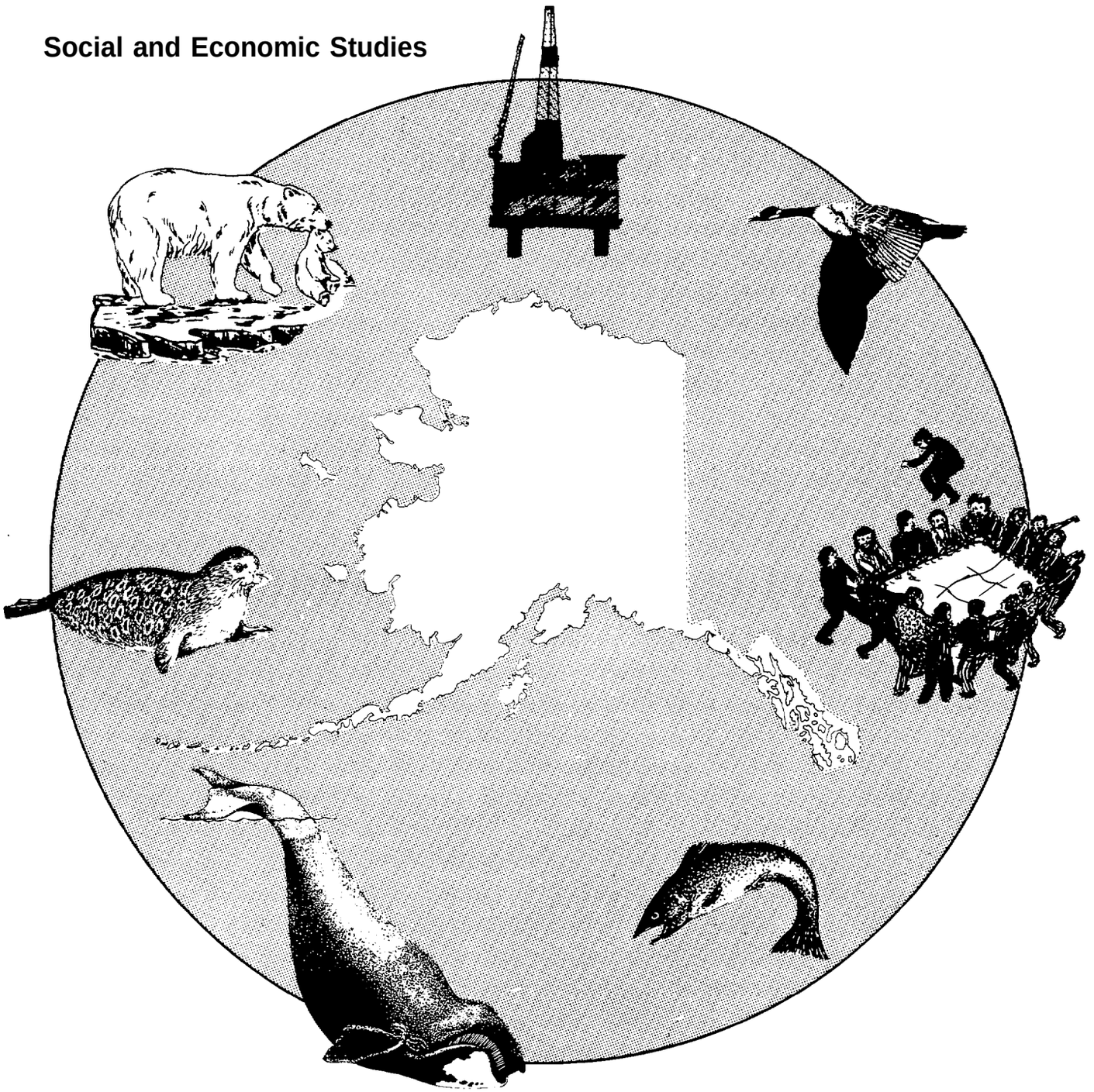
**OCS Study**
MMS 00-0023

# Northern Institutional Profile Analysis: Beaufort Sea

**Social and Economic Studies**



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FINAL TECHNICAL REPORT

# Northern Institutional Profile Analysis: Beaufort Sea

Submitted to:

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IMPACT ASSESSMENT, INC.

May, 1990

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Alaska OCS Environmental Studies Program

Northern Institutional Profile Analysis: Beaufort Sea

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This report was prepared under the direction and with the assistance of Ms. Karen J. Gibson, the Contracting Officer's Technical Representative.

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This project represents a cooperative effort by many, many people. Field research was undertaken in all eight communities on the North Slope, and the people of each of the villages were helpful and kind to the researchers. Without the formal and informal cooperation of the North Slope Borough and the individual villages and their residents this project would not have been possible.

In each of the communities individuals could be singled out who opened their lives and their homes to the researchers and made gifts of food, lodging, and friendship. The tradition of sharing, generosity, and making strangers feel like kin is indeed alive and well on the North Slope.

The North Slope Borough provided access to its 1988-89 census data as these data were still being processed, and this timely access was of immeasurable value. The Planning Department was especially responsive to the needs of the research team.

Two individuals who have worked with us in the past should be acknowledged for the contribution their work has made to this study. Stanley Walens and Lawrence Kaplan contributed regional history and language sections, respectively, to the Point Lay Case Study and those sections have been incorporated into this work as well.

# PREFACE

## Overview

The Northern Institutional Profile Analysis (NIPA) technical report is necessarily a large document. Thus, a guide to its organization will be helpful to the reader. This structure is actually quite simple and is dictated by the main purpose of the study. Each North Slope community has been described, in as standard a manner as possible, using existing published information supplemented by a short period of fieldwork. A separate chapter is devoted to each community. These mainly descriptive and community-specific chapters are preceded by a regional chapter which describes the North Slope Borough in general and synthesizes the village-specific information in a comparative way to discuss village similarities and differences, many of which facilitate the discussion of regional issues. The decision was made to have this regional/comparative chapter before the more descriptive village chapters so that this information is more readily available and to encourage its dissemination. The length of the document makes it unreasonable to expect a reader to become familiar with all the village data before encountering a synthetic regional discussion. The discussion contained in the North Slope Region chapter should enable the user to decide which of the more detailed sections of the report it will be useful to consult. If a regional treatment or a summary discussion is all that the reader requires, the introduction and North Slope chapter should adequately fulfill these needs.

Including all of the communities of the North Slope in a single volume produces a document of intimidating proportions. Further, not all readers are likely to be interested in all of the communities of the Slope, since it is a far-flung region and in fact covers two Minerals Management Service (MMS) planning areas. For these reasons, the study was split into two volumes: a Chukchi Sea volume (Technical Report No. 141) and a Beaufort Sea volume (Technical Report No. 142). Each volume contains a common introduction and regional discussion. Each volume also contains the Barrow and Atqasuk chapters, as Barrow is central to any discussion of the North Slope as a region, and is physically located in both the Chukchi and Beaufort MMS planning regions. Atqasuk is treated, for the purposes of this study, as analytically inseparable from Barrow. The Chukchi Sea report contains the chapters covering the additional communities of Point Hope, Point Lay, and Wainwright. The Beaufort Sea report contains the additional communities of Anaktuvuk Pass, Kaktovik, and Nuiqsut.

## Report Organization and Objectives

In each report, the North Slope regional chapter is itself preceded by a chapter of introduction. The introduction introduces regional issues at a more general level, untied to specific data, than do the subsequent chapters. It thus provides a contextual framework for those later chapters. Much of this information could have logically been contained in the North Slope chapter, but would perhaps have been obscured by the detailed discussion presented there. This separation also has

the advantage of making the presentation of material in the North Slope and following village chapters as standard and comparable as possible.

The objectives of the NIPA project are to provide, in a single source, information on population, economy, both formal and informal sociocultural institutions, and infrastructure for all communities of the North Slope. It does so within a framework which will enable comparable monitoring efforts in the future so that the information can be periodically updated. The major emphasis of the study has been on the collection and use of the published literature on the region, supplemented by some work with unpublished documents and very short periods of fieldwork. This emphasis was dictated by limitations on the time and money available for this research, as well as a desire to collect as far as possible the descriptive results of previous MMS studies in the region. The study is not primarily original research in the sense that one of its intentions was the collection of a substantial body of new data. Rather, its explicit goal was the gathering together of the information that already existed and to make this information easier to access and use.

