ___ APRIL	44b ___ APRIL	44c ___ APRIL
	45a ___ MAY	45b ___ MAY	45c ___ MAY
	46a ___ JUNE	46b ___ JUNE	46c ___ JUNE
	47a ___ JULY	47b ___ JULY	47c ___ JULY
	48a ___ AUGUST	48b ___ AUGUST	48c ___ AUGUST
	49a ___ SEPTEMBER	49b ___ SEPTEMBER	49c ___ SEPTEMBER

Q-50 . Have you owned your own business during the last 12 months?	a _____	b _____	c _____
	1. YES	1. YES	1. YES
	2. NO	2. NO	2. NO

IF WORKING OR UNEMPLOYED, ANSWER THE FOLLOWING QUESTIONS

38-49 During which of the
past twelve calendar
months were you
employed or self-
employed?

38d ___ OCTOBER
39d ___ NOVEMBER
40d ___ DECEMBER
41d ___ JANUARY
42d ___ FEBRUARY
43d ___ MARCH
44d ___ APRIL
45d ___ MAY
46d ___ JUNE
47d ___ JULY
48d ___ AUGUST
49d ___ SEPTEMBER

38e ___ OCTOBER
39e ___ NOVEMBER
40e ___ DECEMBER
41e ___ JANUARY
42e ___ FEBRUARY
43e ___ MARCH
44e ___ APRIL
45e ___ MAY
46e ___ JUNE
47e ___ JULY
48e ___ AUGUST
49e ___ SEPTEMBER

38f ___ OCTOBER
39f ___ NOVEMBER
40f ___ DECEMBER
41f ___ JANUARY
42f ___ FEBRUARY
43f ___ MARCH
44f ___ APRIL
45f ___ MAY
46f ___ JUNE
47f ___ JULY
48f ___ AUGUST
49f ___ SEPTEMBER

Q-50 Have you
owned your
own business during
the last 12 months?

d _____
1. YES
2. NO

e _____
1. YES
2. NO

f _____
1. YES
2. NO

INSTRUCTIONS FOR INTERVIEWER: ASK QUESTIONS 51-53 FOR EACH ADULT WHO IS CURRENTLY OR RECENTLY EMPLOYED, AND FOR THE JOB THAT REQUIRES THE MOST TRAVEL TIME.

Q-51 How do you travel to work now (or in the most recent job that required travel)?

<u>Respondent</u>	<u>Adult #2 in Hsehd</u>	<u>Adult #3 in Hsehd</u>
a1 _____	b1 _____	c1 _____
a2 _____	b2 _____	c2 _____
a3 _____	b3 _____	c3 _____

1. PERSONAL MOTORIZED VEHICLE (CAR, TRUCK, VAN)
2. BUS
3. TRAIN
4. OTHER MOTOR VEHICLE
5. PLANE
6. ON FOOT/BICYCLE
7. NOT APPLICABLE

Q-52 What is the average time it takes/took to travel one way to work?

<u>Respondent</u>	<u>Adult #2 in Hsehd</u>	<u>Adult #3 in Hsehd</u>
a _____	b _____	c _____

1. LESS THAN 30 MINUTES
2. 31 TO 60 MINUTES
3. 1 HOUR (AND SOME MINUTES)
4. 2 HOURS (AND SOME MINUTES)
5. 3 HOURS (AND SOME MINUTES)
6. 4 HOURS (AND SOME MINUTES)
7. 5 HOURS (AND SOME MINUTES)
8. 6 HOURS OR MORE
9. NOT APPLICABLE

Q-53 How many round-trips to work do/did you make in an average week?

<u>Respondent</u>	<u>Adult #2 in Hsehd</u>	<u>Adult #3 in Hsehd</u>
a _____	b _____	c _____

1. LESS THAN ONE
2. ONE
3. TWO
4. THREE
5. FOUR
6. FIVE
7. SIX
8. SEVEN OR MORE
9. NOT APPLICABLE

INSTRUCTIONS FOR INTERVIEWER: ASK QUESTIONS 51-53 FOR EACH ADULT WHO IS CURRENTLY OR RECENTLY EMPLOYED, AND FOR THE JOB THAT REQUIRES THE MOST TRAVEL TIME.

Q-51 How do you travel to work now (or in the most recent job that required travel)?

Adult #4 in Hsehd

d1 _____
d2 _____
d3 _____

Adult #5 in Hsehd

e1 _____
e2 _____
e3 _____

Adult #6 in Hsehd

f1 _____
f2 _____
f3 _____

1. PERSONAL MOTORIZED VEHICLE (CAR, TRUCK, VAN)
2. BUS
3. TRAIN
4. OTHER MOTOR VEHICLE
5. PLANE
6. ON FOOT/BICYCLE
7. NOT APPLICABLE

Q-52 What is the average time it takes/took to travel one way to work?

Adult #4 in Hsehd

d _____

Adult #5 in Hsehd

e _____

Adult #6 in Hsehd

f _____

1. LESS THAN 30 MINUTES
2. 31 TO 60 MINUTES
3. 1 HOUR (AND SOME MINUTES)
4. 2 HOURS (AND SOME MINUTES)
5. 3 HOURS (AND SOME MINUTES)
6. 4 HOURS (AND SOME MINUTES)
7. 5 HOURS (AND SOME MINUTES)
8. 6 HOURS OR MORE
9. NOT APPLICABLE

Q-53 How many round-trips to work do/did you make in an average week?

Adult #4 in Hsehd

d _____

Adult #5 in Hsehd

e _____

Adult #6 in Hsehd

f _____

1. LESS THAN ONE
2. ONE
3. TWO
4. THREE
5. FOUR
6. FIVE
7. SIX
8. SEVEN OR MORE
9. NOT APPLICABLE

INSTRUCTIONS TO INTERVIEWER: ASK QUESTIONS 54-55 OF RESPONDENT AND ANY OTHER ADULT MEMBER OF HOUSEHOLD THAT IS PRESENT

Q-54 What is the average amount of time you would be willing to travel to work one way on a daily basis?

