

SURVEY RESULTS OF THE UPPER KUSKOKWIM REGIONAL STRATEGY PROJECT

Prepared for
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Oversight Committee

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The Oversight Committee of the Upper Kuskokwim Regional Strategy Project decided to conduct a sample survey of adults in the four communities of the region. Part of the project's scope of work was to ascertain personal characteristics and attitudes of the area's residents related to issues of resource development, subsistence, transportation, services, education and other topics. Initial work on survey planning and design of the questionnaire instrument was conducted by the Oversight Committee using assessment interviews with community leaders. A draft was developed at a two day committee meeting. Contractors for the project, Alaska Attitudes and Upper Kuskokwim Regional Planners (UKRP), together with the Department of Community and Regional Affairs, put the instrument into its final form for distribution.

UKRP administered about 78 percent of the 20 minute surveys using face-to-face interviewers. Specially hired local interviewers were used to conduct about 20 percent of the surveys to alleviate language and cultural barriers. About two percent of the surveys were self-administered and returned by mail--this included some members of the Oversight Committee. A frequency distribution of the responses of each question was produced for each of the four communities as well as some crosstabulations on a few selected indicators. A total of 228 adults participated in the survey, which is an estimated 52.7 percent of the adult population in the four communities. As shown in table 6, 145 adults were sampled in McGrath, 43 in Nikolai, 7 in Telida, and 33 in Takotna.

Weaknesses in the methodology occurred primarily in the administration of the survey instrument. Basically, all adults were considered possible participants.

Therefore, it appears that all available adults within a set of time restrictions were asked to participate. First, this approach does not necessarily produce a random sample. Non-participants could skew the results by being a special subgroup due to their subsistence activities, or some other characteristic. A second problem revolves around interviewing multiple adults per household. Survey theory usually suggests that the household is the objective sampling frame and one member from each household is sampled to represent that household's characteristics and attitudes. Interviewing multiple members from each household creates a double counting problem regarding characteristics of the household. Such measures as household size, ownership of property, etc. will tend to be exaggerated, particularly in communities which are heterogeneous in their make-up. Data from McGrath and Takotna are more likely to reflect this problem. Table 6 compares the household size as estimated by actual count and based on the survey. The survey's household size for McGrath is significantly above what would be expected—highlighting the problem of double-counting. However, in the other communities the survey and actual size were similar. In addition, interviewing multiple household members can tend to exaggerate the opinions of larger households and create the problem of bias in that many times two or more adults from the same household are interviewed together. Responses from one member may bias the responses from other members. In evaluating the responses, one should consider these methodological problems.

The report presents the data in three ways. The tables are an abridged review of all of the information contained in the survey. Not all of the responses are given, but key information is highlighted. The reader should refer to the appendix for an exact wording of the questions. Also, the reader must remember

that the communities vary considerably in size. Therefore, one should be careful in using the "total" sample data, as well as remembering that a small difference in the percentages of McGrath respondents may be more significant than a large difference in Telida's responses. Selected data are also highlighted in figures to graphically portray the results and demonstrate key findings in such a way that the reader will grasp it easier. The tables and figures are supported by text which is used to briefly highlight key points and note conclusions or questions raised by the data.

THE 1980 CENSUS AND 1984 SURVEY CHARACTERISTICS OF THE FOUR COMMUNITIES OF THE UPPER KUSKOKWIM

To provide a basis to judge the survey and place the findings in a context for analysis, tables 1 through 5 summarize key individual and household characteristics described in the 1980 census. Though some important changes in population have occurred since the taking of the census, much of the basic data is still illustrative of the character of the communities and can assist planners in understanding the marked differences among the four communities. In 1980, McGrath clearly emerged as the sub-regional center, showing growth, while the balance of the region remained static or fell in population. While Nikolai and Telida are predominately Alaskan Indian villages, McGrath and Takotna are more mixed racially and economically. Both are balanced between Natives and non-Natives, and have a significant Eskimo population. These differences produce much higher household sizes, fewer single person households, a higher proportion of owner-occupied dwellings but fewer rooms and more census defined crowding, lower labor force participation rates and cash incomes for the Indian communities of Nikolai and Telida compared to McGrath and Takotna.

Native-non-Native differences in the cash economy can also be seen by comparing labor force participation and unemployment rates for the two groups residing in the city of McGrath. Natives have both lower participation and higher unemployment.