The need for a study such as NIPA has grown from a combination of the present information needs of MMS and the history of the research program which MMS has sponsored. MMS funded this study because having a single, comprehensive, source for this information will be useful to its analysts in the assessment of current sociocultural and socioeconomic conditions and trends on the North Slope. MMS has become increasingly interested in descriptive and more primary data so that MMS analysts can evaluate for themselves the analysis provided by their contractors. This descriptive information should also be quite useful to other planning agencies (village, regional, state) in carrying out their charges, and so should find a more general audience. Prior to this study, the results of previous work on the North Slope were for the most part only available in the original study reports and required the consultation of many different volumes.

The reader will note that the coverage of the communities is not comparable. This is primarily due to two factors. First, some communities have a much larger body of literature associated with them than others, for a variety of reasons. Second, Impact Assessment, Inc. has had several other MMS contracts involving fieldwork in some North Slope communities which has allowed us to provide more detailed information for those communities than for others. Additionally, limited fieldwork dictated that some communities (Atqasuk in particular) would receive less attention because of the amount of time required and the lack of substantial previous research.

Appendices A, B, and C of both reports contain information related to the NSB Census of Population and Economy (1988-89) upon which much of the most current quantitative information in these reports is based. Appendix D contains updated information on household income and spending patterns that became available subsequent to the completion of the body of these reports.

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List of Acronyms and Abbreviations

| | |
|---|---|
| AA | Alcoholics Anonymous |
| AAIA | Association of American Indian Affairs |
| AANHS | Alaska Area Native Health Service |
| ACI | Alaska Consultants, Inc. |
| ACS | Alaska Communications System |
| ADCRA | Alaska Department of Community and Regional Affairs |
| ADF&G | Alaska Department of Fish and Game |
| AEIDC | Arctic Environmental Information and Data Center |
| AEWC | Alaska Eskimo Whaling Commission |
| AFN | Alaska Federation of Natives |
| AFNA | Alaska Federation of Natives Association |
| AIN | Wainwright |
| AKP | Anaktuvuk Pass |
| ALS | Alaska Legal Services, Inc. |
| ANCSA | Alaska Native Claims Settlement Act of 1971 |
| ANF | Alaska Native Foundation |
| ANICA | Alaska Native Industries Cooperative Association |
| ANILCA | Alaska National Interest Lands Conservation Act of 19S0 |
| ANWR | Arctic National Wildlife Refuge |
| ARCON | Arctic Contractors |
| ASNA | Arctic Slope Native Association |
| ASRC | Arctic Slope Regional Corporation |
| ASRCHA | Arctic Slope Regional Corporation Housing Authority |
| ASTAC | Arctic Slope Telephone Association Cooperative |
| ATQ | Atqasuk |
| ATV | All-Terrain Vehicle |
| AVE | Authorized Village Entity |
| AWIC | Arctic Women In Crisis |
| BAP | Barrow Alcohol Program |
| BIA | Bureau of Indian Affairs |
| BRW | Barrow |
| BUECI | Barrow Utilities and Electrical Cooperative, Inc. |
| BUI | Barrow Utilities, Inc. |
| CB | Citizen's Band Radio |
| CD | Compact Disc |
| CHA | Community Health Aide |
| CHP | Community Health Practitioner |
| CHR | Community Health Representative |
| CIP | Capital Improvements Program (North Slope Borough) |
| CMH | Community Mental Health |

| | |
|---|---|
| CMHc | Community Mental Health Center |
| CNN | Cable News Network |
| COD | Cash On Delivery |
| DCRA | (Alaska) Department of Community and Regional Affairs |
| DEW Line | Distant Early Warning Line |
| DOI | Department of the Interior |
| DPS | (North Slope Borough) Department of Public Safety |
| ECE | Early Childhood Education |
| EIS | Environmental Impact Statement |
| EMS | Emergency Medical Service |
| FAS | Fetal Alcohol Syndrome |
| FTE | Full-Time Equivalent |
| GED | General Education Diploma |
| HH | Household |
| HRAF | Human Relations Area Files |
| HSS | Health and Social Services (NSB) |
| HUD | Housing and Urban Development |
| IAI | Impact Assessment, Inc. |
| ICAS | Inupiat Community of the Arctic Slope |
| IHs | Indian Health Service |
| IR | Incident Report |
| IRA | Indian Reorganization Act of 1934 (extended to Alaska 1936) |
| IRs | Internal Revenue Service |
| ISER | Institute of Social and Economic Research |
| IWC | International Whaling Commission |
| KAK | Kaktovik |
| KIC | Kaktovik Inupiat Corporation |
| MJP | Mayor's Job Program |
| MMs | Minerals Management Service |
| MTV | Music Television Network |
| NANA | Northwest Alaska Native Association |
| NARL | Naval Arctic Research Laboratory |
| NPR-A | Naval Petroleum Reserve-Alaska |
| NQT | Nuiqsut |
| NSB | North Slope Borough |
| NSBDPS | North Slope Borough Department of Public Safety |
| NSBHS | North Slope Borough Health Service |
| NSBSD | North Slope Borough School District |
| O c | Olgoonik Corporation |
| O c s | Outer Continental Shelf |
| OEO | Office of Equal Opportunity |
| PA | Physician's Assistant |
| P/K | Prudhoe/Kuparuk Industrial Enclave |

| | |
|---|---|
| PET-4 | Naval Petroleum Reserve Number 4 |
| PHO | Point Hope |
| PHS | Public Health Service |
| PMC | Piquniq Management Corporation |
| PTA | Parent-Teachers Association |
| Pso | Public Safety Officer |
| PTL | Point Lay |
| RELI | Rural Employment and Living Improvements |
| SAC | School Advisory Council |
| SAR | Search and Rescue |
| SATS | Substance Abuse Treatment Service |
| SCBA | Self-Contained Breathing Apparatus |
| SMR | Standardized Mortality Ratio |
| TAPS | Trans-Alaska Pipeline System |
| TC | Traditional Council |
| TDY | Temporary Duty Assignment |
| TLUI | Traditional Land Use Inventory |
| UAF | University of Alaska, Fairbanks |
| UIC | Ukpeagvik Inupiat Corporation (Barrow) |
| USDW | Utilities and School District Warehouse Combined Facility |
| USFWS | United States Fish and Wildlife Service |
| USGS | United States Geological Survey |
| VCR | Videocassette Recorder |
| VFD | Volunteer Fire Department |
| VHs | (A specific VCR tape format) |
| VISTA | Volunteers In Service To America |
| VSAR | Village Search and Rescue |
| WIC | Women-Infant-Children Program |

# INTRODUCTION

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# INTRODUCTION

## I. SETTING

### Physical Environment of the North Slope Region

A complete physical description of the North Slope region is beyond the scope of this report. The following brief description is intended to orient the reader and provide the essential information about the physical characteristics of the area. It is not a definitive treatment and is simplistic in many respects. The reader interested in detailed information about the specific climatic and physical features of a particular community or area of the North Slope is referred to that more specific literature.

Most of the area encompassed by the North Slope Borough (NSB) consists of a plain extending from the Brooks Range in the south to the Arctic Ocean on the north. The foothills of the Brooks are within the boundaries of the NSB, as is a small portion of the Brooks Range itself. Anaktuvuk Pass, the southernmost NSB community, is in the mountains. Kaktovik is close to the mountains in the east but is still a coastal community, however, as the mountains simply approach the coast closer here than at any other point in the NSB. Point Hope, on the seaward edge of the coastal plain in the west, is near the western part of the range, but the mountains are not as high as the eastern Brooks Range. Anaktuvuk Pass is the only true inland NSB community (see community discussions below). Thus, the typical landscape for a North Slope dweller is the flat coastal plain.