Respondent

a _____

Adult #2 in Hsehd

b _____

Adult #3 in Hsehd

c _____

1. LESS THAN FIFTEEN MINUTES
2. 15 TO 29 MINUTES
3. 30 MINUTES - 60 MINUTES
4. 1 HOURS
5. 2 HOURS
6. 3 HOURS
7. 4 HOURS OR MORE
8. NOT APPLICABLE

Q-55 What is the average amount of time you would be willing to travel to work one way on a weekly basis?

Respondent

a _____

Adult #2 in Hsehd

b _____

Adult #3 in Hsehd

c _____

1. LESS THAN THIRTY MINUTES
2. 31 TO 60 MINUTES
3. 1 HOUR (AND SOME MINUTES)
4. 2 HOURS (AND SOME MINUTES)
5. 3 HOURS (AND SOME MINUTES)
6. 4 HOURS (AND SOME MINUTES)
7. 5 HOURS (AND SOME MINUTES)
8. 6 HOURS OR MORE

INSTRUCTIONS TO INTERVIEWER: ASK QUESTIONS 54-55 OF RESPONDENT AND ANY OTHER ADULT MEMBER OF HOUSEHOLD THAT IS PRESENT

Q-54 What is the average amount of time you would be willing to travel to work one way on a daily basis?

Adult #4 in Hsehd

d _____

Adult #5 in Hsehd

e _____

Adult #6 in Hsehd

f _____

1. LESS THAN FIFTEEN MINUTES
2. 15 TO 29 MINUTES
3. 30 MINUTES - 60 MINUTES
4. 1 HOURS
5. 2 HOURS
6. 3 HOURS
7. 4 HOURS OR MORE
8. NOT APPLICABLE

Q-55 What is the average amount of time you would be willing to travel to work one way on a weekly basis?

Adult #4 in Hsehd

d _____

Adult #5 in Hsehd

e _____

Adult #6 in Hsehd

f _____

1. LESS THAN THIRTY MINUTES
2. 31 TO 60 MINUTES
3. 1 HOUR (AND SOME MINUTES)
4. 2 HOURS (AND SOME MINUTES)
5. 3 HOURS (AND SOME MINUTES)
6. 4 HOURS (AND SOME MINUTES)
7. 5 HOURS (AND SOME MINUTES)
8. 6 HOURS OR MORE

This last set of questions concerns the hunting, fishing and/or trapping that you or members of this household may do. The purpose of these questions is to get an idea of how construction of the dam could affect your hunting, fishing, and trapping activities.

Fishing

Q-56 Do you or other members of your household fish?

a. _____ (IF YES, HOW MANY?) b. _____

1. YES
2. NO

IF THE ANSWER TO QUESTION 56 IS NO, SKIP TO QUESTION 65.

Q-57 What are the reasons you or other household members fish?

IF ONLY ONE REASON IS GIVEN, ASK "Are There Any Other Reasons?"

REASON #1 _____

REASON #2 _____

REASON #3 _____

1. FOR FOOD
2. FOR SPORT/RECREATION
3. FOR CULTURAL REASONS
4. FOR MONEY/INCOME
5. OTHER

Q-58 Of these reasons, what is the main reason?

Q-59 How many total days have you and other members of your household spent fishing in the last twelve months? (INTERVIEWER SHOULD PROVIDE AN EXAMPLE SO THE RESPONDENT UNDERSTANDS THAT WE ARE CONCERNED WITH FINDING OUT THE TOTAL PERSON-DAYS FOR ALL MEMBERS OF THE HOUSEHOLD). IF TWO PEOPLE ON A GIVEN DAY, WERE OUT FISHING FOR ANY PART OF THE DAY, THAT WOULD BE COUNTED AS TWO PERSON-DAYS

Q-60 How many total days have you and members of your household spent fishing in the last 12 months in the area shown on the map?

Q-61 What kinds of fish does your household catch in this area? (show map)

- a. _____ SALMON (IF THEY SAY SALMON, ASK THEM TO BE MORE SPECIFIC)
- b. _____ RED OR SOOKEYE
- c. _____ PINK OR HUMPY
- d. _____ SILVER OR COHO
- e. _____ CHUM OR DOG
- f. _____ KING OR CHINOOK
- g. _____ GRAYLING
- h. _____ RAINBOW TROUT
- i. _____ BURBOT
- j. _____ DOLLY VARDEN
- k. _____ OTHER (specify) _____, _____, _____

Q-62 Of the total amount of meat and fish eaten by your household during the last 12 months, what portion comes from this area?

- _____
- 1. NONE
 - 2. LESS THAN ONE QUARTER
 - 3. ONE QUARTER TO ONE HALF
 - 4. ABOUT ONE HALF
 - 5. ONE HALF TO THREE QUARTERS
 - 6. MORE THAN THREE QUARTERS

ASK QUESTIONS 63 AND 64 ONLY IF CULTURAL AND RECREATION WERE GIVEN AS REASONS IN QUESTION 57.

Q-63 Of all your cultural activities, how important is fishing in the area shown on the map?

- _____
- 1. VERY IMPORTANT
 - 2. IMPORTANT
 - 3. NOT SO IMPORTANT
 - 4. UNIMPORTANT

Q-64 Of all your recreational activities, how important is fishing in the area shown on the map?

- _____
- 1. VERY IMPORTANT
 - 2. IMPORTANT
 - 3. NOT SO IMPORTANT
 - 4. UNIMPORTANT

Hunting

Q-65 Do you or other members of your household hunt?

a. _____ (IF YES, HOW MANY?) b. _____

1. YES
2. NO

IF THE ANSWER TO QUESTION 65 IS NO, SKIP TO QUESTION 78.

