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# **The Alaska Public Forum**



## **NANA Survey Summary**

**March, 1979**

## INTRODUCTION

In the spring of 1978, NANA requested state assistance in order to begin a process to establish an overall regional strategy plan. In an effort to establish goals and priorities with the villages, a survey was conducted in November/December 1978. It was designed and conducted by the Alaska Public Forum in conjunction with Mauneluk and NANA.

The categories involved included: subsistence; employment; community services; transportation; and community ties.

The following analysis provides a synopsis of the survey results which may be used in policy planning by and for the NANA region.

Public meetings which will be held in April, will serve as a follow-up to the survey to cover any areas villages may feel need to be added or emphasized; and, to provide to the individual communities an overview of the survey results of the region as a whole.

The funding for this project was provided by:  
Alaska Public Forum, Office of the Governor;  
Alaska Department of Transportation and Public  
Facilities; and, the U.S. Department of  
Housing and Urban Development.

## METHODOLOGY

The NANA survey was designed to provide information which reflected the attitudes and activities of people from all communities and lifestyles of the NANA Region. The communities surveyed included: Kotzebue (pop. 2431), Ambler (pop. 217), Buckland (pop. 172), Deering (pop. 100), Kiana (pop. 314), Kivalina (pop. 208), Kobuk (pop. 60), Noatak (pop. 261), Noorvik (pop. 527), Selawik (pop. 521), Shungnak (pop. 182).

Interviews were conducted with a random sampling of adults, by household, living in these communities. The adult is defined as a person 18 years of age or older. The total number of interviews conducted was 355. Of these, 161 households were sampled in Kotzebue and an additional 194 households were sampled in the remaining 10 communities of the NANA Region. The number of households randomly sampled in each community was determined by the population size of each.

### VILLAGE SAMPLE DISTRIBUTION

<u>Community</u>	<u>Sample Size</u>
Ambler	17
Buckland	18
Deering	14
Kiana	26
Kivalina	18
Kobuk	8
Noatak	21
Noorvik	32
Selawik	31
Shungnak	9
Kotzebue	<u>161</u>
	355

The survey was conducted during December of 1978. Interviewers were hired by Mauneluk Association with CETA funds and are all residents of the NANA Region. Training of interviewers was provided by Northrim Associates with supervision throughout the field work provided by the Alaska Public Forum. Interviews were conducted in English or Inupiat and required 45 to 75 minutes to administer.

#### HOUSEHOLD AND RESPONDENT CHARACTERISTICS

The total sample of 355 households with 1,805 people represents 36.2% of the entire population of the Region. (4,993 population, State Revenue Sharing.) The average household in the Region has 5.08 people residing in it. The range is from single occupant homes (9.6%) to homes with 13 individuals (0.1%).

Children 12 years and younger are found in 66.2% of the households. The range is from single child households (20% of all households) to households with 7 children (0.3% of all households). Teen-agers, 13-17 years, are found in 40.3% of all households. They range from households with only one youth (18.6% of all households) to 6 teen-agers (0.3% of all households).

Almost half of all the households have two adults (42.3% of all households). The range is from one adult (14.6% of all households), to households with 8 adults (0.6%).

Of the respondents, 50% are male and 50% are female. The average age of respondents overall is 38.4 years and the median age is 34.3 years.

The majority of respondents are heads of households, male heads of household being 29.6% and female heads of household 36.1%. Sons or daughters of the head of households are 16.5% of the sample.

The educational level of respondents is somewhat higher for Kotzebue residents than village residents. Fifty-four percent of the Kotzebue respondents indicate an educational level of twelve years or more while only 36.1% of the village respondents indicate this same level.

Taken on the whole, the respondents have been in their respective communities for a long period of time, with the average length of residency being 25 years overall, 20 years in Kotzebue and 30 years in the villages.

The following analysis of the NANA survey results was conducted by the Institute of Social and Economic Research, University of Alaska, Fairbanks.

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## SUBSISTENCE

SUMMARY: The leadership of the NANA region has indicated that the maintenance of subsistence activities is of the highest priority. Overall, the survey seems to show that a large portion of the NANA population still depends on subsistence as a major source of food. Two-thirds of the people interviewed indicated that they hunted for at least one-half of their meat. The young are continuing the subsistence lifestyle. Sharing seems to be prevalent among the hunters and gatherers with 91% indicating that they share food. It appears that people who have jobs for pay continue to participate in subsistence activities.

TABLE 1: COMPARISON OF WORK PATTERNS  
AND TYPE OF FOOD EATEN

Proportion of Meals where Meat Is Purchased at the Store

	<u>No Meals Purchased</u>	<u>¼ Meals Purchased</u>	<u>½ Meals Purchased</u>	<u>More Than ½ Meals Purchased</u>	
Unemployed	19%	58	19	4	= 100
Part-time employed	11	63	24	2	= 100
Full-time employed	0	61	39	0	= 100

Proportion of Meals where Meat Is Hunted or Gathered

	<u>No Meals Gathered</u>	<u>¼ Meals Gathered</u>	<u>½ Meals Gathered</u>	<u>More Than ½ Meals Gathered</u>	
Unemployed	4	29	35	32	= 100
Part-time employed	5	37	36	22	= 100
Full-time employed	5	35	30	30	= 100

Looking at different age groups, subsistence activities seem to be maintained by the youth. Roughly, half of each of the five age groups are doing 5-10 activities throughout the year, while only 1-5% don't hunt at all. See Table 2.

TABLE 2: DIFFERENCES IN SUBSISTENCE ACTIVITY  
AMONG FIVE AGE GROUPS

<u>Number of Subsistence Activities</u>	<u>Age</u>				
	<u>15-24</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>Over 54</u>
None	1%	2	4	0	5
1-4	39	27	27	22	29
5-10	42	56	52	61	50
11 or more	18	15	17	17	16
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
No. of Respondents:	74	89	48	51	56

Longtime residents are a bit more likely to be active in subsistence activities. There was almost no difference between men and women, and the unemployed and employed in subsistence activity. Although the unemployed are slightly more intensely involved in hunting and gathering, it is interesting to note the continued participation of the full-time employed in subsistence activities. See Tables 3 and 4.