The Brooks Range is a topographic barrier, separating the forested land to the south from the treeless Arctic Slope. It is also the continental divide, with streams either flowing north to the Arctic Ocean or south to the major Alaskan rivers. Once the rivers flowing north leave the foothills and enter the arctic plain their courses meander and many lakes and marshes are formed. The entire plain, as well as the foothills, are underlain by permafrost. In the summer the ground only thaws to a very shallow depth, so drainage is very poor. Even though average annual precipitation is only five to fifteen inches a year, the summer tundra is waterlogged with numerous stagnant pools and marches, and most streams and rivers are characterized by long oxbow features.

Differences in temperature and the amount of sunlight (and to some extent wind) differentiate the seasons on the North Slope. Depending on one's exact location (north at Barrow or south at Point Hope), one could experience up to seventy-two days of winter darkness and summer sunshine, with the days in between being transitional. Temperatures in summer are cool, averaging in the forties (Fahrenheit) on the coast, although it can reach the eighties on occasion. Average winter temperatures are in the minus ten to minus thirty degree Fahrenheit range, with an extreme of minus sixty or seventy and a high of plus twenty to thirty. Temperatures in the interior can be more extreme both in the winter and summer.

The coastal environment of the North Slope is not uniform, but can generally be divided into two parts. The eastern portion, the Beaufort, includes the coast east of Barrow all the way to Kaktovik (and the Canadian border). There is relatively little movement of the winter ice and conditions are more stable than to the west. This makes conditions for hunting on the ice fairly safe, but relatively unproductive. Seal hunters must use the "breathing-hole" technique which

requires patience and persistence. Perhaps because of difficult conditions, aboriginally this area was only sparsely populated. In fact, today Kaktovik is the only coastal community in this region. Nuiqsut residents whale along this coast in the fall and exploit this area in the summer, but seem to be primarily river- and land-oriented in the winter.

The western Arctic coast, along the Chukchi Sea, reaches from Barrow to Point Hope. While there are areas where the ice is relatively stable in this region, such places are very localized. In general, there is considerable ice movement. Leads (stretches of open water) will open periodically during the winter, often close to land. This is the source of rich and relatively easily exploited marine resources. For this reason this area was densely populated (for the Arctic) in aboriginal times with villages or settlements at Point Barrow (two), Atanik and Point Belcher (both north of present day Wainwright), Wainwright, Icy Cape, Point Lay, Cape Lisburne, and Point Hope. There were also scattered houses or seasonally used campsites all along the coast.

The ice in this region is considered very dangerous, however, because it is very mobile. Currents in the Chukchi are much stronger than in the Beaufort. These ice conditions clearly have implications for oil exploration as well as for subsistence hunting, making the undertaking more technically difficult and potentially dangerous. Part of the Chukchi coast has a barrier island and lagoon environmental zone which is more stable in winter and productive for fishing in summer. However, most marine mammals are hunted beyond this area, although beluga maybe driven into the lagoon to facilitate their harvest.

Geopolitical Relationship of the North Slope to the State and the Nation

To all intents and purposes, the political structure of the North Slope region of today is equivalent to the North Slope Borough (NSB). The relationship of the NSB to the state of Alaska and the rest of the United States is a result of oil development, the passage of the Alaska Native Claims Settlement Act (ANCSA), and the formation of the North Slope Borough. ANCSA required the formation of regional and village corporations, but did not address the political organization of Alaska Natives. Thus, the NSB was not a necessary (in the sense of mandated) organization. Rather, the NSB was formed from the local perception that local Inupiat interests would best be served by a regional government. The common perception was that the corporate form mandated by ANCSA was too new to many Inupiat, and the potential distribution of resources too wide, for the village corporations to coordinate in an effective manner for some time, even with the guidance of the regional corporation. The NSB was also seen as a way to tap a different and steady resource for the Inupiat people, to help supplement and develop their vision of the land rights granted them by ANCSA (for which the ANCSA cash settlement and corporate forms seemed inadequate and difficult to use).

All Native communities have delegated most of their city powers to the NSB, so that the NSB is administratively a single, consolidated municipality. The NSB consolidates the policies and powers of all the villages and can therefore work more effectively with the state and federal government. This sometimes means that individual villages are misrepresented but this is typically a minor problem. The NSB has so many more resources available to it than do the individual villages that the advantages of NSB representation outweigh the disadvantages. Since the State of Alaska is only somewhat less dependent on oil revenues than is the NSB, and oil production in Alaska is

primarily concentrated on the North Slope, the NSB has a strong position in relation to the state. The state initially opposed the formation of the NSB and tried to severely limit its taxing authority. This question has still not been completely resolved, but the practical result has been a legislative limit on the NSB's ability to tax for operating expenses and a political limitation, based on the total debt load that the NSB was willing to assume, on the level of taxation for the payment of interest on bonds issued to finance capital improvement projects.

Alaska is a large state, and the North Slope is by no means the most isolated part of the state. One could argue that because of the oil development in Prudhoe Bay and the air travel associated with it, the offices in Barrow, the relative wealth of the NSB, and the development of telecommunications systems, that the North Slope has more access to Fairbanks and Anchorage than practically any other region of the state. The NSB maintains offices in Anchorage and Juneau and its leaders remain up-to-date on state-level events. In past state legislatures the "Ice-Block" of northern representatives had a disproportionate influence relative to the size of the populations they represented. This has since been nullified by a form of reapportionment, but these representatives still wield a good deal of influence.

The existence of mineral resources in Alaska lay behind the push for statehood. The discovery of vast reserves of oil on the North Slope was directly responsible for the pressure to build the Trans-Alaska pipeline and for the passage of ANCSA. These have been the most obvious parts that the North Slope has played in the national political system. At present, national oil policy is still somewhat responsive to conditions and activities on the North Slope, but it is now more a case of North Slope activity being predicated upon national policy than vice versa.

## The Communities of the North Slope Borough

The above section briefly discussed the physical environment of the North Slope in general. Here we will supply a short summary of each community. Particular emphasis will be placed on the relationship between a community's location and physical setting and the subsistence activities which are possible and actually take place there.

### Anaktuvuk Pass

Anaktuvuk Pass is located in the Brooks Range in one of the few passes through those mountains. It is a transitional zone between the continental subarctic and arctic climatic zones. Temperatures range from highs in the nineties in the summer to lows of minus fifty or sixty in the winter. The people depend heavily on terrestrial subsistence resources, primarily caribou, supplemented by fish. Because of the mountainous terrain, Anaktuvuk Pass is the only village where six-or eight-wheeled ATVS (all-terrain vehicles) are employed to a great extent. Valleys and stream courses, combined with the limitations imposed by the federal authorities, define the areas where animals can be hunted in the Gates of the Arctic National Park within which lies most of the village subsistence range.

## Atqasuk

Atqasuk is located about sixty miles south of Barrow on the coastal plain, on the Meade River. Because of the coastal geography, Atqasuk is less than thirty miles from the ocean. Aboriginally the community was oriented to the land and river, but the current population shares so many ties with Barrow and transportation between the two is so fast and easy that Atqasuk in many ways has adopted the subsistence harvest patterns of Barrow. Many Atqasuk people go to Barrow to whale, and many Barrow people maintain fish camps in the Mead River area. People transfer and move between the communities very readily. Caribou and fish are the two most important local subsistence resources.

## Barrow

Barrow, like Point Hope, is ideally situated for spring whaling. Point Barrow extends far out into the ocean and is used as the demarcation of the Chukchi from the Beaufort sea. Barrow is not located on the point as such but is near enough to take advantage of the environmental conditions created by the point (aboriginally there were immunities on the point as well as in the present location of Barrow). To the west of the point, the Chukchi is subject to the same currents and shifting ice as Point Hope. To the west, the Beaufort is more stable. Barrow hunters are thus able to utilize the sea ice ocean environment at all times of the year. The Beaufort coast is basically oriented east and west, while the Chukchi coast is north and south (or southwest to northeast). Thus, wind direction has different effects in the two regions. The coastal region in its entirety is subject to the forces of erosion. Barrow also has good access to terrestrial and riverine resources which supplement the marine orientation of the population.