Since 1980, the city of McGrath has grown a rapid 43 percent, doubling the real term growth of the 1970's (see figure 1). Nikolai also grew 26 percent and now equals its population of 1970. Telida and Takotna both stayed about the same. Table 6 reviews the race and adult/children rates in the four communities. Takotna has the highest proportion of adults (71 percent), and Nikolai and Telida are predominately Native communities while a majority of McGrath and Takotna are non-Native. Tables 7 and 8 describe the personal and household characteristics of the sample. The results closely parallel the 1980 census. McGrath and Takotna have more racial heterogeneity, higher household incomes, and higher educational attainment compared to the other two communities. Nikolai and Telida have a higher proportion of owner-occupied residences, little mortgaged housing, and have residents who were born in Alaska and always lived in their respective communities. Takotna has the highest proportion of incomes over \$60,000 and adults over 50 years of age, while McGrath has the only significant group of adults with four or more years of college.

TRANSPORTATION

When looking at vehicle ownership, Takotna and McGrath had the only significant number of cars/trucks and motorcycles, and also were the only communities with aircraft ownership (see table 9 and figure 2). All four communities had high snow machine ownership (67 to 86 percent) and McGrath, Nikolai and Takotna had a

high proportion of 3-wheeler/ATV's. Boat ownership was highest in Nikolai, McGrath and Telida, while Telida and Nikolai households were more likely to own dog teams. The reader should be cautioned about estimating the actual number of vehicles because of the sampling problems already discussed.

Regarding inter-community travel, the role of McGrath as a sub-regional center is graphically displayed in figures 2 and 3. The highest average number of trips per respondent annually occurred from each of the other three communities to McGrath. For example, Telida residents traveled to McGrath 10.7 times a year; Takotna residents, 8.9 times a year; and Nikolai residents 5.6 times annually. There was minimal travel between the communities of Takotna, Telida and Nikolai. McGrath residents were most likely to visit Takotna (3.1 times annually) and Nikolai (2.2 times) and least likely to travel to Telida (.8 times annually).

In looking at the modes of inter-community travel, aircraft was the most commonly mentioned method in all four communities (see table 10). The snow machine was the second most frequently mentioned mode and the boat was third. Inter-community travel by residents of Telida seemed most dependent on aircraft, while the other communities had more variety of methods available. Distance is likely the key factor in this.

The mode and pattern of travel in the region predicts support for road alternatives. The close proximity and high inter-community travel between Takotna and McGrath combine to produce strong support for a winter road with a plurality to majority supporting a permanent road among residents of these two communities. Telida respondents supported a Telida-Nikolai-McGrath winter road.

For all alternatives, support declined when comparing winter to permanent road options (see table 11 and figure 4).

RESOURCE DEVELOPMENT

The survey asked respondents to rate 11 resource development options on a 10 point scale (from 1 - oppose, to 10 - favor). In table 12, three measures are given for each community - the mean or average score on the 10 point scale, the percent which favored the proposal by giving it a score of 7 to 10, and the relative rank of the 11 development options. Figure 6 displays the mean scores of each resource option by community. McGrath and Takotna respondents were more likely to support any development option compared to residents of Nikolai and Telida. A majority of McGrath respondents favored agriculture, fur tanning, small scale mining and timber development. Only large scale mining received a mean score below 5 which reflects this community's greater receptivity to development. Takotna respondents gave majority support to small scale mining, agriculture, fur tanning, and oil and gas development. Least support was given to tourism and commercial fishing. Nikolai residents were most likely to favor timber, fur tanning and agriculture, and oppose commercial fishing, guiding, tourism, and oil and gas development. Only for agriculture, did a majority of Telida respondents support development. A strong plurality did support fur tanning, and commercial fishing, but the community also showed sharp divisions of opinion on many options. Lowest scores were given to oil and gas development, and tourism. In looking at the distribution of responses, it suggests that options which would substantially alter the character of the region and produce the greatest population growth, were likely to be opposed. Also, the tourism and guiding industries were not strongly favored which

suggests a concern over the compatibility of these activities with traditional harvesting of fish and game. It appears that most development favored either already exists, such as small scale mining and fur tanning, or could be developed or enhanced on a small scale for regional consumption - such as agriculture and timber. There may have been some confusion by respondents with some viewing an option as large scale for export, and others seeing it as small scale for local consumption. Support for agriculture may be a combination of those wanting large-scale export agriculture and others wanting to reduce local food costs. Support or opposition to any option should not be viewed as a measurement of economic feasibility, but does provide insight into how receptive the local residents are to general project concepts.