TABLE 3: DIFFERENCE IN SUBSISTENCE ACTIVITY  
BY YEARS LIVED IN THE COMMUNITY

<u>Number of Subsistence Activities</u>	<u>0-5</u>	<u>6-10</u>	<u>11-20</u>	<u>Over 20</u>
	<u>Years</u>	<u>Years</u>	<u>Years</u>	<u>Years</u>
None	3%	0	2	3
1-4	34	13	42	25
5-10	48	81	42	54
11 or more	15	6	14	18
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of Respondents:	60	16	67	175

TABLE 4: NUMBER OF SUBSISTENCE ACTIVITIES  
IN RELATION TO WORK PATTERNS

	<u>No Activities</u>	<u>1-4 Activities<sup>1</sup></u>	<u>5-9 Activities</u>	<u>10 or more Activities</u>	
Unemployed	3%	32	45	20	= 100%
Part-time employed	2	31	52	15	= 100
Full-time employed	5	24	57	14	= 100

<sup>1</sup>These include: caribou, moose, seal, 5 species of fish, birds, whale, bear, berries, trapping, crafts, eggs and plant gathering.

We know that 91% of NANA residents share food, but only about 15% of those sharing food also trade. Thus, sharing appears to be a significant way that those who do fewer subsistence activities add large amounts of subsistence foods to their diets. From Table 5 it appears that those with higher incomes are more likely to trade for food, but it is generally not done.

Percent of those who share food that also trade for food.

Income	TABLE 5:	Yes, we trade for food	No, don't trade for food		
\$ 5000 or less		14%	86	=	100% 58
\$ 5000-14,999		17	83	=	100 110
\$15000 or more		19	81	=	100 106
				n =	274

The survey results confirm the assertion that NANA residents are heavily engaged in subsistence activities and that the food hunted and gathered accounts for over half of the food consumed by the respondents. Since young people are actively engaged in subsistence activities, it may be projected that continual use can be anticipated as long as the resource base is maintained.

## EMPLOYMENT:

SUMMARY: The survey results seem to indicate people are more willing to work inside the NANA region rather than relocating outside the region. Among the untapped skills are fixing machinery and welding which fall into the category of trades and teaching, typing, care of others, which fall into the area of services as well as some regional skills such as skin-sewing and ivory carving.

Preference for working for pay at different times of the year was clearly expressed. One-fourth of the respondents indicated a preference for not working during the summer months when subsistence gathering and hunting are done. With only 8% of the native population employed full-time, the current situation is that the vast majority of the native population is either working part-time (45%) or are unemployed (47%). When asked "how does this household meet their daily needs," multiple answers were given by most respondents. In addition to jobs, almost 42% of the Kotzebue respondents indicated that subsistence hunting and fishing was important, while slightly over 80% of the village respondents said subsistence activities helped meet their families' daily needs. Eighteen point six percent of the Kotzebue respondents said food stamps and other forms of government aid contributed, while 24.8% of the village respondents said they relied on some sort of government assistance.

ANALYSIS: One of the options open to NANA residents is to manage commercial resource development and the corresponding job opportunities. At this time in the NANA region there is a pool of skills and labor available for work.

In Table 6, 18% of the respondents reported that they have skills in the trades and are not working now. Likewise, on support services, 12% of the respondents are skilled people who are not currently working. Half of the respondents said they had not worked in the past year. The availability of jobs is unknown.

TABLE 6: COMPARISON OF TYPES OF SKILLS PEOPLE HAVE  
AMONG THREE EMPLOYMENT GROUPS

(figures represent percentage of total number of native respondents)

	<u>Trades</u> <sup>1</sup>	<u>Services</u> <sup>2</sup>	<u>Regional Skills</u> <sup>3</sup>	<u>Other</u>
Unemployed	18%	12%	14%	8%
Part-time employed	13%	15%	7%	6%
Full-time employed	2%	3%	1%	1%

Number of respondents = 254

<sup>1</sup>Trades--fixing machinery, welding

<sup>2</sup>Services--teaching, helping sick, typing, taking care of children

<sup>3</sup>Regional skills--ivory carving, basket making, skin sewing, sewing.

Table 7 shows that about one-quarter of NANA residents do not want to work for pay during the summer and would like to be employed in the winter months.

Table 7 shows the proportion of people who expressed a preference for working in certain months in each village. In every case two to three times more people want work during the winter months. In important subsistence months: June; July; and August only 10% of the people report they want to work for pay.

TABLE 7: PERCENT OF PEOPLE STRONGLY WANTING WORK DURING THE MONTHS IN EACH VILLAGE

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shungnak</u>
January	32%	11%	12%	0%	6%	8%	16%	12%	39%	23%	33%
February	32	11	12	0	6	8	16	15	35	28	33
March	28	11	12	0	6	8	16	15	39	23	33
April	25	16	12	0	0	8	19	9	35	28	22
May	18	5	0	0	6	0	16	15	23	28	11
June	8	11	0	12	6	16	19	12	4	19	11
July	5	11	0	12	6	8	25	12	4	14	0
August	8	22	12	12	0	8	25	18	12	14	0
September	18	11	12	12	6	0	19	15	15	28	0
October	24	16	12	12	6	0	16	15	27	33	11
November	29	11	12	0	6	0	22	18	31	23	33
December	29	11	12	0	6	0	16	18	31	19	33
No. of Respondents:	161	18	17	8	18	12	31	32	26	21	9

Tables 8 and 8a show the relationship between subsistence activities and desired time for work more clearly. These Tables show that those most active in subsistence, especially in the summer, are the ones who do not want to work for pay during the same time.