Q-66 What are the reasons you or other household members hunt?

IF ONLY ONE REASON IS GIVEN, ASK "Are There Any Other Reasons?"

a. _____ REASON #1
b. _____ REASON #2
c. _____ REASON #3

1. FOR FOOD
2. FOR SPORT/RECREATION
3. FOR CULTURAL ACTIVITIES
4. FOR MONEY/INCOME
5. OTHER

Q-67 Of those reasons, what is the main reason?

Q-68 Do you or other household members have a subsistence permit from the Department of Fish and Game?

_____ (IF YES, ANSWER THE NEXT QUESTION)

1. YES
2. NO

Q-69 How many household members hold such permits?

Q-70 How many total days have you and other members of your household spent hunting in the last 12 months? (IF NECESSARY, MAKE IT CLEAR THAT YOU ARE INTERESTED IN TOTAL PERSON-DAYS FOR ALL MEMBERS OF YOUR HOUSEHOLD). COUNT EACH PERSON FOR HOWEVER LONG THEY SPENT HUNTING AS ONE PERSON-DAY.

Q-71 How many total days have you and members of your household spent hunting in the last 12 months in the two areas shown on the map?

a. _____ Area #1
b. _____ Area #2

Q-72 What kinds of animals does your household hunt within each area?

	MOOSE	CARIBOU	SHEEP	BLACK BEAR	WOLF	WATER- FOWL	PTARMI- GAN	_____	OTHER	_____
Area #1	a1	b1	c1	d1	e1	f1	g1	h1	i1	j1
Area #2	a2	b2	c2	d2	e2	f2	g2	h2	i2	j2

Q-73 How many animals did you and other household members harvest in each area (by species)?

	MOOSE	CARIBOU	SHEEP	BLACK BEAR	WOLF	WATER- FOWL	PTARMI- GAN	_____	OTHER	_____
Area #1	a1	b1	c1	d1	e1	f1	g1	h1	i1	j1
Area #2	a2	b2	c2	d2	e2	f2	g2	h2	i2	j2

Q-74 How many animals did you and other household members obtain from road kills (by species)?

	MOOSE	CARIBOU	SHEEP	BLACK BEAR	WOLF	WATER- FOWL	PTARMI- GAN	_____	OTHER	_____
a1	b1	c1	d1	e1	f1	g1	h1	i1	j1	

Q-75 Of the total amount of meat and fish eaten by your household during the last twelve months, what portion comes from your harvests in these areas (combined) excluding road kills?

- _____
1. NONE
 2. LESS THAN ONE QUARTER
 3. ONE QUARTER TO ONE HALF
 4. ABOUT ONE HALF
 5. ONE HALF TO THREE QUARTERS
 6. MORE THAN THREE QUARTERS

ASK QUESTIONS 76 AND 77 ONLY IF CULTURAL AND RECREATION WERE GIVEN AS REASONS IN QUESTION 66.

Q-76 Of all your cultural activities, how important is hunting within these areas?

- _____
1. VERY IMPORTANT
 2. IMPORTANT
 3. NOT SO IMPORTANT
 4. UNIMPORTANT

Q-77 Of all your recreational activities, how important is hunting within these areas?

- _____
1. VERY IMPORTANT
 2. IMPORTANT
 3. NOT SO IMPORTANT
 4. UNIMPORTANT

TRAPPING .

Q-78 Do you or other members of your household trap?

a. _____ (IF YES, HOW MANY?) b. _____

1. YES
2. NO

IF THE ANSWER TO QUESTION 78 IS NO, SKIP TO QUESTION 88.

Q-79 What are the reasons you or other household members trap?

IF ONLY ONE REASON IS GIVEN, ASK "Are there any other reasons?"

- a. _____ REASON #1
- b. _____ REASON #2
- c. _____ REASON #3

1. FOR FOOD
2. FOR SPORT/RECREATION
3. FOR CULTURAL ACTIVITIES
4. FOR MONEY/INCOME
5. OTHER

Q-80 Of those reasons, what is the main reason?

Q-81 How many total days have you and other members of your household spent trapping in the last 12 months? (IF NECESSARY, MAKE IT CLEAR THAT YOU ARE INTERESTED IN TOTAL PERSON-DAYS FOR ALL MEMBERS OF YOUR HOUSEHOLD). COUNT EACH PERSON FOR HOWEVER LONG THEY SPENT IN THE AREA AS ONE-PERSON DAY.

Q-82 How many total days have you and members of your household spent trapping in the last 12 months in the two areas shown on the map?

- a. _____ Area #1
- b. _____ Area #2

Q-83 What kinds of animals does your household trap within each area?

	BEAVER	MARTEN	LYNX	MINK	MUSK- RAT	OTTER	RED FOX	WOL- VERINE	OTHER		
Area #1	a1	b1	c1	d1	e1	f1	g1	h1	i1	j1	k1
Area #2	a2	b2	c2	d2	e2	f2	g2	h2	i2	j2	k2

Q-84 How many animals did you and other household members harvest in each area (by species)?

	BEAVER	MARTEN	LYNX	MINK	MUSK- RAT	OTTER	RED FOX	WOL- VERINE	OTHER		
Area #1	a1	b1	c1	d1	e1	f1	g1	h1	i1	j1	k1
Area #2	a2	b2	c2	d2	e2	f2	g2	h2	i2	j2	k2

ASK QUESTIONS 85 AND 86 ONLY IF CULTURAL AND RECREATION WERE GIVEN AS ANSWERS TO QUESTION 79.

Q-85 Of all your cultural activities, how important is trapping within these areas?

- _____
1. VERY IMPORTANT
 2. IMPORTANT
 3. NOT SO IMPORTANT
 4. UNIMPORTANT

Q-86 Of all your recreational activities, how important is trapping within these areas?