When the development options were presented a second time to select the one most important to the future of the region, the priorities shifted somewhat. Greater attention was paid to oil and gas. Agriculture dropped overall. Timber support remained strong while small scale mining received interest only in Takotna (see table 13).

In moving from specific types of resource development to the general concept of development, the patterns suggested above emerge more strongly. Nikolai opposed development if the population increased while the other communities supported the idea (see table 14). McGrath's support was probably lower than expected because of the high number of residents who felt there were currently too many people in the community (see table 19). Strong majorities in all four communities supported development if it created seasonal employment, but just as strongly opposed development if it disturbed historical sites. Seasonal employment opportunities are likely to be considered compatible with local

subsistence lifestyles and therefore an acceptable form of development providing local opportunities. Regarding the trade-offs between development and fish and wildlife, the communities showed two patterns. McGrath and Takotna were more sure that development would not hurt fish and wildlife, and most likely to disagree with prohibiting development because it would harm fish and wildlife. Telida and Nikolai residents were more divided on whether development would hurt fish and wildlife, but only Telida respondents largely agreed that development should not occur because of the harm it definitely would do. A majority in all four communities disagreed that development was necessary even if it hurt fish and wildlife. These responses suggest that residents did see some development-environmental conflicts, but a majority felt that development could be done responsibly in a way to protect fish and wildlife. However, if the tradeoff between the two options did arise, fish and wildlife were considered more important than the opportunities presented by development.

The sample's resource development attitudes resulted in strong support for a regional resource development plan which is prepared by elected local residents. Over 70 percent of each community's respondents supported the concept of a plan (see table 15).

Table 15 also shows that residents did not have a strong knowledge of current plans for land disposal which could have an effect on the region and the pattern of future development. Very few respondents were very familiar with state and federal land disposal and a plurality could not form an opinion on two current land disposal plans. Among those who did express an opinion on the Appel Mountain and Big River plans, opinions were divided between those favoring and opposing. McGrath residents were most favorable of both plans while Nikolai

respondents were most opposed.

One form of development could include small-scale exploitation of local fuel sources to reduce consumer fuel costs which except for wood are largely imported. Based on incomplete 1980 census data, McGrath and Takotna residents use a combination of fuel oil and wood to heat their homes, and bottled gas and electricity to cook with (Takotna uses just bottled gas). About one-third of the McGrath and over one-half of Takotna homes do not heat water. Nikolai and Telida (though complete data is not shown) depend exclusively on wood for heating, and bottled gas and wood for cooking. Also, residents of the two communities do not heat their water.

SUBSISTENCE

From information presented in table 17 and figure 8, subsistence activities are critical to the resident population. Almost everyone in Nikolai and Telida and substantial majorities of McGrath and Takotna subsistence hunt, fish and gather. For that reason, the respondents rely on subsistence for a large portion of their diet. Over three quarters of Nikolai and Telida residents have half or more of their food coming from subsistence sources. For McGrath and Takotna respondents, 35 and 41 percent respectively derive more than 50 percent of their food from subsistence sources.

Looking at specific subsistence resources, Nikolai and Telida rated every option higher than the other two communities. Only bear received an average score 3.5 or below from these two sets of respondents. Differences between Nikolai and Telida residents included the former's higher scores for caribou and Telida

respondents greater interest in marten. As noted, McGrath and Takotna respondents rated the resources as less important. McGrath most prized moose, salmon and other fish, while Takotna residents most valued moose, other fish and marten. Figure 8 ranks the 10 resources for all respondents. Moose, salmon, berries, other fish, waterfowl and other game were rated as most important. Bear and beaver were rated least important.

In terms of compliance with fish and game laws, only Telida respondents had a significant problem in understanding the law. In knowing how to change the law, positive response declined in every community, and only about one-half of the residents knew how to change regulations. In terms of bag limits, except for waterfowl, it would appear that existing limits were deemed acceptable by a majority of all residents.

ATTITUDES TOWARD GOVERNMENT AND SERVICES

Satisfaction with city and traditional government services was mixed (see table 19). Except for Telida, the modal response for city services was some satisfaction. Since Telida probably has few if any services, the high marks given are probably not significant. McGrath, the largest and most organized community, has the lowest proportion very satisfied. On evaluating traditional government services, the mixed race communities of McGrath and Takotna have higher don't know responses. In the Indian communities of Nikolai and Telida, the satisfaction with traditional government seems to be slightly lower when compared to city services.