TABLE 8: MONTHLY COMPARISONS OF ACTIVITY  
IN SUBSISTENCE AND DESIRE TIME FOR WORK

	<u>Want Work</u>	<u>No Preference</u>	<u>Don't Want to work</u>	
<u>January</u>				
Not active	28%	61	11	= 100%
Active some of month	21	71	8	= 100
<u>February</u>				
Not active	28	62	10	= 100
Active some of month	21	70	9	= 100
<u>March</u>				
Not active	26	63	11	= 100
Active some of month	20	68	12	= 100
<u>April</u>				
Not active	27	63	10	= 100
Active some of month	14	71	15	= 100
<u>May</u>				
Not active	18	65	17	= 100
Active some of month	16	66	18	= 100
<u>June</u>				
Not active	10	63	27	= 100
Active some of month	11	63	26	= 100
<u>July</u>				
Not active	3	65	26	= 100
Active some of month	5	63	28	= 100
Active most of month	0	83	17	= 100
<u>August</u>				
Not active	10	67	23	= 100
Active some of month	13	63	24	= 100
Active most of month	12	60	28	= 100
<u>September</u>				
Not active	18	67	15	= 100
Active some of month	16	65	19	= 100
Active most of month	37	38	25	= 100
<u>October</u>				
Not active	20	64	16	= 100
Active some of month	23	67	10	= 100
Active most of month	33	67	0	= 100
<u>November</u>				
Not active	25	63	12	= 100
Active some of month	24	68	8	= 100
Active most of month	33	67	0	= 100
<u>December</u>				
Not active	25	62	13	= 100
Active some of month	21	69	10	= 100
Active most of month	50	50	0	= 100

Number of Respondents: 318

Table 8a:

## MONTHLY SUBSISTENCE ACTIVITY IN THE VILLAGES

(percentage)

	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Noorvik	Kiana	Noatak	Shungnak
<u>January</u>											
Not active	80	61	53	75	61	50	84	66	77	67	89
Active part of month	20	39	47	25	39	50	16	34	23	33	11
	100	100	100	100	100	100	100	100	100	100	100
<u>February</u>											
Not active	83	66	53	75	67	50	84	66	73	71	56
Active part of month	17	34	47	25	33	50	16	34	27	29	44
	100	100	100	100	100	100	100	100	100	100	100
<u>March</u>											
Not active	77	61	59	75	61	58	81	59	62	52	44
Active part of month	23	39	41	25	39	42	19	41	38	48	56
	100	100	100	100	100	100	100	100	100	100	100
<u>April</u>											
Not active	70	72	47	75	72	42	77	63	73	43	56
Active part of month	30	28	53	25	28	58	23	37	27	57	44
	100	100	100	100	100	100	100	100	100	100	100
<u>May</u>											
Not active	62	44	29	50	56	33	42	47	58	38	33
Active part of month	38	56	71	50	44	67	58	53	42	62	67
	100	100	100	100	100	100	100	100	100	100	100
<u>June</u>											
Not active	42	11	29	0	6	33	19	34	31	24	33
Active part of month	56	89	71	100	94	67	77	66	69	71	67
Active most of month	2	0	0	0	0	0	4	0	0	5	0
	100	100	100	100	100	100	100	100	100	100	100
<u>July</u>											
Not active	30	17	0	13	17	0	36	34	15	9	33
Active part of month	67	83	100	87	83	100	60	66	81	81	67
Active most of month	3	0	0	0	0	0	4	0	0	10	0
	100	100	100	100	100	100	100	100	100	100	100
<u>August</u>											
Not active	25	6	0	0	6	0	13	13	15	5	11
Active part of month	68	78	59	100	88	58	84	87	73	81	78
Active most of month	8	16	41	0	6	42	3	0	12	14	11
	100	100	100	100	100	100	100	100	100	100	100
<u>September</u>											
Not active	37	17	6	0	17	8	36	13	12	5	11
Active part of month	61	83	94	100	83	92	64	87	88	86	78
Active most of month	2	0	0	0	0	0	0	0	0	9	11
	100	100	100	100	100	100	100	100	100	100	100
<u>October</u>											
Not active	42	17	12	25	17	17	55	44	39	29	22
Active part of month	57	83	88	75	83	83	45	56	61	71	78
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	100	100	100	100	100	100	100	100	100	100	100
<u>November</u>											
Not active	43	56	59	38	50	58	32	41	46	33	22
Active part of month	56	44	41	62	50	42	68	59	54	67	78
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	100	100	100	100	100	100	100	100	100	100	100
<u>December</u>											
Not active	65	61	59	75	83	42	45	50	92	52	67
Active part of month	34	39	41	25	17	58	55	50	8	48	33
Active most of month	1	0	0	0	0	0	0	0	0	0	0
	100	100	100	100	100	100	100	100	100	100	100

Willingness to work and available skills do not complete the employment picture. Resource development may mean relocation of a single individual, household or a village.

Table 9 shows the percent of people in each village who are willing to work in three likely places: Kotzebue, in a city outside NANA, and a camp outside NANA. Preference depends on the village, but there is more desire to relocate in Kotzebue rather than any place outside NANA, and generally a greater preference to remain in the region than to go outside, even if the job was located at a camp.

TABLE 9: WILLINGNESS TO WORK OUTSIDE VILLAGE (percentage)

	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Noorvik	Kiana	Noatak	Shungnak	all villages
Willing to work in Kotzebue	DNÄ	61	81	63	67	33	86	72	67	81	56	66.7
Willing to work in a city outside NANA	68	56	63	38	67	67	61	75	62	62	44	59.5
Willing to work in a camp or village outside NANA	68	67	80	28	61	58	71	78	77	76	44	65
Number of Respondents:	157	18	16	3	18	12	28	32	24	21	9	186

If we compare what people want with what they actually did, a similar pattern exists. Table 10 shows the different locations where people actually worked in the past year. The vast majority of work sites was in NANA. See Table 10.

TABLE 10: Percent of People Working in 6 Different Locations

Nana village	41%
Other village	2%
Kotzebue	43%
Nome	.5%
Somewhere else in Alaska	0%
Pipeline camp	13%

Employment opportunities would be more useful inside the NANA region, either in a village or in Kotzebue.

Table 11 shows employment patterns in each village, and the number of unemployed in each village. "Unemployed" means those respondents who said they didn't have a job in the last year. As noted earlier, the vast majority of people interviewed were either unemployed or had part time jobs.

TABLE 11: WORKING PATTERNS IN THE VILLAGES

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shungnak</u>
Unemployed	46%	50	24	50	50	50	48	56	46	71	22
Part-time employed	46	50	52	50	44	50	39	38	46	29	56
Full-time employed	8	0	24	0	6	0	13	6	8	0	22
	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
Number of Persons											
Unemployed	74	9	4	4	9	6	15	18	12	15	2
Number of Respondents	161	18	17	8	18	12	31	32	26	21	9

If the NANA labor force is to be used and developed, future economic development projects should be directed to locate within the NANA region and encouraged to generate jobs in both the areas of trade and services. If possible, job opportunities should accommodate the seasonal commitments of subsistence hunters.