- _____
1. VERY IMPORTANT
 2. IMPORTANT
 3. NOT SO IMPORTANT
 4. UNIMPORTANT

Q-87 What portion of your yearly income is from animals trapped in these areas shown on the map?

- _____
1. NONE
 2. LESS THAN ONE QUARTER
 3. ONE QUARTER TO ONE HALF
 4. ABOUT ONE HALF
 5. ONE HALF TO THREE QUARTERS
 6. MORE THAN THREE QUARTERS

Q-88 That is it for the questions on hunting, fishing and trapping. Now can you tell me, Have you noticed any changes in your community since 1980?
(IF 1, ANSWER QUESTION 89)

- 1. YES
- 2. NO

:
:
:
:

Q-89 Please describe how your community has changed since 1980 (GIVE THEM SHEET E). (probe until no more: Yes, can you think of any others?)

CHANGE	CODE
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Thank you for your cooperation and for sharing your thoughts. You have been very helpful and it is greatly appreciated. When we are putting this information together, it is possible that some problems may come up, if for instance a mistake was made in recording an answer. Would you be willing to give me your phone number [or post office box number], to use only in such a case?

RESPONDENT'S FIRST NAME: _____
Phone Number _____
Box Number _____

HOUSEHOLD SURVEY

SHEET A

- 1. VERY SATISFIED**
- 2. SATISFIED**
- 3. NEITHER SATISFIED NOR DISSATISFIED**
- 4. DISSATISFIED**
- 5. VERY DISSATISFIED**

HOUSEHOLD SURVEY

SHEET B

EMPLOYMENT STATUS

1. EMPLOYED OR SELF-EMPLOYED
2. RETIRED
3. UNEMPLOYED AND ACTIVELY SEEKING WORK
4. UNEMPLOYED AND NOT ACTIVELY SEEKING WORK
(DURING THE PAST MONTH)
5. HOMEMAKER
6. STUDENT
7. DISABLED

HOUSEHOLD SURVEY

SHEET C

INDUSTRY-EMPLOYER

1. **Agriculture, Forestry and Commercial Fishing** (loggers, farm implement & fertilizer sales, farmers and ag. laborers, trappers)
2. **Mining** (metal mining, oil & gas extraction, nonmetallic minerals)
3. **Construction** (carpenters, bricklayers, electricians, plumbers)
4. **Manufacturing** (Forest and Wood Products, Seafood Processors, Chemical and Allied Products, Paper and Paper Products)
5. **Transportation, Communications, Utilities**, excluding government utilities (telephone company, air transportation, electric, gas and sanitary services, and trucking and warehousing)
6. **Wholesale Trade** (establishments that sell goods to retail outlets and not directly to consumers such as distributors of furniture, alcoholic beverages, automotive parts, construction machinery)
7. **Retail trade** (establishments that sell goods directly to consumers such as clothing, hardware, and food stores, gasoline stations, eating and drinking establishments, automotive dealers)
8. **Finance, insurance and real estate** (banks, realty offices, insurance companies, credit agencies, and investment companies)
9. **Services, other than wholesale and retail trade** (hotels, legal services, auto repair shops, and business services)
10. **Federal government**
11. **State government** (including education)
12. **Local government** (including education and utilities)

HOUSEHOLD SURVEY

SHEET D

OCCUPATION

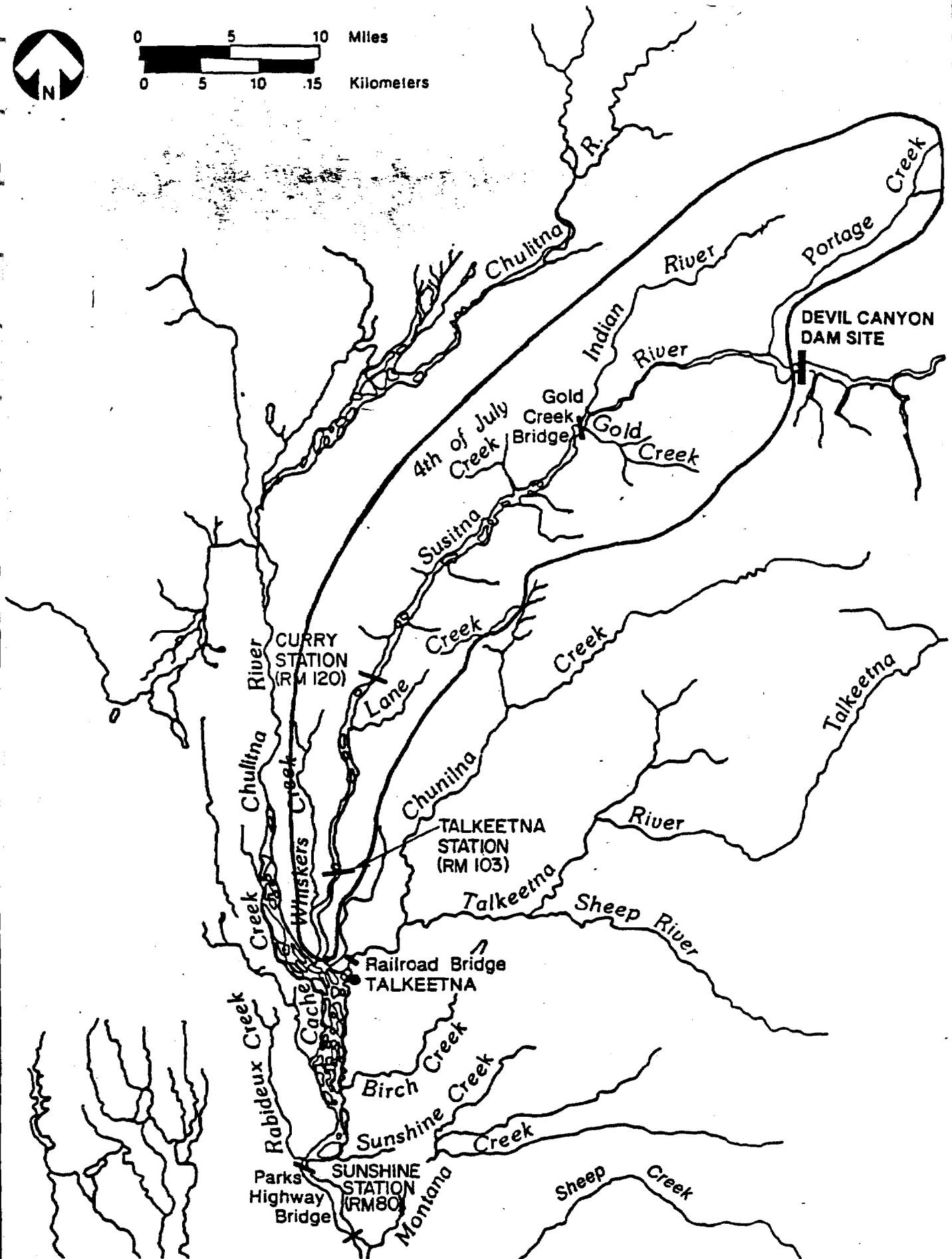
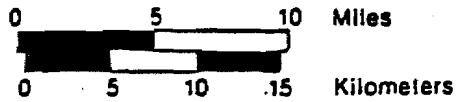
1. Professional, technical and managers (teachers, engineers, accountants, lawyers, medical & dental technicians, airplane pilots)
2. Clerical workers and sales persons (bookkeepers, secretaries, shipping & receiving clerks, tele. oper., and clothing sales people)
3. Service Workers (Hospital, hotel, restaurant workers, private household workers, police officers, firefighters)
4. Agriculture, fishery and forestry related workers (loggers, commercial fishers, trappers, farmers, and landscapers)
5. Processing (food, metal processing, ore refining)
6. Machine trades (Machinists, mechanics, printers, cabinetmakers)
7. Benchwork (Fabricators, Assemblers, & Repairers of metal, jewelry, photo equip. & textiles, tailors, sewing machine operators)
8. Structural (welders, electrical workers, carpenters, painters)
9. Armed Forces
10. Recreation-based occupations (guiding, mountain-climbing)
11. Motor freight & transportation (truck drivers, air transportation, railroad, parking lot)
12. Packaging and Materials Handling (packagers, movers, stevedores)
13. Mining (borers, drillers, cutters, and blasting specialists)
14. Miscellaneous (elec. util., water and water treatment, graphic arts workers)