When asked how to make their city better, there was little consensus. Many

suggestions were beyond the scope of local government or would represent substantial expenditures. The response, OK as is, is the most interesting response, and may be indicative of satisfaction. As with the more specific satisfaction questions, Telida residents were the most agreeable with their current situation (60 percent) and McGrath respondents were least likely to give OK as the open-ended response (3 percent).

While lacking enthusiasm, the satisfaction with services is adequate, if not supportive. The issue of additional local government through the establishment of an organized borough was met with little interest (see table 19). While a majority did not seem to know or understand the purpose of a borough, a majority of McGrath, Nikolai and Takotna respondents opposed their community being apart of one. Most Telida residents just had no idea what the question was asking.

Table 21 shows that residents have a strong interest in obtaining title to city land. Over 80 percent of McGrath, Nikolai and Takotna respondents would like title to land primarily to live on. For the Telida sample, the interest was lower, but still a majority, and reasons ranged from recreation to residence and subsistence needs.

Turning to specific services, residents of the Upper Kuskokwim region have many of the same concerns and desires for such things as commercial outlets, public safety, health, education and recreation as other residents of Alaska. Looking at banking, respondents from McGrath and Takotna were much more likely to have used banking services compared to those in Nikolai and Telida. However, interest in a bank in the region was found in all the communities (see table 21). Interest in businesses for the region varied with a hotel, lumberyard and

bank mentioned most often. Nikolai respondents were most interested in child care facilities and Telida residents mentioned small engines most often.

Turning to the issue of public safety, McGrath and Nikolai residents were divided over whether law enforcement was adequate (see table 20). Takotna residents were more likely to feel enforcement was adequate while Telida residents could not form an opinion. Public safety was a non-issue in the small and homogeneous population of Telida. A majority in all the communities, except Telida, favored the stationing of a state trooper in the region and establishing an overnight holding facility. It is difficult to tell if these opinions would stay the same if a specific location for these services were identified. Respondents were also given the opportunity to select a method for dealing with minor offenses. Large majorities preferred community service for these offenses over fines or jail.

Regarding health care issues, McGrath and Takotna with larger non- Native populations have more residents with health insurance (70 and 56 percent respectively). Of those with insurance (57 percent of the sample with 50 percent of sample being non-Native), about one-half of the policies provide for medical travel (see table 22). Large majorities in all the communities have used the McGrath Health Center. However, estimating usage rates is difficult because of the lack of a time dimension in the question. Attitudinally, there was strong support for more visits from doctor's assistants and a care facility for the elderly.

Almost one-half of the respondents had school age children. Satisfaction with the child's education varied with Nikolai and Telida generally very satisfied

and the other two communities more divided (see table 23). More residents wanted their children to continue their education and attend college rather than other options. Though some 29 percent showed no preference as to how their children should continue their education. This suggests that these parent's aspirations for their children are really no different compared to parents in urban-suburban settings. When asked about educational, training and counseling opportunities, the respondents were largely supportive of all alternatives. Only the small Telida sample saw less need for opportunities, such as substance abuse and family violence workshops, and job counseling. Given its small size and close-knit lifestyle, this is not surprising. While general interest is quite high for these opportunities, it is impossible to use this as a measure of demand or likely participation. Whether residents would travel to another community to participate, or whether a specific type of training or education would meet either their real or perceived needs would require a great deal more study.

In looking at the recreational interests of the Upper Kuskokwim residents, the survey says more about the general need for recreational opportunities and outlets than prioritizing specific needs. Support for the development of both winter and summer sports was almost universal (see table 24). Those wanting development of water, gymnastic and general recreational facilities was above 80 percent. These questions were designed to measure perceived wants and not the feasibility or willingness to pay or maintain these facilities. It is obvious, however, that the differences between recreational needs and opportunities is substantial.

SUMMARY

In conclusion, the reader should recall the limitations of the survey as well as its strengths. The survey provides a look into the attitudes and feelings of the residents of the area. The respondents were found to have needs for services and community improvements, and interests in maintaining an existing valued lifestyle. People's need for security and stability and wanting to maintain a quality of life built over many years are traits found in everyone. In some ways, the respondents were contradictory in wanting expansion which could potentially interfere with lifestyle, but in terms of development showed a great deal of insight by understanding the effects of large scale development on the population, thus showing preferences for more limited opportunities. It cannot be stressed enough that the wants and needs of the respondents were not tied to the costs and trade-offs required. Wanting a service or project is the first step in its feasibility, but does not measure willingness to pay, willingness to accept hidden lifestyle changes, and the economic feasibility of the concept. This survey goes a long way in defining the residents' general attitudes, but additional analysis would be required to implement almost any preference cited in the report.