## Kaktovik

Kaktovik is located on Barter Island, a thin barrier island about three hundred miles east of Barrow, near the Canadian border. It has an environment much different from the other NSB coastal communities because the Beaufort Sea is frozen for up to ten months a year. There is relatively little ice movement and winter populations of sea mammals are relatively small. The area was traditionally more significant as a meeting and trading place than as a location for subsistence activities. Whaling did occur between the island and the mainland at some time in the past, but land forms or whale migration patterns have changed since that time. Fall whaling in the Beaufort does continue at the present time. Success in fall whaling is much less sure than in spring whaling, however, and the conditions are often unpleasant and dangerous. Kaktovik does not have access to a major navigable river, but is the closest village (other than Anaktuvuk Pass) to the Brooks Range. Spring and fall trips to the mountains are quite common. Caribou is the major subsistence resource. Kaktovik is the only coastal village to also hunt a substantial number of sheep. Fish are also quite important.

## Nuiqsut

Nuiqsut and Kaktovik are the only NSB villages on the Beaufort Sea part of the plain, and Nuiqsut is actually inland and not coastal. While Nuiqsut residents have ocean-going boats and have a fall whaling quota, the community is oriented more towards the exploitation of terrestrial and riverine subsistence resources. The Colville River fisheries, especially in the delta, are very productive. Caribou and moose are the mainstays of the terrestrial resources exploited. The present community is surrounded by oil development, which somewhat hinders subsistence pursuits. The Colville River is a transportation avenue in all seasons, either by boat or by snowmachine, for subsistence activities. Three- and four-wheelers are also used, but not as extensively as in coastal communities.

## Point Hope

The most important physical feature of Point Hope is its location on a low-lying peninsula jutting out into the Chukchi Sea. This peninsula is subject to erosion. Marine resources are very rich and form the bulk of Point Hope's harvest. Terrestrial resources, especially caribou, are also important (and have become more so with the advent of technological innovations in snowmachines and ATVs) but the focus of Point Hope subsistence is still on the sea. The currents around Point Hope are strong, making the influence of the wind on ice movements quite profound. The ice can shift very quickly around Point Hope. This contributes to the richness of the resource base, but also makes hunting on the ice quite dangerous. The location of Point Hope is ideal for spring whaling, and this activity is the quintessence of Point Hope's identity as a community.

The ice cover is almost completely absent in the summer, so sea mammals are not harvested much at this time. The foothills of the De Long Mountains provide access to caribou and moose. For further information, see Foote 1%1, Nelson 1%9, and Lowenstein 1981.

## Point Lay

In comparison to most of the other coastal communities, Point Lay has little written about it in regard to geography and subsistence. Point Lay is located in an area of barrier islands and an extensive lagoon system. Until the refounding of the village in 1972 the village site had been on the barrier island spit. These barrier islands are for the most part only several feet above sea level, while the shore of the mainland is faced by steep bluffs of ten to twenty feet (sometimes with a very narrow beach area at their foot). All are subject to severe erosion in the storms which periodically buffet the region.

Point Lay is one of the windiest locations on the North Slope. Its temperatures fall between those of Point Hope and Wainwright. The hinterlands, up to and including the mountains, are extensively traveled by snowmachine and ATV (locally known as "Hondas," in reference to a brand name that has become a generic label). Point Lay makes great use of terrestrial subsistence resources. This is especially true of caribou, which are hunted by some people at almost any time of year.

The lagoon is shallow and so restricts the size of boats and motors that can be used there (although itissaid thatthe lagoon wasdeeper inthe past). The lagoon provides a stability in the ice system absent in other villages. Except for a period of several weeks during freeze-up and break-up, the lagoon is safe for travel. The ocean beyond the spit is not as hospitable. When it is open, Point Lay people use mostly aluminum-hulled craft with outboard motors (usually forty-five horsepower or below), the same boats they use in the lagoon and for river travel. The lagoon is used for fishing, but most other marine mammals are pursued in the open ocean. Other than beluga, marine mammals are not hunted from Point Lay as much as they were in the past. Point Lay is the major harvest site on the North Slope for beluga, however, and this major event usually takes place within the space of one week early in July.

Aside from beluga, the Point Lay area is not rich in marine mammal resources. Seals, walrus, and other marine mammals are harvested, but not to the degree that they are in Point Hope or Wainwright. Historically, few bowhead whales were ever taken out of Point Lay because the leads open up so far from the coast (although on occasion leads will open very close to the barrier islands). Most whales that were taken out of Point Lay were actually harvested by crews from Point Lay hunting off Icy Cape.

## Wainwright

Wainwright can be compared to Point Hope in many of its geographical aspects. It is also a community oriented to the sea, depending primarily upon sea mammals. However, it is located on the mainland on a large coastal indentation where the sea ice is much more stable than around Point Hope. Currents are also weaker. This makes ice conditions around Wainwright safer, but less productive, than around Point Hope. Wainwright hunters generally have to travel further for successful harvests than do those from Point Hope. Whaling generally occurs at some distance up the coast from the community, and leads open much further from the coast than they do around Point Hope.

Wainwright people also make extensive use of riverine resources. Fish abound in the Kuk River system and the river is also used as a convenient way to hunt terrestrial species as well. As in some other villages, caribou is the most important terrestrial resource. Because the Kuk River is so large and Wainwrighters are not hindered by a shallow lagoon, Wainwright boats tend to have larger outboards than those in Point Lay. This allows Wainwrighters to travel longer distances in subsistence pursuits and increases the size of the vessels they can use (and the carrying capacity of that vessel).

As with the other North Slope villages, terrestrial subsistence resources are also quite important, especially caribou. Wainwrighters hunt as far south as Point Lay and sometimes further to the north than Barrow. The best sources for more information on these topics are Nelson 1%9 and Nelson 1982.

## II. GENERAL HISTORY OF THE NORTH SLOPE REGION

The history of the North Slope can, and has been, described in a number of different ways, depending in part on the analytic focus of the author and in part by the fact that any decision on dates of historical periods are somewhat arbitrary. There are, of course, no abrupt starts and stops to historical periods over a region as vast as the North Slope. The issue of what constitute historically significant periods on the North Slope is raised in the regional chapter of this document. Here the discussion centers on four periods: Precontact to the Whaling Period; Reindeer Herding and Fur Trapping and Trading; Post-World War II Era - Oil Exploration and the DEW Line; and, The Alaska Native Claims Settlement Act and the North Slope Borough.

### Precontact to the Whaling Period

Prior to contact with non-Native Alaskans, the Inupiat of the North Slope were hunters and gatherers, dependent upon the availability of large terrestrial and marine mammals for subsistence. It is impossible to know the population of the North Slope region during that time but estimates range into the thousands. However, it is certain that variation in the human population occurred with some frequency according to the migrations and population fluctuations of their food resources.

Contact occurred in different parts of the North Slope at different times. The earliest population figures are from 1850 when only Point Hope and Barrow were year-round settlements. Point Hope's population was 854 and Barrow's was about 398. The mid to late 1800s through the early 1900s marked the commercial whaling era which was a time of rapid population growth in the coastal communities. Trading posts were erected, missions established, and the presence of non-Natives became a permanent element of the North Slope. Wainwright was established as a permanent village in 1904.

While the coastal communities were booming during the whaling era, those living in the interior region were experiencing severe declines in food resources, primarily caribou. Starvation was common and many family groups were forced to migrate to the coast, depopulating the interior.

In addition to migration, diseases introduced by white explorers, traders, and whalers (to which the Natives were not immune) had important influences on population size and structure. High mortality rates and social disruption caused by widespread exposure to tuberculosis, measles, smallpox, influenza, and whooping cough contributed to the decline of Native population and culture. Point Hope lost as much as 12% of its population in one year. And in 1900, more than 200 Nunamiut died following contact with a whaling ship. Barrow lost 100 Natives to a measles epidemic as well (Chance 1966:15). As late as the mid 1950s, 10% of Eskimo children died before their first birthday and 90% of Alaska's deaths from tuberculosis occurred among the Eskimo (Alaska Health Survey 1954:32, cited from Chance 1966:17).