## COMMUNITY SERVICES

### Summary:

In recent years many new services have been provided in the NANA communities. Items such as water and sewer systems or cross-wind runways. Often times these things are initially paid for by the federal or state government, but the cost of operating and maintaining them is the responsibility of local people. Therefore, participants in the survey were asked how important the service was in light of local responsibility to pay for its maintenance.

Included in the list were services that local communities have supported for a long time, such as search and rescue and volunteer fire fighting.

The highest priorities for the villages appear to be search and rescue and airport maintenance. Kotzebue residents agree with those but add fire fighting equipment to the top two. Villages vary in their priorities which points up the differences in needs from community to community. Responses were measured against those who were employed versus unemployed, and by income levels. Only slight changes were apparent with these variables.

ANALYSIS:

Each of the villages had a choice of services they thought were important and would be willing to pay for. In all but two cases the villages ranked search and rescue as the most important community service. Overall, the highest priority went to: 1) search and rescue, 2) maintaining the airport, 3) fire protection, and 4) community center activities. There were considerable differences among the villages, as displayed in the following table.









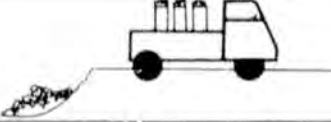




TABLE 12: RANKINGS OF COMMUNITY SERVICES BY EACH VILLAGE IN THE SURVEY

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Anbier</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Nostak</u>	<u>Shunonak</u>	<u>All Villages</u>
Search and rescue	1	3	1	5	2	1	1	1	1	1	1	1
Fire fighting equipment	2	5	3	1	5	2	7	10	1	2	5	4
Maintain airport	3	1	1	1	1	1	3	2	3	2	2	1
Sewer	4	5	4	3	4	4	4	8	2	4	6	6
Street lights	5	6	2	8	6	2	6	4	2	2	5	5
Community center activities	6	4	3	1	2	3	4	3	2	3	1	2
Maintain roads	7	7	1	3	5	6	10	7	6	5	5	10
Jail	8	2	2	7	3	8	9	5	5	5	4	9
Garbage	9	5	2	2	3	2	8	4	4	8	7	7
Playground	10	6	2	6	4	3	4	9	2	5	5	8
Community shower	11	6	4	2	3	6	5	12	8	6	3	10
Heated shelter	12	5	1	4	6	5	2	6	3	2	1	3
Firemen (paid)	13	7	5	6	7	7	11	11	7	7	8	11

1 means very important and willing to pay a lot  
 13 means least important and not willing to pay for

# Ranking of Community Services - Kotzebue



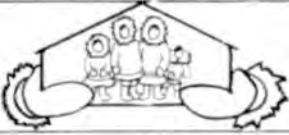



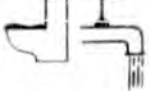
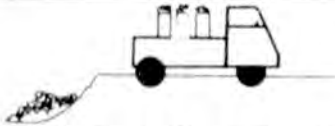


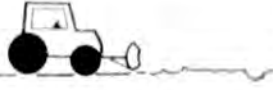


table 12

search and rescue priority 1*	
firefighting equipment priority 2	
maintain airport priority 3	
sewer (and water) priority 4	
street lights priority 5	
community center activities priority 6	
maintain roads priority 7	
jail priority 8	
garbage priority 9	
playground priority 10	
community shower priority 11	
heated airport shelter priority 12	
paid firemen priority 13*	

\* Priority 1: Very important, community would be willing to pay a lot for maintenance.  
Priority 13: Least important, community not willing to pay for maintenance.

# Ranking of Community Services - All Villages

table #2

search and rescue priority 1*	
maintain airport priority 1*	
community center activities priority 2	
heated airport shelter priority 3	
firefighting equipment priority 4	
street lights priority 5	
sewer (and water) priority 6	
garbage priority 7	
playground priority 8	
jail priority 9	
maintain roads priority 10	
community shower priority 10	
paid firemen priority 11*	

\* Priority 1: Very important, community would be willing to pay a lot for maintenance  
Priority 11: Least important, community not willing to pay for maintenance

To see if different subgroups rate services differently, three variables were used: income, employment status, and village size. As in the subsistence section, the greatest differences exist between the higher income group (more than \$15,000 a year) and the others.

Higher income people gave more importance to fire protection, airport, sewers, community center activities, and jails. Their interest probably lie more with protection of property and assets, since they are more likely to own property.

TABLE 13: RANKING OF COMMUNITY SERVICES  
BY THREE INCOME GROUPS

	<u>Less Than \$5,000</u>	<u>\$5,000- \$14,999</u>	<u>\$15,000 &amp; Up</u>
Search and rescue	1	1	1
Maintain airport	2	2	3
Street lights	3	5	6
Community center activities	4	3	4
Sewer	5	7	4
Garbage	6	10	9
Fire fighting equipment	7	4	2
Heated shelter	8	6	10
Maintain roads	8	8	7
Playground	9	9	8
Jail	10	11	5
Community shower	11	12	11
Paid Firemen	12	13	12

1. most important and willing to pay a lot  
13. least important and not willing to pay

There are also differences between the full-time workers and the unemployed. Like the highest income group, the fully employed people are concerned with property related services. This tendency is not a major difference though. Community showers, playgrounds, and paid firemen are considered less important by all groups.

See Table 14.

TABLE 14:

RANKINGS OF COMMUNITY SERVICES  
COMPARING THREE EMPLOYMENT GROUPS

	<u>Unemployed</u>	<u>Part-time Employed</u>	<u>Full-time Employed</u>
Search and rescue	1	1	1
Maintain airport	2	2	3
Community center activities	3	4	2
Street lights	3	7	8
Fire fighting equipment	4	3	2
Sewer	5	4	1
Heated shelter	6	8	5
Maintain roads	7	5	4
Jail	8	9	2
Garbage	9	10	2
Playground	10	6	5
Community shower	11	11	6
Paid Firemen	12	12	7

1. most important and willing to pay a lot.  
12. least important and not willing to pay for.