TABLE 9: TRANSPORT OWNERSHIP OF THE 1984 SURVEY SAMPLE

<u>Who Own</u>	<u>MCGRATH</u>	<u>NIKOLAI</u>	<u>TELIDA</u>	<u>TAKOTNA</u>	<u>TOTAL</u>
Car/Truck	35%	2%	0%	60%	31%
3-Wheeler/ATV	68%	61%	0%	70%	65%
Aircraft	15%	0%	0%	10%	11%
Boat	54%	56%	43%	20%	49%
Dog Team	20%	47%	50%	20%	26%
Snow Machine	70%	79%	86%	67%	72%
Motorcycle	33%	7%	0%	50%	29%

TABLE 10: MODES OF INTER-COMMUNITY TRAVEL

<u>Mode</u>	<u>Mention:</u>	<u>MCGRATH</u>		<u>NIKOLAI</u>		<u>TELIDA</u>		<u>TAKOTNA</u>		<u>TOTAL</u>	
		<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>2</u>
Aircraft		68%	20%	86%	7%	86%	43%*	88%	17%	76%	17%
Snow Machine		18	41	5	45	0	29	6	60	12	45
Boat		6	22	7	36	0	0	0	10	5	22
Other/DK		8	16	2	12	14	29	6	13	8	16

*Note: Aircraft was mentioned as both first and second mode by some Telida residents.

TABLE 11: PREFERENCES FOR INTERCOMMUNITY ROADS
OF THE 1984 SURVEY SAMPLE

<u>% Support Road</u>	<u>MCGRATH</u>	<u>NIKOLAI</u>	<u>TELIDA</u>	<u>TAKOTNA</u>	<u>TOTAL</u>
Nikolai to Telida					
Winter	25%	48%	71%	0%	28%
Permanent	16%	20%	57%	0%	16%
McGrath to Nikolai					
Winter	35%	45%	60%	7%	34%
Permanent	20%	19%	20%	7%	18%
McGrath to Takotna					
Winter	56%	43%	0%	64%	54%
Permanent	46%	22%	20%	52%	42%

TABLE 17: SUBSISTENCE ACTIVITY OF 1984 SURVEY SAMPLE

<u>HH Subsistence Activity</u>	<u>MCGRATH</u>	<u>NIKOLAI</u>	<u>TELIDA</u>	<u>TAKOTNA</u>	<u>TOTAL</u>
Fish	78%	98%	100%	69%	81%
Hunt	88%	98%	100%	75%	88%
Berries/Greens	88%	95%	100%	78%	88%
 <u>% of Food Based on Subsistence</u>					
Less than 25%	25%	0%	0%	37%	21%
25-50%	40	24	17	22	34
50-75%	25	44	50	41	31
More than 75%	10	32	33	0	14
 <u>Mean Score of Importance to Subsistence*</u>					
Moose	4.6	5.0	5.0	4.4	4.6
Caribou	3.4	4.4	3.6	2.6	3.5
Bear	1.9	3.5	3.1	2.6	2.3
Beaver	2.7	4.2	4.6	3.0	3.1
Marten	3.0	4.2	5.0	3.6	3.4
Salmon	4.3	4.9	4.9	3.2	4.3
Berries	3.9	4.8	4.9	3.5	4.1
Waterfowl	3.3	4.7	4.9	3.0	3.6
Small Game	3.3	4.3	4.7	3.4	3.6
Other fish	4.0	4.4	4.9	3.7	4.1

*Note: The scores represent the average on a 5 point scale from 1 - not important, to 5 - very important.