HOUSEHOLD SURVEY

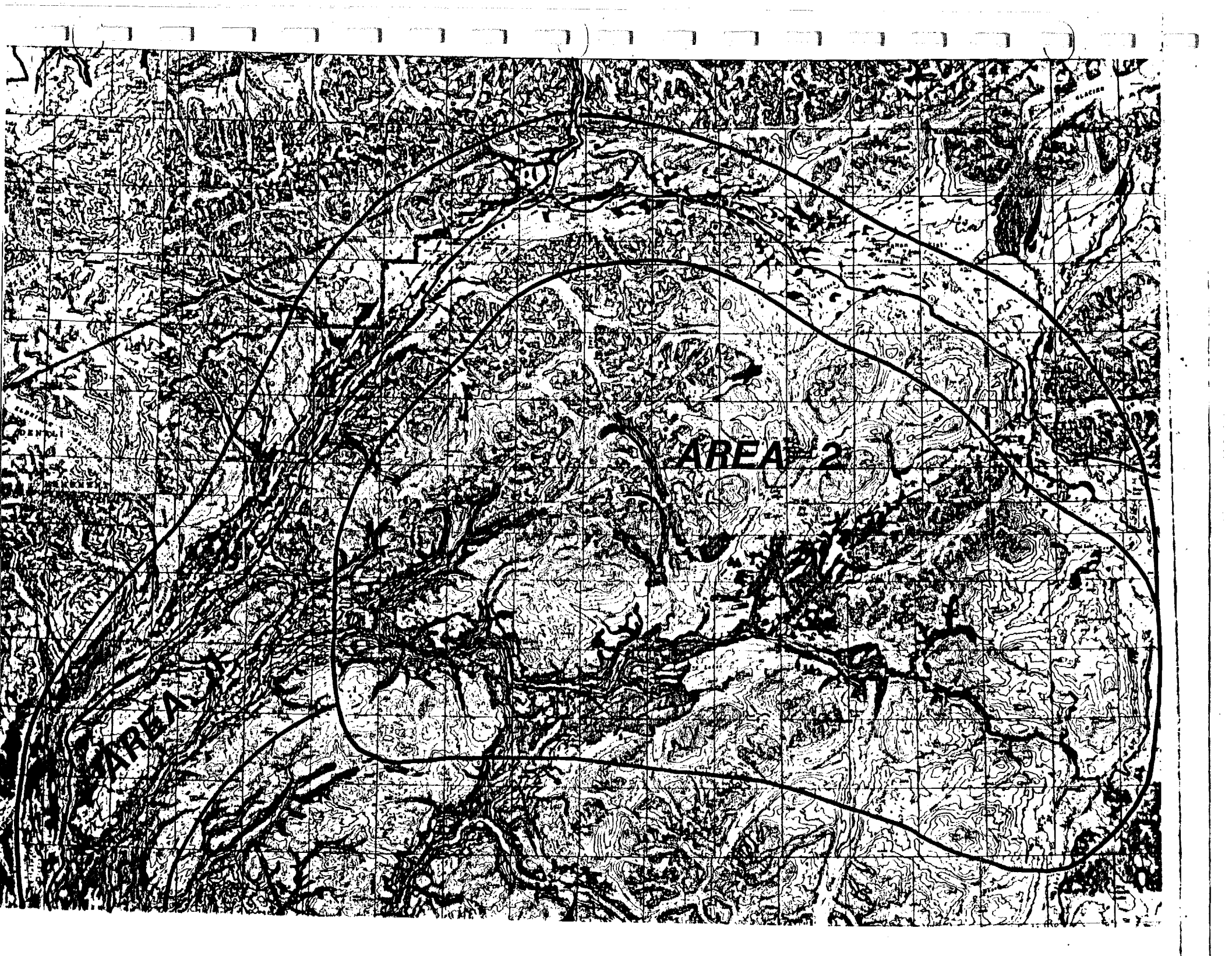
SHEET E

1. BIG CHANGE FOR WORSE
2. SMALL CHANGE FOR WORSE
3. BIG CHANGE FOR BETTER
4. SMALL CHANGE FOR BETTER

0136h



SUSITNA RIVER AND MAJOR TRIBUTARIES FROM MONTANA CREEK TO DEVIL CANYON



GLACIER

AREA 2

AREA 1

APPENDIX C

SUSITNA HYDROELECTRIC PROJECT SURVEYS
IN CANTWELL, TRAPPER CREEK AND TALKEETNA

INFORMATION FOR INTERVIEWERS

1. INTRODUCTION

A. Types of Surveys

There are three types of surveys that will be conducted in the communities:

1. Household survey - 30% of the community's^a households
2. Business survey - 100% of the identifiable^b business establishments; in addition, business surveys should be conducted when home businesses are identified in the household survey.
3. Construction Worker Survey (in Talkeetna and Cantwell only)
This survey will be self-administered and will be distributed by the project managers. Completed questionnaires will be mailed to us.

^a As delineated in our maps of the community.

^b From telephone directories, 1983 for Talkeetna, Trapper Creek, and Cantwell.

B. Survey materials:

1. The list of blocks of housing units that will be contacted and additional blocks that may be needed; the list includes the number of housing units that are expected to be in each block and the total target number of households that you should try to interview in that community.
2. A preliminary listing of businesses.
3. Maps which show where the blocks are, in relation to roads and other identifiable landmarks.
4. A set of questionnaires.
5. A set of answer lists and 2 fish and game maps which will be used to support the administration of the survey. (from Harza-Ebasco)
6. A log to record housing units contacted.
7. Waterproof (e.g. clear plastic with zip-lock) container for several surveys
8. Compass (hand-held)
9. Flashlight
10. ID card, from the Alaska Power Authority (from APA)
11. A set of George Gleason's business cards (from APA)
12. Fact sheet on the project (from APA)
13. A copy of the latest newsletter on the project (from APA)
14. Call back sheets, to be placed at households where no one is home
15. Red pens
16. Time and expense sheets

11. HOUSEHOLD SURVEY

A. Background on the methodology:

Possible households were identified from the Mat-Su Borough's assessor records of housing units. These were clustered into areas called blocks. A random sampling method was used to choose the blocks that will be surveyed. Each household in a chosen block should be surveyed. This methodology was chosen in order to limit the amount of travel time needed to conduct the surveys.

Because of the methodology used, a number of issues may come up in trying to locate households:

1. Some units may be vacant.
2. We do not have the names of the residents we are trying to reach.
3. In some areas where roads are scarce, the map will not be specific as to where the housing unit is. This will be of most consequence in the Trapper Creek survey.
4. The assessor records may be outdated, and additional housing units may be found in some blocks.

B. Operational procedures:

1. Attempt to survey the blocks in the order listed.