From Table 15, the larger city, Kotzebue, differs from the villages in that there is slightly more emphasis on the services of airport maintenance, sewers, and road maintenance than in the villages. These differences probably serve to highlight the variation in conditions between outlying villages and Kotzebue.

TABLE 15: RANKINGS OF COMMUNITY SERVICES  
COMPARING KOTZEBUE AND OTHER NANA VILLAGES

	<u>Kotzebue</u>	<u>Other Villages</u>
Search and rescue	1	1
Fire fighting equipment	2	5
Maintain airport	3	2
Sewer	4	6
Street lights	5	7
Community center activities	6	3
Maintain roads	7	10
Jail	8	12
Garbage	9	9
Playground	10	8
Community shower	11	11
Heated shelter	12	4
Firemen	13	13

- 1 = most important and willing to pay a lot  
13 = least important and not willing to pay for

All agencies responsible for the provision of capital improvements should be aware of the current preferences of NANA residents. New facilities and services should be planned based on the ability and interest of the community to pay for the maintenance and operation of the structure or service.

## TRANSPORTATION

### Summary:

Overall the survey indicates that the majority of the travel done by NANA residents is within the region and the most common mode is by air. When transportation facilities were ranked, both Kotzebue and village respondents gave the highest preference to 1st, trail markers, second, trail shelters and third, airport shelters. It appears that most surface and water travel is subsistence related, while air travel is largely for work and to visit. Individual villages varied their rank order.

### ANALYSIS:

The transportation needs of a community may depend on what kind of equipment is available.

Table 16 shows a sample of the types of vehicles in each village. In all but Kotzebue, cars and trucks are not used much. Sno-gos and boats appear to supply most of the needs. As expected, the types of vehicles owned is stratified by income and employment: the wealthier owning planes and cars.

TABLE 16: EQUIPMENT IN EACH HOUSEHOLD OF NANA COMMUNITIES  
(figure represents number owned)

	<u>Kotzebue</u>	<u>Kivalina</u>	<u>Ambler</u>	<u>Kobuk</u>	<u>Buckland</u>	<u>Deering</u>	<u>Selawik</u>	<u>Noorvik</u>	<u>Kiana</u>	<u>Noatak</u>	<u>Shungnak</u>
Car, truck	52	0	0	2	0	2	0	2	5	0	2
Sno-go	98	12	16	5	12	9	22	24	19	18	7
Cycle	48	1	7	2	2	4	1	5	4	2	0
Boat	76	13	14	5	11	7	24	26	18	18	6
Plane	11	0	1	1	0	0	1	1	2	0	0

Table 17 shows that private airplanes are not as subsistence related as are boats and sno-gos. Those individuals most active in subsistence, though, appear to have access to all modes of transportation.

TABLE 17: EQUIPMENT OWNERSHIP BY INTENSITY OF ACTIVITY IN SUBSISTENCE

Equipment	No Activities	1-4 Activities	5-10 Activities	Over 10 Activities	Number of Respondents
Car-truck	3%	26	59	12 = 100%	65
Sno-go	2	28	56	14 = 100	214
Cycle	5	30	54	11 = 100	67
Boat	2	22	60	16 = 100	193
Plane	0	44	38	18 = 100	16

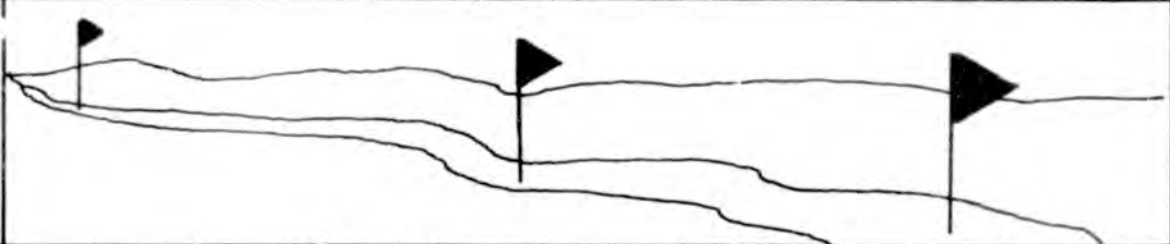
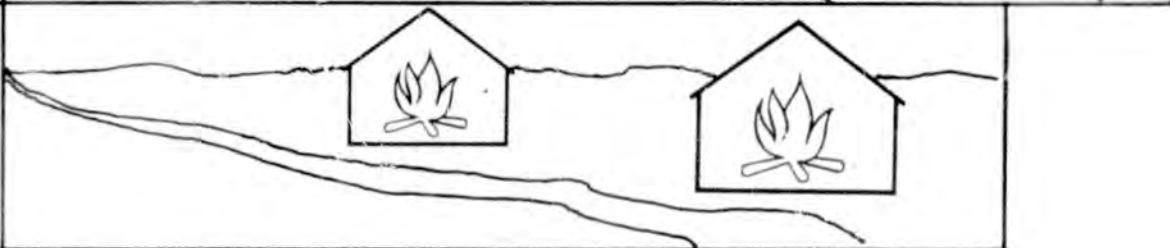
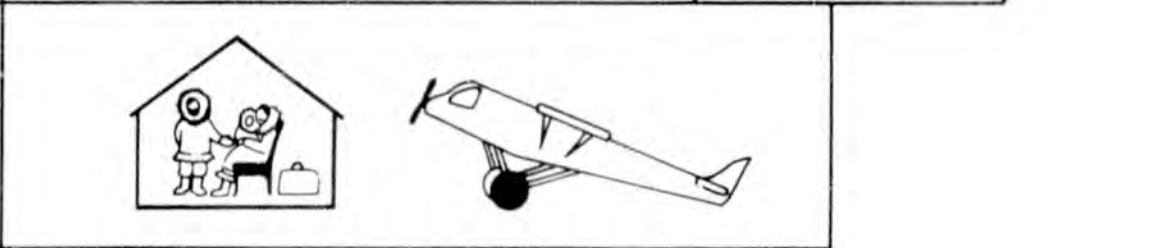
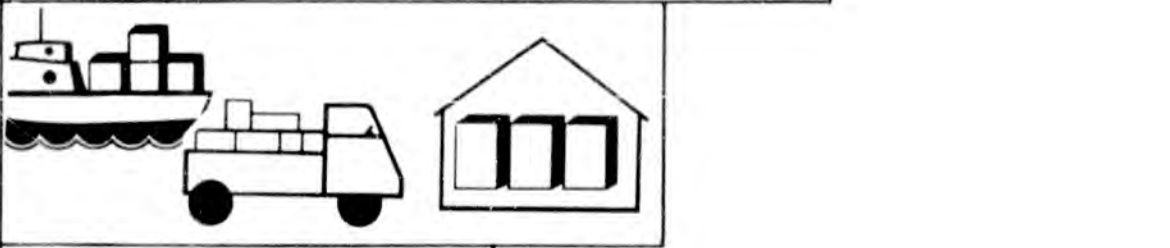
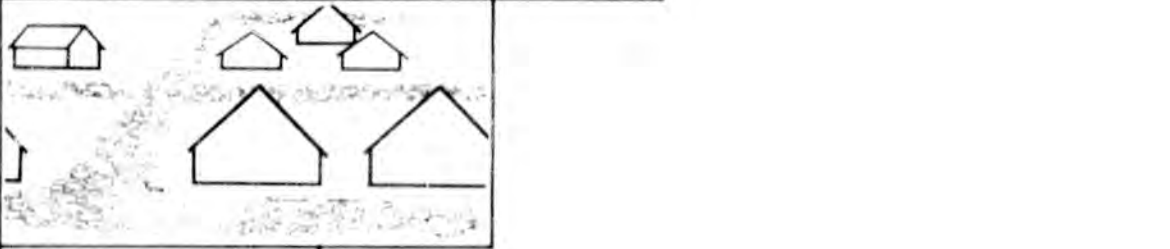