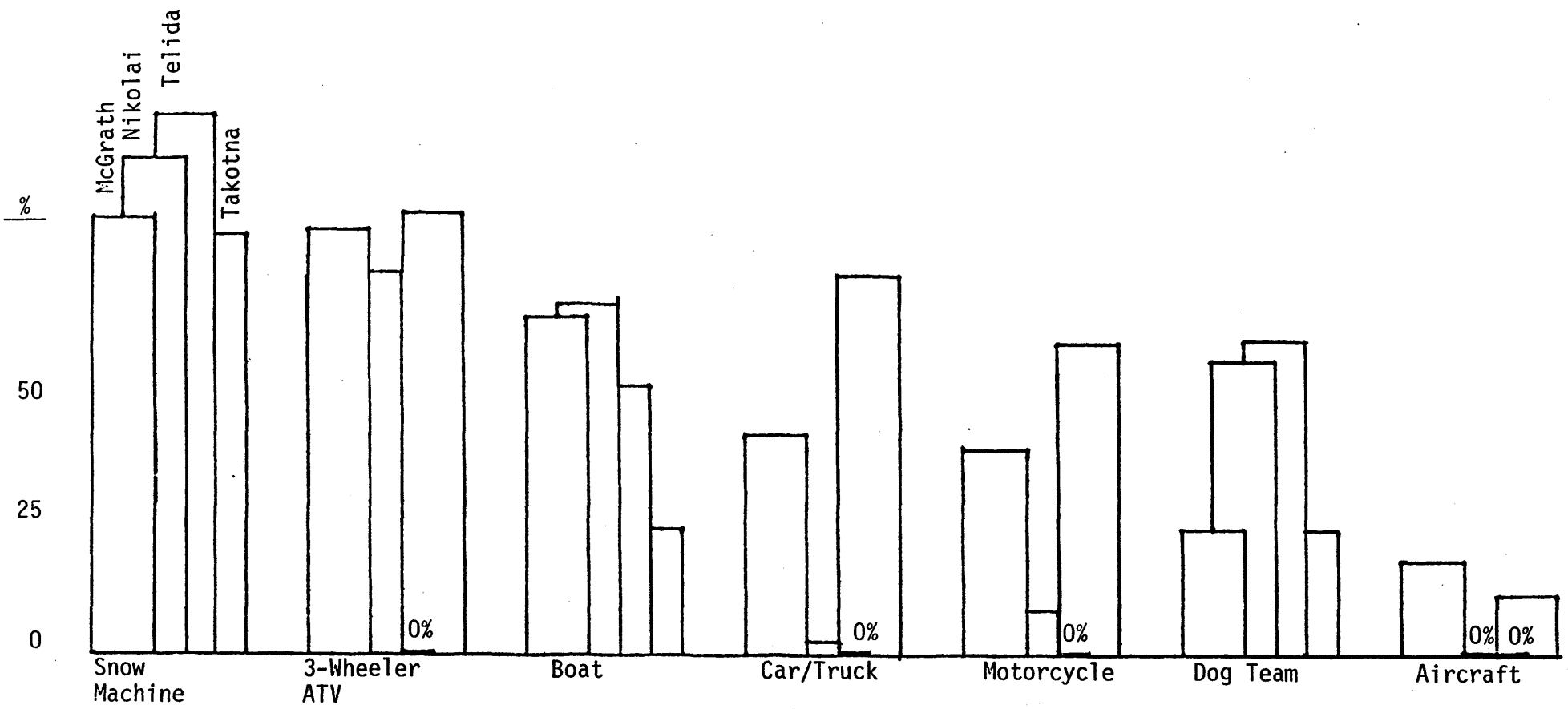


Figure 2: Transport Ownership in 1984

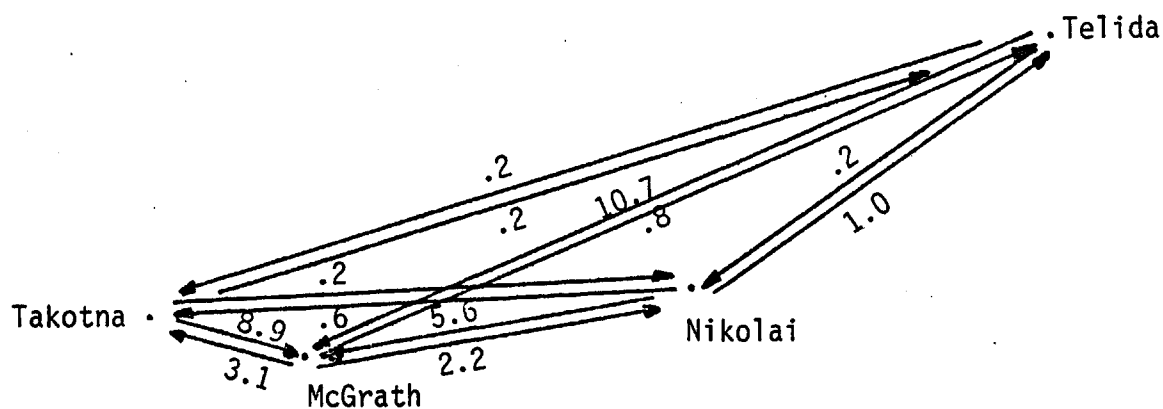


Figure 3: Average Number of Trips Per Year Per Adult

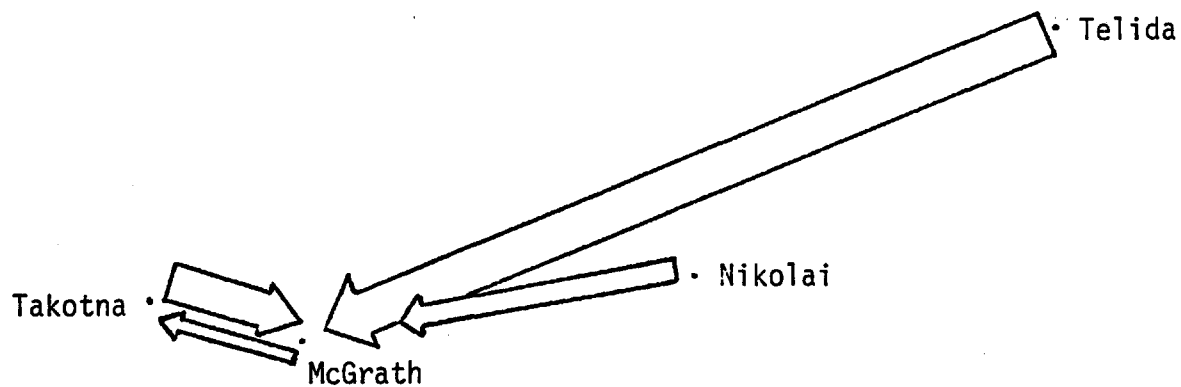