Reindeer Herding and Fur Trapping and Trading

In the late 1800s and early 1900s reindeer from the Siberian Chukchi were imported to the North Slope by the United States Bureau of Education. This was done to replace uncertain supplies of game and relieve economic instability resulting from the decline of commercial whaling which finally ended in 1915. Overlapping this period was the growth of the fur trapping and trading industry. While Natives had previously only supplemented their income with trapping, beginning in the 1920s it was providing many Natives with a crucial source of cash. An annual income of $3,000 or $4,000 to as much as $7,000 was not unusual (Chance 1966:16). However, following the depression in 1929, furs lost their value and reindeer herding became an increasingly important means of subsistence for many families in the 1930s and 1940s. By then the herds that had been brought in 30 years earlier had grown to about 600,000 head. Coinciding with the crash of the fur market was an increase in caribou populations in the inland region. Consequently, many Nunamiut were able to repopulate their original lands in the interior of the North Slope and live a traditional subsistence lifestyle. These people were to later establish Anaktuvuk Pass as a permanent settlement in the 1950s.

Also during this period, schools, air strips, missions, and trading posts were established throughout the region. In many cases the introduction of one of these into a settlement area proved to be a catalyst for establishing a permanent village. Such was the case in Point Lay which became a permanent village primarily as a result of the creation of a school in 1939. Anaktuvuk Pass was to become a year-round community in the early 1950s following the construction of a trading post in the area.

Post-World War II Era - Oil Exploration and the DEW Line

In 1944 the United States Navy initiated oil exploration in the Barrow area, providing economic opportunities to Natives from across the region. The Naval Petroleum Reserve Number 4 (PET-4) was responsible for significant growth in Barrow. Interestingly, Wainwright's population decreased noticeably, from 314 to 227, due to out-migration to Barrow for employment.

Another development that affected the growth of villages on the North Slope was the decision by the federal government, and other allied countries, to construct radar stations across the Arctic to serve as a military distant early warning system following World War II. The construction of these enormous radar structures between 1953-1957 significantly affected, though in different ways, the communities in which they were located. In Point Lay, for example, the construction of the Distant Early Warning (DEW) Line station in 1950 was, from many current residents' point of view, the reason that the village was abandoned. (Others claim that the closing of the school was the more immediate cause of Point Lay's dissolution.) The DEW Line station that was chosen by the federal government to be in the vicinity of Kaktovik was built literally on top of the village, forcing residents to rebuild adjacent to their traditional homesites. In addition, the residents of Kaktovik were displaced twice subsequently due to decisions made by DEW Line administrators. Nevertheless, the construction of the DEW Line in Kaktovik spurred its growth. "In 1%2, over half of the Eskimo men at Kaktovik were earning salaries of $600 or more a month at the Barter Island site" (Chance 1966:17). The DEW Line built in the vicinity of Barrow was important in stabilizing its population until the 1960s but has since ceased to be a major influence.

**The** Alaska Native Claims Settlement Act **(ANCSA)** and the North Slope Borough **(NSB)**

Perhaps the greatest overall changes in recent years affecting population size and structure on the North Slope were brought about by the passage of **ANCSA** and the incorporation of the NSB. **ANCSA** provided for the establishment of Native **Corporations** throughout Alaska and endowed them with the ownership of land. Most important in terms of population growth, however, was the wealth that the NSB accumulated from taxes levied upon the developers of North Slope crude oil. This money was **funnelled** into each of the eight villages, leading to a variety of changes on the local level. These impacts can be distinguished in three general areas. First, there were changes made to the physical village in terms of infrastructure development and capital improvements. Every village was equipped with a school, a health clinic, a Utilities and School District Combined Facility **(USDW),** water, electric power, an equipment maintenance building, and road and housing improvements were made. Second, public services were instituted in each **community** which served to attract and retain local populations. Services organized by the borough that are now locally available include health care, education (through high school and, to a limited degree, beyond), public safety, fire fighting, search and rescue, seniors programs, day care (in some communities), housing programs, and energy assistance programs. Increased employment opportunities, the third area of impacts followed naturally from the above two changes. The vast majority of employment in each of the villages is provided either directly through the borough or is borough-related. Most of these changes to some extent entailed the migration of non-Natives to the North Slope, changing dramatically the ethnic composition as well as the size of village populations, particularly in Barrow. Capital improvements probably had the most far-reaching effects in this respect. Both Native and non-Native individuals were drawn to NSB villages to participate in construction projects, especially in the early 1980s. However, even though Capital Improvements Program **(CIP)** spending has decreased, employment opportunities created by the NSB continue to support many individuals. A significant number of positions now include infrastructure maintenance, small-scale construction, and **service-oriented** positions.

An additional consequence of the passage of **ANCSA** and the incorporation of the NSB was the resettlement of the traditional village of Point Lay and fishing sites of **Atqasuk** and **Nuiqsut** under an aggressive NSB resettlement program. The sudden and deliberate migration of such large numbers of **Inupiat** to these three villages was unprecedented in recent history.

## III. THE COMMUNITIES TODAY

The North Slope Borough is clearly the dominant entity on the North Slope in terms of government and economy. This also appears to be the case ideologically and culturally, at least in a regional sense. Each village still maintains an identity very much its own, but because of the centralization imposed by the form of the NSB there is an almost inevitable **process** of cultural homogenization. Most decisions that affect more than single individuals are made at the NSB **level** (in Barrow or perhaps even off-Slope in Anchorage, Fairbanks, or Juneau). There is no purpose in speaking of separate "cash" and "subsistence" economies on the North Slope, as virtually all **Inupiat** people incorporate both wage activity and subsistence pursuits into their daily lives. While each village has a different **resource** base to draw upon, there is good evidence **to** suggest that increased wage activity (higher earnings combined with more time constraints) has resulted in a **simplified** subsistence yearly round that is more similar from village to village than was true in

the past. After a brief description of the similarities among the outer villages (primarily in terms of their relations with Barrow and the NSB) we will look briefly, at what makes each of the villages different or contributes to its identity as an independent community.

## The Villages and the North Slope Borough

All four of the main topical areas of concern (population, economy, formal institutions, and cultural issues and informal institutions) demonstrate a clear difference between Barrow on the one hand and the other seven NSB Native communities on the other. This is not to deny that there are differences among the outer villages, but these are dwarfed by the gulf between the outer villages and Barrow. Because of the unique (at least in terms of the United States) political organization of the North Slope, the standard regional model of a hub city with outlying "villages" is not really appropriate. Rather, the NSB is functionally a united municipality where only Barrow has effective formal representation in the decision-making process.

In terms of population, the outer villages have very large Native majorities while Barrow is 39% non-Native. Fifty-nine percent of the total NSB population lives in Barrow. Forty-nine percent of the total Native NSB population lives in Barrow, whereas 82% of the total non-Native NSB population lives in Barrow. There are few non-Native children in the outer villages, whereas Barrow now has a significant number of non-Native children. This is commonly interpreted as meaning that non-Native families are now taking up at least short-term residence in Barrow whereas this is still very rare in the outer villages. There are few minorities, other than whites, in the outer villages, whereas Barrow has significant populations of Blacks, Filipinos, and Hispanics. Barrow is clearly much larger than the other villages and differs markedly in other population characteristics. Residents of the outer villages readily perceive these differences.