2. Conduct the interviews between 9 a.m. and 9 p.m. If it appears that the time is inconvenient for the respondent, set an appointment for a better time. Be on time for appointments.
3. In areas designated as parcel "A16" or "B4", etc., the location of the "X" on the map is not meant to indicate the location within the parcel the housing unit is. It is not possible to determine the location with the data available to us.
4. If there is no one present at a possible residence, try at least 2 callbacks. Callbacks should be done at different times of the day, in order to maximize the possibility of finding the residents at home. If you are able to interview a neighbor of a housing unit that has no one at home, ask the neighbor about the unit (Is it occupied; if so, what is a good time to catch the residents at home):
5. Do not spend more than 30 minutes trying to locate a housing unit.
6. Some areas of the Mat-Su Borough have a high incidence of no-trespass signs at driveways and private roads. If you run across one, try to go on in to see someone. However, if you run into any signs of hostility, leave immediately.
7. A housing unit will be considered successfully canvassed if:
 1. An interview occurs.
 2. The unit is identified as vacant by a neighbor.
 3. The interviewer has attempted to call on the housing unit three times, at different times of day, and has not been able to find someone at home.

A housing unit will be considered not successfully canvassed if:

1. The household refused to respond.
 2. The housing unit can not be located.
 3. It is impossible to gain access, due to barriers, dogs, etc.
8. The listing of blocks contains information on the target number of housing units to be canvassed. If you are unable to meet the target number of households, either because of households that refuse to respond or because the housing unit can not be located, there is a secondary listing of blocks that should be used. As always, interview every household in each secondary block that it is necessary to canvass.
 9. If more housing is found in a block than was expected, go ahead and interview those additional units. This is especially likely to happen in Cantwell. Do not count such households as part of the listing of successfully canvassed housing units. These households will be in addition to the original target survey households.

10. Try to park your car as close to the housing unit as possible.
11. The questionnaires have been designed to allow open-ended questions to be precoded, as the interviewer is taking down the response. Also, there are instructions on several pages for the interviewer.

In order to help the interviewer distinguish quickly between text that should be spoken aloud and instructions which are only there for the interviewer's purposes, a convention in the typing of the questionnaire has been used:

1. All questions and sentences which should be said to the respondent are typed in lower-case letters.
 2. All words which are not to be spoken aloud (instructions and precoded answers) are typed in upper-case letters.
12. In the course of doing some of the surveys, the interviewer may become aware that a member of the household owns a business (question Q-50).