The kind of equipment available then, may determine the kind of transportation services and facilities desired in each community. Table 18 shows that even though more cars and planes are available, trail markers and shelters are still very important. This trend is consistent with the need for search and rescue services also. The development of roads and streets is not overwhelmingly important, and transportation more suited to the arctic environment is valued. There are variations in ranked preference from village to village, however a common trend is evident.

TABLE 18: RANKING OF TRANSPORTATION SERVICES WITHIN EACH VILLAGE

Transportation Services	All villages except											Kotzebue
	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Noorvik	Kiana	Noatak	Shungnak	
Trail Markers	1	1	1	1	1	1	2	1	1	1	2	1
Trail shelters	2	1	1	4	2	2	1	1	2	2	1	2
Airport shelter	3	1	1	2	3	3	3	2	1	3	1	3
Freight shelters	4	2	2	2	5	4	4	4	3	3	2	3
Streets	5	2	2	3	4	6	5	3	4	5	3	4
Docks	6	3	3	5	6	5	6	6	5	6	4	5
Roads to other villages	7	3	4	3	7	7	7	5	6	4	5	5
Number of Respondents:	161	18	17	8	18	12	30	30	26	21	9	189

# Ranking of Transportation Services - Kotzebue

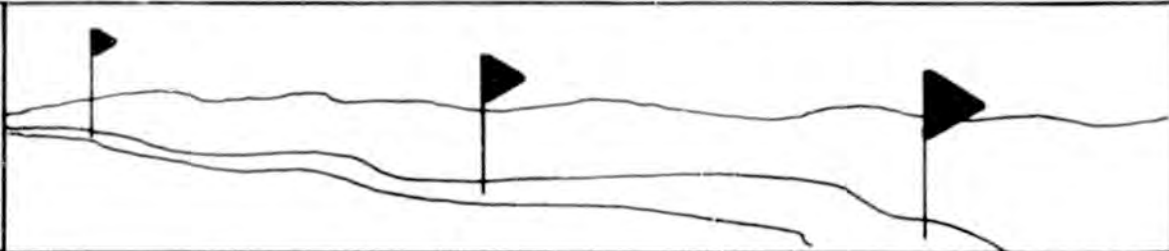
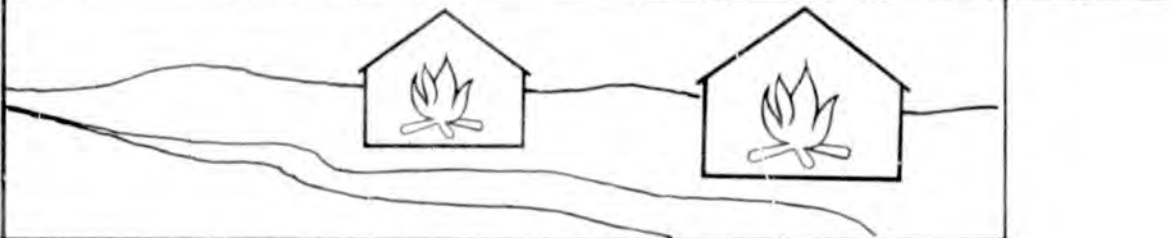