In terms of formal institutions, with the exception of religion, all are centered in Barrow and many limit their sphere of effective service to Barrow. Those that are not effectively limited to Barrow often are still often characterized as unresponsive to local (outer village) needs. Barrow is the seat of the NSB government and, so, is the headquarters for all NSB functions -- government, schools, public safety, fire protection, municipal services, and so on. All of course have a presence in each of the villages, with some degree of freedom of action. In all cases, however, all resources and policy ultimately derives from the administration in Barrow. Only to the degree that it is pragmatically necessary, and even then not all the time, do the local representatives of NSB institutions have freedom of action. Programs for which the NSB is only partially responsible, such as health care, exhibit even more of a contrast. In terms of facilities, which the NSB funded through its CIP program, the villages would be more than adequately served by their clinics (which fall just short of the facilities at the hospital in Barrow) if they were visited more frequently by specialists in various areas of medicine. This is not to say that there are not frequent visits by numerous specialists at present. In any given month -- except for the Summer months when subsistence activities significantly alter other activities in the villages -- a wide variety of trained medical personnel visit each village, providing a very broad scope of services. Among the staff that routinely visit the villages are: Veterinarians/Public Health Officers, Public Health Nurses, Maternal-Child Health Nurse Practitioner, Dentists, Psychologist/Mental Health Clinicians, Substance Abuse Counselors, Optometrist, Health Education Specialist, and Dietitians. Each village is visited by approximately three to four programs each month, and these professionals offer

in-service training to the clinic staff and conduct prevention activities in the schools during their visits in addition to providing direct patient/client services. Physicians visit the villages at a minimum of once per quarter, with the larger villages receiving more frequent visits. Physicians are also in daily contact with the Health Aides/Practitioners in each village for telephone consultations. Even given these programmatic efforts, however, the continual access to various specialty providers in Barrow makes that community much different in its health care environment than the other villages. This is, in part, mitigated by a regional emergency response team. Much like other areas of Alaska, emergency medical response capability on the North Slope far exceeds the capability of most similar sized communities in the lower 48. The Borough supports a highly qualified medevac team through its Search and Rescue Department, and this team works with village-based emergency medical service personnel when the there is an emergency that exceeds the capacity of the locally available resources. Again, however, there are unavoidable logistical challenges built into such a system on the North Slope, such as response time to geographically dispersed communities and weather conditions that not infrequently make even emergency flights problematic. For services where the NSB has no formal responsibility, such as child welfare, food stamps, and other social programs, the disparity between the level of service available in Barrow and in the outer villages is especially great. The NSB has built a facility in Browerville for abused women and children, so that they may live for a time outside of the abusive environment. No such facilities exist in the outer villages except for "safe houses" which are seldom used.

The North Slope economy is also dominated by Barrow, at least in terms of cash flow. There is a dual nature to the labor force on the North Slope that, while it is obvious, is little remarked upon. Most of the people working in the extractive industries, the productive foundation of practically all non-subsistence economic activity on the North Slope, are non-Native transients. To all intents and purposes they form part of an "invisible economy" as far as North Slope residents are concerned. Practically all Inupiat who work for wages (and unemployment is low on the North Slope -- see the discussion of labor force participation in Section II B of the NSB Region chapter for elaborations and qualifications of this statement) are in the service sector and are in some way paid with money from the NSB derived from taxes on oil production facilities. There is practicably no private sector economic activity in the outer villages (confined for the most part to a few small-scale retail stores). Barrow does now support a growing private sector, but mainly in the service areas -- retail stores, a gas station, engine repair shops, restaurants, "real" hotels, and so on. In the summer, several Barrow businesses cater to tourists. While Kaktovik and Anaktuvuk Pass also receive summer visitors, it is nowhere near the scale of Barrow's traffic.

In terms of cultural issues and informal institutions, the NSB is also taking a high-profile role in promoting and funding such celebratory cultural gatherings as the newly revived Messenger Feast and periodic Elders' Conferences. The NSB Commission on Language, Culture, and History is an integral part of the NSB Planning Department and has representation from each of the villages. The NSB also reinforces many "traditional" Inupiat values through official NSB policy and program statements. For example, Elders have priority for most new housing. The NSB pays for people to assist Elders with housekeeping and other tasks. At the same time these programs manifest an official endorsement of Inupiat values, they also may be subtly undermining them. Fewer non-kinsmen now volunteer to do such tasks without being paid (although it should be stated that information bearing on this topic exists for only a few of the villages -- Nuiqsut, Point Hope, Point Lay, and to a limited degree, Barrow). In general, tasks in the past that were performed as part of a "web of mutual obligations" are now seen as appropriate labor-for-cash transactions (such as

sewing a whaling boat cover, or fitting and lashing the sewn skins on the boat). At the same time, kinship and sharing are still the fundamental values of Inupiat life. Their behavioral manifestations are constantly changing but use these values as their most common referents.

Each of the seven outer villages has unique characteristics relating to historic and environmental factors. Point Hope and Barrow are older villages. Point Hope is characterized as the most traditional whaling village, whereas Barrow has become a much larger and diversified hub community. Wainwright also maintains a whaling identity and a commitment to the value system implicit in hunting whales, but does so using explicitly "non-traditional" equipment. A somewhat smaller population and a more difficult whaling site are used to partially explain this. Kaktovik is a fairly isolated community which whales in the fall and has always (since permanent settlement) been associated with non-Native institutions (trading post, DEW Line, NSB). Nuiqsut also whales in the fall, but is a "new" community, refounded after the formation of the NSB. It is surrounded by oil development and has a mixed terrestrial/sea orientation. Atqasuk and Point Lay are also refounded communities. Atqasuk is in many ways an extension of Barrow, as it is not very far away by either snowmachine or plane. Point Lay is the only coastal non-whaling community (it is too small) and is the village closest to having its labor force fully engaged in wage employment. Point Lay has a mixed terrestrial/sea subsistence orientation, but because of environmental conditions spends much more time on the land than the sea. Point Lay is the prime location for the harvest of beluga on the North Slope, however, so that this one marine resource is, in terms of weight harvested, the single most important species. Since the harvest occurs within a span of about a week, the beluga harvest is understandably important in Point Lay. Anaktuvuk Pass is the only village with an almost exclusive terrestrial orientation.

The Individual Nature of the Communities

Anaktuvuk Pass

Anaktuvuk Pass is the only truly interior village on the North Slope. They are oriented primarily to terrestrial resources, more specifically caribou. It is the caribou from which the name of the village is derived ("place of caribou droppings") and which refers to the fact that caribou migrate through the pass by the thousands on their way onto the arctic slope from the mountains and vice versa. Indeed, it is the caribou that supported a substantial human population in an area that would otherwise have been incapable of doing so. Sheep and wolves are also hunted in significant numbers, and fishing is a common activity. The environment of Anaktuvuk Pass is one of the mountains rather than the coastal plain. Settled as a permanent community in the early 1950s, the site of the contemporary village was the site of seasonal settlements before that.

Atqasuk

Atqasuk is in many respects a "suburb" of Barrow. Although Atqasuk of course has its own mix of resources and its own history, modern innovations (snowmachines, planes, telecommunications) have conspired to make it and Barrow parts of the same community. They share a certain portion of their population and the Atqasuk land use area is for most purposes the same as the Barrow

land use area. Atqasuk was the community least developed in this report, and it was this question, the relationship between Barrow and Atqasuk, which received the most attention.

## Barrow

Barrow is the hub community of the NSB. It is easily the largest community in the region, containing nearly 60% of the region's total population. Furthermore, Barrow's population composition is vastly different from that of the other villages. Nearly 40% of Barrow's population in non-Native (this is about 82% of the total NSB non-Native population). Wage employment is more pervasive in Barrow than perhaps any other village except Point Lay, and the opportunities in Barrow are certainly the most diverse. Non-Native influence is quite obvious in Barrow, from the NSB bureaucracy to the churches to the private sector of the economy. At the same time, Barrow is 60% Inupiat and the NSB is essentially an Inupiat government. Subsistence activities, and especially whaling, still dictate to a large extent the scheduling of other events. Barrow is the most diverse of the NSB villages, as there are significant segments of the population not at all connected with subsistence activities except in the most peripheral of ways.

Barrow is also the seat of power in the NSB. While Barrow may not be the engine that drives the outer villages, it is the provider of the fuel for those villages. Barrow is where the interests of oil development and Inupiat intersect and conflict, and where the resulting accommodations are most evident.

## Kaktovik

Kaktovik has existed as a meeting place for a long time, but has a relatively recent history as a settlement. This history of settlement has centered around a non-Native nucleus, whether a trading post or school or DEW Line. This focus distinguishes Kaktovik from all the other NSB communities and goes some way to explain the integration of non-Natives into Kaktovik life. Kaktovik people also early adapted to the opportunities of the wage economy (Chance 1966). Kaktovik maintains its identity as an Inupiat village partly because of its unique mix of subsistence resources. They hunt whales in the fall (as does Nuiqsut) but are primarily oriented to the riverine and terrestrial environments. Their closeness to the mountains distinguishes them from all other coastal villages and while sheep are not a major resource in terms of weight, they have become the "subsistence signature" of the village (along with fall whaling).