Figure 4: Visual Presentation of Inter-Community Travel -- Amount and Direction (only most substantial travel shown)

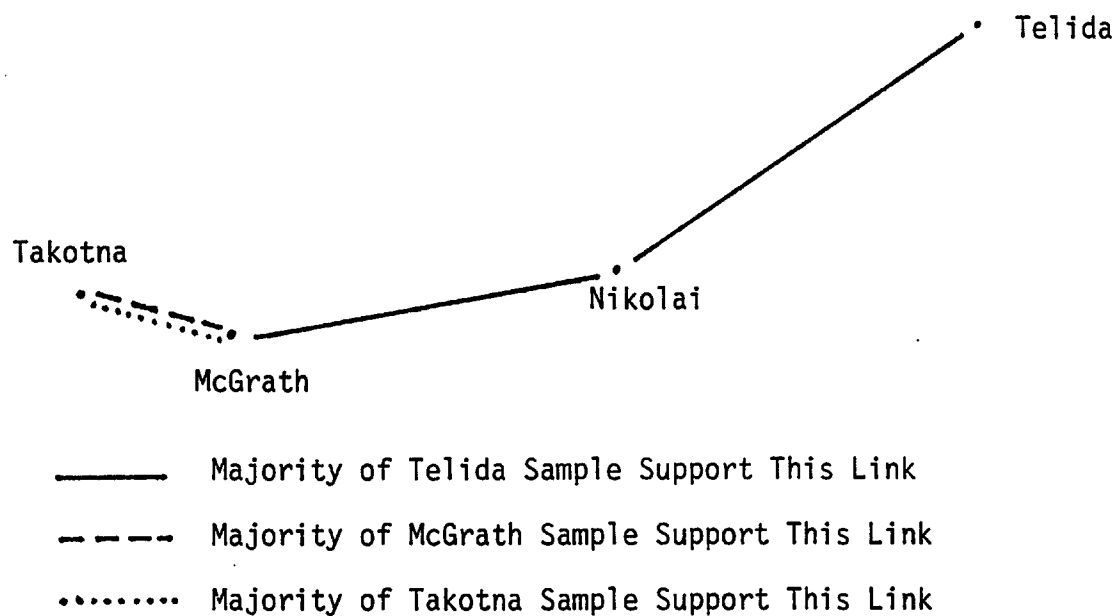


Figure 5: Visual Presentation of Majority Support for Road Links