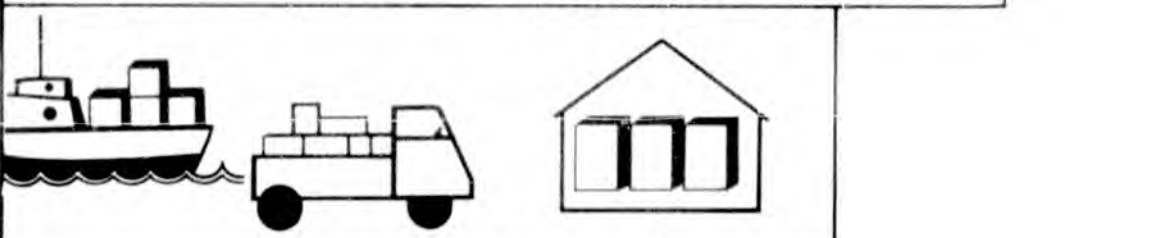
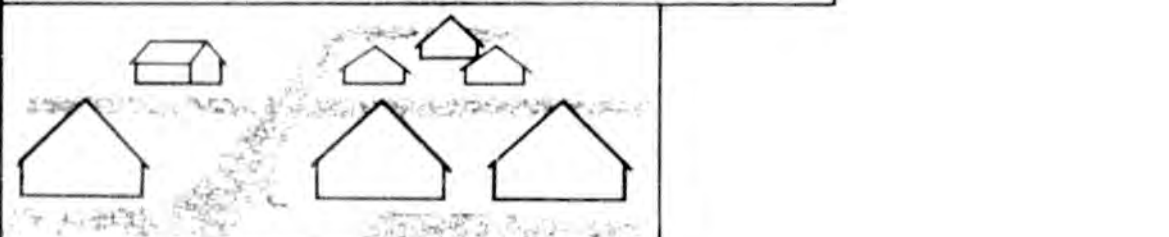
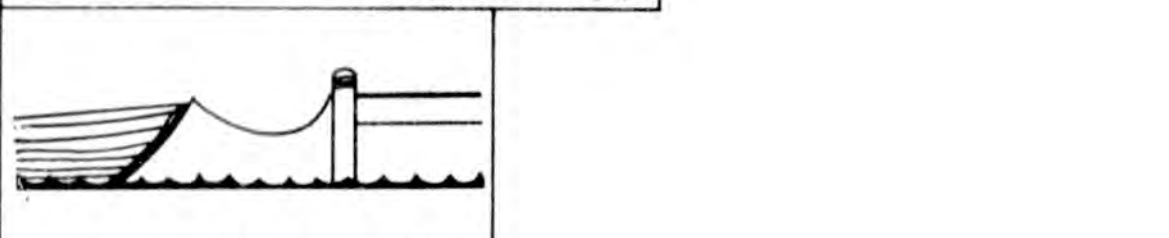
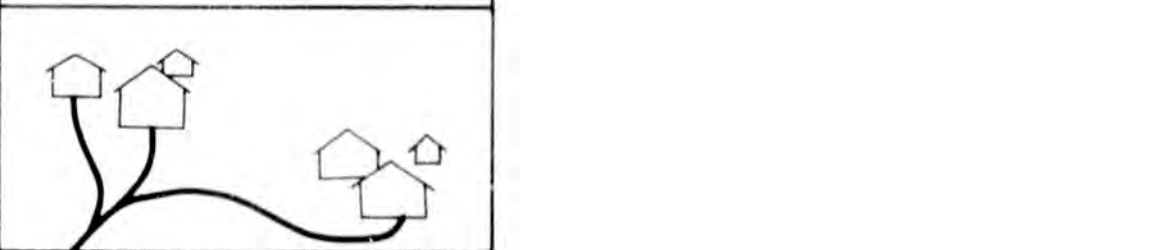
table 18

<p>trail markers priority 1*</p>	
<p>trail shelters priority 2</p>	
<p>airport shelters priority 3</p>	
<p>freight shelter priority 4</p>	
<p>streets priority 5</p>	
<p>docks priority 6</p>	
<p>roads to other villages priority 7*</p>	

\* Priority 1: Most important transportation services  
Priority 7: Least important transportation services

# Ranking of Transportation Services- All Villages except Kotzebue

table 18

<p>trail markers priority 1*</p>	
<p>trail shelters priority 2</p>	
<p>airport shelters priority 2</p>	
<p>freight shelter priority 3</p>	
<p>streets priority 4</p>	
<p>docks priority 5</p>	
<p>roads to other villages priority 5*</p>	

\* Priority 1: Most important transportation services  
Priority 5: Least important transportation services

Those who make frequent trips by air want more "conventional" services like roads and streets, freight shelters, and airports. While air travel cannot be substituted for land travel, it appears that mobility in many forms is on the increase.

Nearly half of the respondents traveled within the region, and one third went outside the region. Table 19 describes all the trips reported by NANA respondents. More than half (65%) of the traveling is done within the region and by air, for either work or visiting. Trips made for purely subsistence reasons don't seem to have shown up here judging from the 10% reported for snowmachine and 8% for hunting. Given this great amount of air travel, and yet the desire for trail markers and shelters, it suggests that air travel and land travel belong in two different spheres of interest: work and social life on one hand, and traditional subsistence life on the other.

TABLE 19: Description of All Trips Taken by NANA Respondents

<u>Where</u>		<u>Why</u>		<u>How</u>	
village in NANA	38%	visit	32%	commercial airline	60%
Kotzebue	20%	work	30%	charter airline	20%
Anchorage	12%	shopping	17%	boat	10%
fish camp	7%	hunting or		snowmachine	10%
village outside		fishing	8%		100%
NANA	7%	illness	5%		
Nome	4%	vacation	5%		
Fairbanks	4%	school	3%		
other	8%		100%		
	100%				

(this table does not show the relationships among where-why-how)

Future projects designed to improve transportation facilities and services should be directed towards upgrading trails and airports. Development of connecting roads does not appear to be of current high priority. Such plans, however, should be developed in conjunction with preferences for the location of employment opportunities.

## COMMUNITY TIES

Summary: Forces of change have come to bear on the residents of NANA. Influence such as population growth, increased mobility for such activities as employment and education as well as increased cost of living are perceived as both positive and negative influences by NANA residents. Several variables were combined to indicate the relative strength of the ties individuals have to their communities. These were measured against the variables of age, level of participation in subsistence activities and occupational skills.

In addition, general attitudes about the quality of life in NANA were examined with an emphasis of the effects of new people coming to live in the NANA region. The two major problem areas appear to be increased alcohol abuse and unemployment. Many residents may be looking to education as a solution to these problems, since the majority in all communities believe that a college education is very important.

ANALYSIS: Potential development of resources poses decisions about many facets of village life. One central issue is the degree to which NANA residents are tied to their village--the place where they have grown up. Over half the respondents have lived in their village 21 years or more. Only 20 percent have lived there 5 years or less. From Table 3, it is clear that long time residents become more dependent on the land for their daily needs. The longer a person has lived in a village, the more likely they are to depend on subsistence and exclude a work for pay life style. In addition, Table 2 shows that the youth in the NANA region are continuing the subsistence tradition. So what then are the elements of the ties that hold people to their land?

Age is one element. Table 20 shows that the young are more willing to relocate; they have looser ties to their village, especially for men. Although there is not much difference between income groups, lower income groups have looser ties than the higher income groups. The same pattern applies to the unemployed and full-time employed.