## Nuiqsut

Nuiqsut is a "new" community and a hybrid one. It is a coastal community that is located inland. Nuiqsut has a fall whaling quota of two strikes and has a fairly impressive record of whaling success. At the same time, most subsistence activity from the village exploits the surrounding riverine and terrestrial environments. Most of the population to repopulate Nuiqsut came from coastal communities, although many of these people had a history of using the Colville River area in times past. Nuiqsut's location on the river facilitates access both to the ocean and to the interior, even though the channel near the village has silted up so that it is no longer navigable.

Wage labor activity and subsistence activities coexist in Nuiqsut perhaps in a more equal balance than in any other village. The current level of economic activity, the subsistence resource base, and other idiosyncratic factors account for this.

point Hope

Point Hope is the quintessential Native whaling village. Its physical location is ideal for springtime shore ice whaling using skin boats. The leads are close enough, and narrow enough, that the use of motors is not necessary and in fact has been much resisted. Only recently have motors been used for certain parts of the hunt (mainly going to assist other crews and to tow the dead whale to shore). Wage employment is not as much a part of established routine in Point Hope as in other villages, probably because the ratio of available people of working age to jobs is higher than in the other villages (except maybe for Wainwright). Point Hope is unusual in having at least several men who remain subsistence hunting specialists and do not look for even part-time or seasonal wage employment. Point Hope is also the village with the most active dog teams on the North Slope (most villages have few or none). Point Hope has two active Eskimo dance groups which are known throughout Alaska. Only 'Barrow and Wainwright on the North Slope have groups to rival them. While fundamental change cannot be denied, Point Hope retains the identity of a "traditional" coastal Inupiat whaling village.

Point Lay

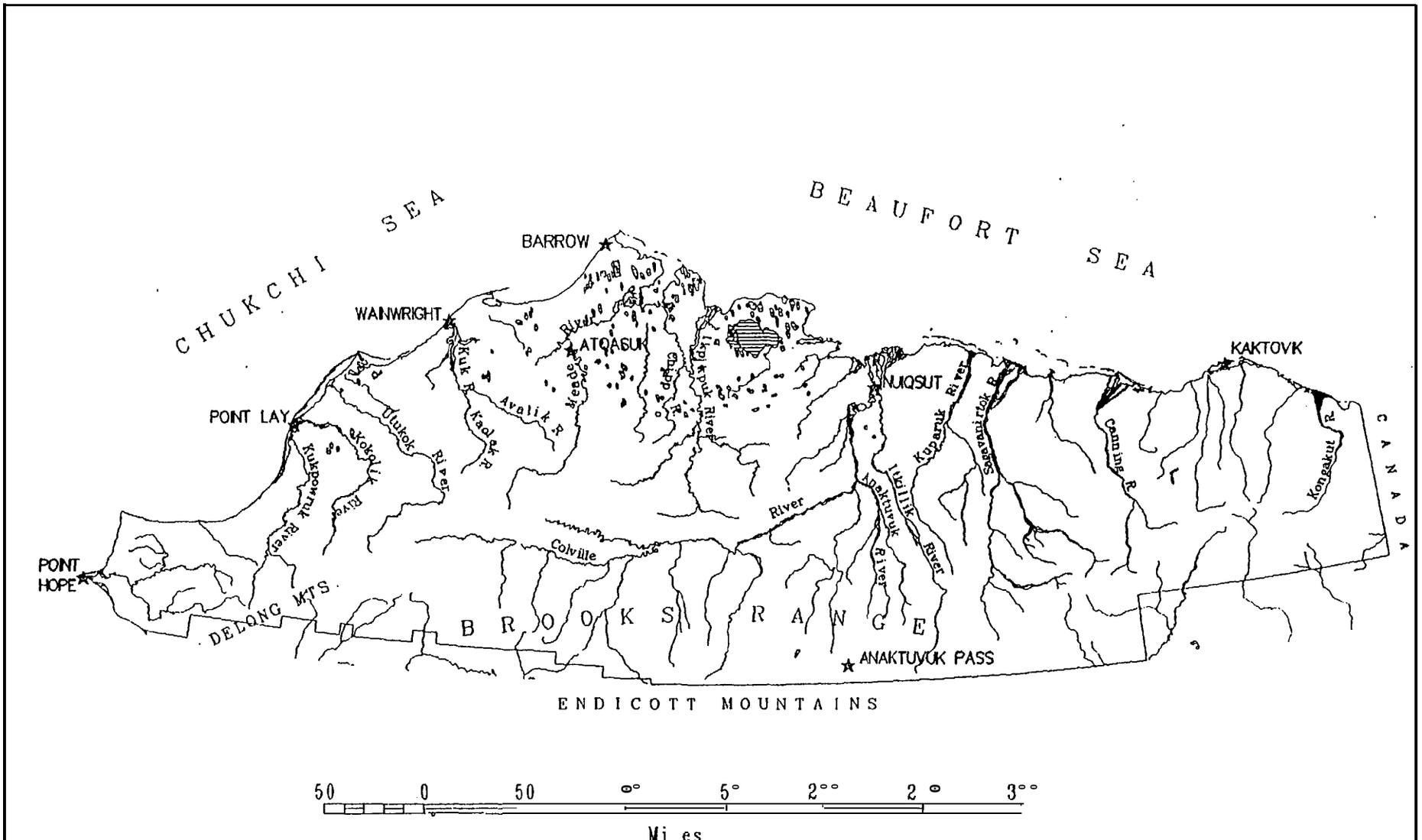
Point Lay is in many ways the antithesis of Point Hope, except that it too is still very much an Inupiat village. Point Lay has perhaps the highest ratio of people of working age to jobs, with the jobs sometimes outnumbering the people available to fill them. The village has been in its present location only since the early 1980s, and relatively few people are active subsistence resource harvesters. Informants attribute this to the need to work to develop and support the community, as well as the need to learn the land before one can be a really active hunter. Aside from beluga, Point Lay people are mostly oriented to the land. Point Lay people have started to go to other villages to whale on crews in those villages, and so are beginning to adopt the subsistence cycle timing of those places to some degree.

The Point Lay Inupiat identity is most often connected to people who made their living inland rather than on the coast from marine mammals. Present day Point Lay is the only NSB community to have a formally recognized IRA, which the villagers historically associate with the reindeer herd. Point Lay has never formally incorporated as a city, so the IRA is the only local government. This provides the village with its identity as a Native (and Inupiat) identity. In some ways, some Point Lay people consider this the only truly Inupiat identity on the North Slope, as all other groups (the NSB, city councils, corporations) take the form of foreign and imposed institutions. The Point Lay IRA is perceived as the continuation of an Inupiat way of doing things (even if formally recognized by a federal law giving it a formal structure).

## Wainwright

Wainwright shares with Point Hope the reputation of being a 'traditional" **Inupiat** community, which is in many ways surprising. **Wainwright** does not have nearly the time depth as a settlement that Point Hope does. **Wainwright** also whales with aluminum boats using outboard motors. The ethos of the hunt remains the same, however, and **Wainwrighters** continue to rely on subsistence resources to a higher degree than most of the other villages (in part because their resources are richer). As in Point Hope, there are more employable people than jobs and a few people concentrate on subsistence activities. Wainwright is also a more difficult community for a non-Native to enter and interact with than Point Hope. Both communities welcome visitors, but Point Hope has had more experience with them in the past and is more open to them. Wainwright's open protectiveness can be taken as yet another example of its traditionalism.

# NORTH SLOPE BOROUGH REGION

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## SECTION I: POPULATION SIZE AND STRUCTURE

Although there were many events that affected population size and structure on the North Slope, for purposes of analysis, we have selected certain events that mark general periods of change affecting the region as a whole. However, these periods overlap to a large extent and do not reflect truly discrete categories of time.

### A. Regional Population History

#### 1. Precontact to the Whaling Period

Prior to contact with non-Native Alaskans, the Inupiat of the North Slope of Alaska were transient hunters and gatherers, completely dependent upon the availability of large terrestrial and marine mammals for subsistence. It is impossible to know the population of the North Slope region during this time but estimates range into the thousands. However, it is certain that variation in the human population occurred with some frequency according to the migrations and population fluctuations of their food resources.