If this is the case, you should explain to the respondent that we are doing two types of surveys, and that you would like to ask a few more questions after the household survey is complete. Upon completion of the household survey, take out a copy of the business questionnaire and run through it.

13. Read the questions exactly as written on the questionnaire. If the respondent does not understand the question, repeat it. It is permitted to elaborate on the meaning of the question, if that appears to be necessary (this is because we are a small group, and we will have gone over the purpose of each question in detail).

Keep a record of any questions that appear to be unclear to the respondent.

14. Some of the questions ask for pretty detailed information and may be construed as an invasion of privacy by some respondents. If a respondent seems reluctant to answer a question, reiterate that the questionnaires will be kept completely confidential, and that only the aggregated results will be made public. If the respondent refuses to answer the question, indicate this with an R in the answer slot, and go on to the next question. We do not want to encourage people to skip questions, but it is more important to complete the interview than to press for the answer to any particular question.

After the respondent has answered the last question, ask him if he will answer the unanswered question(s).

15. There are a couple of questions that should be coded by the interviewer, after leaving the house (including Q-31, Q-33, Q-34). Check over the questionnaires each evening for accuracy, legibility, clarity of the wording on the free-answer questions, and to identify/eliminate any conflicting answers.
16. In the case of conflicting answers that you identify later, make a note of the original responses and then correct the coded portion of the questionnaire as appropriate.

C. Filling In the Questionnaire

1. If there are a list of choices on the questionnaire, choose the one that best fits the respondent's answer and write the number of the question in the answer slot. If the answer does not fit into one of the categories, code the answer as Other, and write down the exact answer.
2. If the question asks for a number of years, people, etc., be sure to put a number in the answer slot. Thus, if the respondent answers "a couple of years", confirm that he means 2.
3. There are a few questions that are answered by putting check marks in the answer slots (Q:5-16, Q:38-49, 61, 72, and 83).
4. For any other questions, write down exactly what the respondent says, and add interviewer notes to clarify, where necessary.
5. If a respondent refuses to answer a question, write an R in the answer slot.

D. Guidelines to Questions that Respondents May Ask

1. How will this information be used?

- For project planning
- This is an opportunity for you and other residents to provide input to the planning process.
- Try and move back to the survey questions.

2. How long have you lived in Alaska?

- Stress that you've worked in Alaska a lot/ a long time/ many times.
- Trained to work on the surveys

3. Why do you keep studying this?

- It is a big and expensive project, important, deserves a lot of consideration.

6. How often will you be doing this survey?

- Once a year.
- If concern is shown: This is to provide continual input to project planning.
- We are only surveying about one-third of the households, using a random sample. Your household may or may not be part of the sample next year.

7. Skepticism about the APA running roughshod over communities.

- The purpose of the surveys and the socioeconomic program is to make sure the communities closest to the project are taken into account.

E. Guidelines on selected survey questions

Intro Display your Alaska Power Authority ID card at each household.

Present the full explanation of the survey to each respondent (client's request). There may be a number of respondents that are hesitant about participating, or that just refuse. Be as persuasive as possible, focusing specifically on the usefulness of the data to project planning (and the mitigation of impacts to the community).

If the respondent asks for more information on the project, explain a little and give him/her a fact sheet.

If the respondent asks to receive a copy of the results, explain that the APA has not determined distribution policy, and take down his/her name and address.

If the respondent asks questions about the project that are outside our scope of work, give him/her George Gleason's card, and explain that he will best be able to answer their questions.

If an adult that lives there is not available, try to determine, from the child or non-resident you are speaking with, a likely time to reschedule the interview.

Q-1 Head of household = primary wage earner. If more than one person makes the same amount of money, they are both heads of household.

Q-2a The answer should include people that are away at the hospital or on a trip.

Q-2b-2d Many people forget to identify new-born infants as members of the household because they aren't used to thinking of them as individuals yet. That is why there is an indication to the interviewer that this should be checked.

Age is determined by the person's last birthday. So, if someone is going to be 5 years old tomorrow, they should be listed as under 5 years.

Children who live in the resident on a part-time basis should be included as a fraction.

Q:5-16 Be sure to confirm that the respondent understands the question was asked in the negative. Place check marks next to the months they mention

Q-17 Write down the respondent's exact answer, and then fill in the coded answer.

Q-20 Trailer = unit on wheels; Mobile home = unit on blocks

Q:23-24 If the respondent answers that he/she considers the facility and service in question poor or very poor, ask what his/her reasons are.

Review the listing of facilities/services that are available in the community or for the community, and eliminate any sub-questions that are not relevant.

Q-30 Employment is considered to be an activity for which the respondent gains income. Working at their own business is employment. Building one's own house is not considered employment.

The answer is 2, Unemployed and actively seeking work, if the person has sought work during the past month.

Q-31 Write down the respondent's exact answer, and then fill in the coded answer.

Q-33 Write down the respondent's exact answer, and then fill in the coded answer.

Q-34 Write down the respondent's exact answer, and then fill in the coded answer.

Q-35 If you are unsure if the community the respondent mentions is within 10 miles of their home, ask him/her.

Q-50 If the answer is YES (1), make a note to do a business survey after the household survey is completed.

Q-65,
Q-78,
Q-87 A cultural activity is an activity you traditionally do with family or friends, that you do on a regular basis, and that is related to your way of life.

Q-90 If the respondent has not lived in the community since 1980, ask him/her to talk about any changes since moving there.

Q-91 As the respondent mentions changes, note the type of change in the left-hand column. Then, ask the respondent to rate the magnitude of the change and place the code in the second column.

III. BUSINESS SURVEY

A. Methodology

All businesses in each community should be interviewed. Each interviewer will start out with a listing of known businesses in the community. During the first couple of days, you should ask members of the community to identify any other businesses that there are.