TABLE 20:<sup>1</sup> TIES TO HOME: OLD AND YOUNG COMPARED

	15-24	Age 25-44	45+
Looser ties	56%	45	45
Average	32	26	15
Strong ties	12	28	40
	<u>100%</u>	<u>100</u>	<u>100</u>

Table 21 shows that the more loosely tied individuals see changes in the village in a more positive light. The traditional ways of doing things appear to be not quite as important to them. Having an allotment appears to make no difference in how tied people are to their village, nor does owning or renting a house.

TABLE 21: EFFECT OF TIES TO VILLAGE ON OPINION OF CHANGE

	Things Are Worse Now	Things Are About the Same	Things Are Better Now Than 10 years ago
Looser Ties	49%	36	57
Average	20	39	25
Strong ties	31	25	18
	<u>100%</u>	<u>100</u>	<u>100</u>

Another element of the community ties is participation in subsistence. Table 22 shows that those who are least active in subsistence have stronger ties to the community. This group may include the elderly who are no longer as active as they used to be or these results may be confounded by the difference in men's and women's responses.

TABLE 22: EFFECT OF SUBSISTENCE INTENSITY ON TIES TO VILLAGE

	Number of Subsistence Activities			
	0	1-4	5-10	11 or More
Looser ties	38%	40	51	54
Average	12	30	23	18
Strong ties	50	30	26	28
	<u>100%</u>	<u>100</u>	<u>100</u>	<u>100</u>

<sup>1</sup>. Ties were sum of the times people said they would not move away from the village for work.

Ties to home appear to have little relationship to mobility. Whether or not a person travels has little to do with his desire to remain in the village. This result is easily understood considering many trips are made for visiting. However, occupation does make some difference (see Table 23).

The people with construction-related skills are more willing to move away from their village since they cannot work all year round in one place.

TABLE 23: EFFECT OF OCCUPATION ON TIES TO VILLAGE

	<u>Trades</u>	<u>Services</u>	<u>Native Skills</u>
Loose ties	72%	31	45
Average	14	30	18
Strong ties	14	39	37
	<u>100%</u>	<u>100</u>	<u>100</u>
Respondents	84	74	47

When it comes to overall quality of life, there is much agreement about the problems and the joys of living in the NANA region. Table 24 shows that even among the three employment groups, everyone feels that the availability of natural resources, human closeness and a sense of freedom make the quality of life worthwhile. Conversely, the major problem was identified as alcohol abuse with unemployment mentioned second. The positive elements appear to be outweighed by the negative forces since overall, the majority of people see things getting worse. Particularly the unemployed believe that things were better ten years ago. (see Table 24)

TABLE 24: COMPARISON OF THREE QUESTIONS ON SATISFACTION WITH VILLAGE LIFE AMONG EMPLOYMENT GROUPS

	<u>Unemployed</u>	<u>Part-time Employed</u>	<u>Full-time Employed</u>
<u>Rank of Things Liked the Best</u>			
Hunting & fishing	1	3	3
Friends & family	2	2	1
Freedom	3	1	2
<u>Rank of Things Disliked the Most</u>			
Alcohol abuse	1	1	1
Unemployment		2	
Cost of living		3	
<u>Percent Thinking Things Were Better 10 Years Ago</u>			
	74%	61%	57%

Those who think life was better ten years ago in their village do see some positive change: when asked about new people coming to live in the community, they like the new ideas and learning, and the added business that a population increase brings. But the new people are believed to be taking jobs from long time residents. NANA residents voiced this concern more strongly than the advantages of new people. See Table 23. Even the 40% who believe that losing jobs to outsiders is a problem, believe that alcoholism has a greater negative impact, and that it affects all areas of village life.

Table 25: OPINIONS OF NANA RESPONDENTS WHO THINK VILLAGE LIFE WAS BETTER TEN YEARS AGO

<u>Good Things About Change</u>		<u>Bad Things About Change</u>	
News ideas & learning	28%	People take jobs	40%
More business	22%	Changes life style	17%
More services	9%	People bring disease and alcoholism	12%
Can't stop people	16%	Too crowded	10%
Other	25%	Take land	9%
	<u>100%</u>	Other	12%
			<u>100%</u>

While population growth has brought changes, most people think that subsistence opportunities have not changed much. See Table 24. Only one quarter see much of a difference and they are evenly divided. Those who are most active in subsistence think game has stayed the same or multiplied, while those least active think available game has decreased.

TABLE 26: VIEWS ON CHANGES AND PERCEPTION OF WILDLIFE ABUNDANCE

<u>Change in Wildlife Abundance</u>	<u>Opinion of Village Life Now</u>		
	<u>Worse Now</u>	<u>Same</u>	<u>Better Now</u>
Less	15%	21%	11%
Same	73	71	75
More	12	8	14
	<u>100%</u>	<u>100%</u>	<u>100%</u>

When asked about the importance of a college education, nearly all respondents believe that a college education is very important. This is particularly true of village residents. Variables of income, and participation in subsistence activities did not change the emphasis on education. The unemployed placed slightly higher emphasis on it than did the employed. The response of NANA residents to the question of importance of a college education can be compared to the responses of a national survey. While 60% of Kotzebue respondents and 74% of village respondents believe that a college education is very important, only 36% of the respondents in the nation felt that it was very important. See Table 25.

TABLE 27: PERCENT OF RESPONDENTS WHO THINK  
A COLLEGE EDUCATION IS VERY IMPORTANT

All Villages Except Kotzebue	Kotzebue	Kivalina	Ambler	Kobuk	Buckland	Deering	Selawik	Noorvik	Xiana	Noatak	Shunqnak	National <sup>2</sup>
74%	60%	72%	75%	75%	83%	67%	58%	72%	69%	81%	89%	36%

As future plans for resource development, the creation of employment opportunities or other economic development projects are developed, decision makers should address the reasons why people choose to live in their communities, as well as the problem areas identified. Social and economic variables of alcoholism, family closeness, subsistence and the emphasis on education should all be included.

2. Tenth Annual Gallup Poll of the Public's Attitudes Toward the Public Schools. September 1978 -- Phi Delta Kappan -- page 39.