In addition there will be some businesses that will be identified from the household surveys. These businesses should also be surveyed.

B. Procedures

1. Conduct the interviews between 9 a.m. and 9 p.m.
2. Ask to speak with the owner or manager. If that person is not there, determine a better time to reach him or her.

If the respondent is the manager and cannot answer all questions, obtain the owner's phone number. We will contact the owner at a later time.

3. Some respondents may operate more than one business. If this is the case, a questionnaire should be filled out on each business.
4. The questionnaires have been designed to allow open-ended questions to be precoded, as the interviewer is taking down the response. Also, there are instructions on several pages for the interviewer.

In order to help the interviewer distinguish quickly between text that should be spoken aloud and instructions which are only there for the interviewer's purposes, a convention in the typing of the questionnaire has been used:

1. All questions and sentences which should be said to the respondent are typed in lower-case letters.
2. All words which are not to be spoken aloud (instructions and precoded answers) are typed in upper-case letters.
5. Read the questions exactly as written on the questionnaire. If the respondent does not understand the question, repeat it. It is permitted to elaborate on the meaning of the question, if that appears to be necessary (this is because we are a small group, and we will have gone over the purpose of each question in detail).

Keep a record of any questions that appear to be unclear to the respondent.

6. Some of the questions ask for pretty detailed information and may be construed as an invasion of privacy by some respondents. If a respondent seems reluctant to answer a question, reiterate that the questionnaires will be kept completely confidential, and that only the aggregated results will be made public. If the respondent refuses to answer the question, indicate this with an R in the answer slot, and go on to the next question. We do not want to encourage people to skip questions, but it is more important to complete the interview than to press for the answer to any particular question.

After the respondent has answered the last question, ask him if he will answer the unanswered question(s).

7. Check over the questionnaires each evening for accuracy, legibility, clarity of the wording on the free-answer questions, and to identify/eliminate any conflicting answers.

C. Filling in the Questionnaire

1. If there are a list of choices on the questionnaire, choose the one that best fits the respondent's answer and write the number of the question in the answer slot. If the answer does not fit into one of the categories, code the answer as Other, and write down the exact answer.
2. If the question asks for a number of years, people, etc., be sure to put a number in the answer slot. Thus, if the respondent answers "a couple of years", confirm that he means 2.
3. There are a few questions that are answered by putting check marks in the answer slots (Q-22, Q-25, Q-28).
4. For any other questions, write down exactly what the respondent says, and add interviewer notes to clarify, where necessary.
5. If a respondent refuses to answer a question, write an R in the answer slot.

D. Guidelines on selected questions

- Q-1 Be sure that the respondent is answering the question for only that one business.
- Q-8a Met your needs = been able to provide you with the amount of goods and services that you need.
- Q-9a Expansion of an existing business and the start of a new business may not appear to be distinct actions to the respondent, when this first question is asked. If the respondent begins to talk about starting a new business, record this answer under Q-10. Then, clarify the distinction and ask if the respondent plans on expanding his/her present business as well.

Talkeetna

Talkeetna is an unincorporated community in the Mat-Su Borough. Incorporated status was voted down in 1982.

1. Closest state Trooper post is in Trapper Creek.
2. School is new and well-equipped. Handles grades K-6.
3. Has a fire station and new equipment. Staffed by volunteers.
4. Nearby landfill operated by the borough.
5. Ambulance and active EMT organization
6. No medical care available in the community; Use hospitals in Anchorage, Fairbanks, Palmer. Doctors in Wasilla as well.
7. Road System - maintenance of state roads by the state, borough roads by the borough.
8. Railroad passes through. Airfield. Residents use float planes on nearby lakes.
9. Social Services - a counselling center available in Palmer; extension services were rejected by the Talkeetna community.
11. There is a library.
12. Indoor Recreation - none
13. Outdoor Recreation Facilities - nearby Denali State Park, McKinley National Park. Talkeetna is historically the take-off point for expeditions to Mt. McKinley, and fishing/hunting parties.
14. No water system
15. No sewage treatment system

Trapper Creek

Trapper Creek is an unincorporated community in the Mat-Su Borough.

1. State Trooper post
2. School is new and well-equipped. Handles grades K-6.
3. No fire protection. Old building and equipment that is not used or maintained.
4. Nearby landfill operated by the borough.
5. Ambulance and active EMT organization
6. No medical care available in the community; a nurse that lives in the community helps out when she can. Use hospitals in Anchorage, Fairbanks, Palmer. Doctors in Wasilla as well.
7. Road System - maintenance of state roads by the state, borough roads by the borough.
8. No other transportation facilities; residents use float planes on nearby lakes.
9. Social Services - a counselling center available in Palmer; there is an extension service in Trapper Creek periodically.
11. Library - was a hot political issue. I believe it was voted down..
12. Indoor Recreation - none
13. Outdoor Recreation Facilities - nearby Denali State Park, McKinley National Park.
14. No water system
15. No sewage treatment system

Cantwell

Cantwell is an unincorporated community in an unorganized borough.

1. State Trooper post
2. School is new and well-equipped. Handles grades K-12.
3. Fire hall under planning/construction
4. Garbage dump is on land that is technically private (Native-owned).
Obtaining a better landfill is a high-priority need.
5. Ambulance would be associated with fire hall
6. No medical care available in the community. Use hospitals in Anchorage, Fairbanks, Palmer. There is a small clinic in Healy, doctors in Wasilla as well.
7. Road System - maintenance of state roads by the state.
8. There is a private air strip. The Railroad passes through, and a couple of residents use float planes on nearby lakes.
9. Social Services - only those provided by the state in Anchorage, Fairbanks.
11. Library - there is a library at the school.
12. Indoor Recreation - the Native community built a community building.
13. Outdoor Recreation Facilities - nearby McKinley National Park.
14. No water system
15. No sewage treatment system