Contact occurred in different parts of the North Slope at different times. The earliest population figures are from 1850, when only Point Hope and Barrow were year-round settlements. Point Hope's population was 854 and Barrow's was about 398. The mid- to late-1800s through the early 1900s marked the commercial whaling era which was a time of rapid population growth in the coastal communities. Trading posts were erected, missions were established, and the presence of non-Natives became a permanent element of the North Slope. Wainwright was established as a permanent village in 1904.

While the coastal communities were booming during the whaling era, those living in the interior region were experiencing severe declines in food resources, primarily caribou. Starvation was common and many family groups were forced to migrate to the coast, depopulating the interior.

In addition to migration, diseases brought by white explorers, traders, and whalers (to which the local populations were not immune) had important influences on population size and structure. High mortality rates and social disruption caused by widespread exposure to tuberculosis, measles, small pox, influenza, and whooping cough contributed to the decline of Inupiat population and culture. Point Hope lost as much as 12% of its population in one year. In 1900, more than 200 Nunamiut died following contact with a whaling ship. Barrow lost 100 Natives to a measles epidemic as well (Chance 1966:15). As late as the mid-1950s, 10% of Eskimo children died before their first birthday and 90% of Alaska's deaths from tuberculosis occurred among the Eskimo (Alaska Health Survey 1954:32, cited from Chance 1966:17).

2. Reindeer Herding and Fur Trapping and Trading

In the late 1800s and early 1900s reindeer from the Siberian Chukchi were imported to the North Slope by the United States Bureau of Education. This was done to replace uncertain supplies of game and relieve economic instability resulting from the decline of commercial whaling, which finally ended in 1915. Overlapping this period was the growth of the fur trapping and trading industry. While Inupiat had previously only supplemented their income with trapping, beginning in the 1920s such activities were providing a crucial source of cash. An annual income of $3,000 or $4,000 to as much as $7,000 was not unusual (Chance 1966:16). However, following the Depression in 1929, furs lost their value and reindeer herding became an increasingly important means of subsistence for many families in the 1930s and 1940s. By then the herds that had been brought in 30 years earlier had grown to about 600,000 head. Coinciding with the crash of the fur market was an increase in caribou populations in the inland region. Consequently, many Nunamiut were able to repopulate their original lands in the interior of the North Slope and live a traditional subsistence lifestyle. These people were to later establish Anaktuvuk Pass as a permanent settlement.

Also during this period schools, air strips, missions, and trading posts were established throughout the region. In many cases the introduction of one of these into a settlement area proved to be a catalyst for establishing a permanent village. Such was the case in Point Lay, which became a permanent village primarily as a result of the creation of a school in 1939. Anaktuvuk Pass was to become a year-round community in the early 1950s following the construction of a trading post in the area.

3. Post-World War II Era - Oil Exploration and the DEW Line

In 1944 the United States Navy initiated oil exploration in the Barrow area, providing economic opportunities to Natives from across the region. The" Naval Petroleum Reserve Number 4 (PET-4) was responsible for significant growth in Barrow. Interestingly, Wainwright's population decreased noticeably, from 314 to 227, due to out-migration to Barrow for employment.

Another development that affected the growth of villages on the North Slope was the decision by the federal government, and other allied countries, to construct radar stations across the Arctic to serve as a military distant early warning system following World War II. The construction of these enormous radar structures between 1953-1957 significantly affected, though in different ways, the communities in which they were located. In Point Lay, for example, the construction of the DEW Line station in 1950 was, from many current residents' point of view, the reason that the village was abandoned. (Others claim that the closing of the school was the more immediate cause of Point Lay's dissolution.) The DEW Line station that was chosen by the federal government to be in the vicinity of Kaktovik was built literally on top of the village, forcing residents to rebuild adjacent to their traditional homesites. In addition, the residents of Kaktovik were displaced twice subsequently due to decisions made by DEW Line administrators. Nevertheless, the construction of the DEW Line in Kaktovik spurred its growth. "In 1%2, over half of the Eskimo men at Kaktovik were earning salaries of $600 or more a month at the Barter Island site" (Chance 1966:17). The DEW Line built in the vicinity of Barrow was important in stabilizing its population until the 1960s but has since ceased to be a major influence.

4. The Alaska Native Claims Settlement Act (ANCSA) and the North Slope Borough (NSB)

Perhaps the greatest overall changes in recent years affecting population size and structure on the North Slope were brought about by the passage of ANCSA and the incorporation of the NSB. ANCSA provided for the establishment of Native corporations throughout Alaska and endowed them with the ownership of land. Most important in terms of population growth, however, was the wealth that the NSB accumulated from taxes levied upon the developers of North Slope crude oil. This money was funnelled into each of the eight NSB villages, leading to a variety of changes on the local level. These impacts can be distinguished in three general areas. First there were changes made to the physical village in terms of infrastructure development and capital improvements. Every village was equipped with a school, a health clinic, a Utilities and School District Combined Facility (USDW), water, electric power, an equipment maintenance building, and road and housing improvements were made. Second, public services were instituted in each community which served to attract and retain local populations. Services organized by the NSB that are now locally available include health care, education (through high school and, to a limited degree, beyond), public safety, fire fighting, search and rescue, senior programs, day care (in some communities), housing programs, and energy assistance programs. Increased employment opportunities, the third area of impact, followed naturally from the above two changes. The vast majority of employment in each of the villages is provided either directly through the NSB or is NSB-related. Most of these changes to some extent entailed the migration of non-Natives to the North Slope, changing dramatically the ethnic composition as well as the size of village populations, particularly in Barrow. Capital improvements probably had the most far-reaching effects in this respect. Both Native and non-Native individuals were drawn to NSB villages to participate in construction projects, especially in the early 1980s. However, even though CIP spending has decreased, employment opportunities created by the NSB continue to support many individuals. A significant number of positions now include infrastructure maintenance, small-scale construction, and service-oriented positions.

An additional consequence of the passage of ANCSA and the incorporation of the NSB was the resettlement of the traditional village of Point Lay and fishing sites of Atqasuk and Nuiqsut under an aggressive NSB resettlement program. The sudden and deliberate migration of such large numbers of Inupiat to these three villages was unprecedented in recent history.

B. Contemporary North Slope Population

1. Resident Population

Table 1-NSB, Population Composition of North Slope Villages, 1980, displays age, sex, and ethnicity information for the population of the North Slope as a region in 1980. Tables 2a-NSB, 2b-NSB, and 2c-NSB display detailed information on the ethnic composition of the same population in 1988. Table 3-NSB displays age, sex, and ethnicity information for the population in 1988. One can see that the Native to non-Native ratio has changed over this time span. In 1980, Alaska Natives are listed as composing approximately 79.4% of the population of the NSB. By 1988, the figure of Inupiat residents was listed as 72.3% of the total population of the region. Controlling for the inclusion of non-Inupiat Alaska Natives in the 1980 census information, the Alaska Native figure for 1988 would be 73.7%. This represents a decline of 5.7% when measured against the non-

Native population. In absolute terms, the population of the region has grown from 3,888 to 5,498 (including "missing cases" for which ethnicity/age/sex information is not available), a 41% increase. The Alaska Native (Inupiat plus other Alaska Native) residents of the NSB increased from 3,086 to 4,007 (see Table 3-NSB; this figure includes some "missing cases" from Table 2-NSB) persons between 1980 and 1988, or by approximately 30%. Non-Native residents increased from 802 to 1,416 (also from Table 3-NSB), or by approximately 77%.

Figure 1-NSB graphically displays the relative size of the Inupiat and non-Inupiat components of the regional population by age groups for the year 1988. It should be noted that while the Inupiat component of the population approximates a normal population curve, the non-Inupiat portion of the population is amplified for both the youngest ages and the prime working years, ages 26 through 55 or so. This is consistent with the data from the individual villages that suggest non-Inupiat come to the villages as adults and their migration is primarily dependent upon employment considerations and that further these people, when they do have children, tend to leave the villages when their children reach high school age. Figure 2-NSB displays similar information, but broken out by sex. Of particular interest is the predominance of males in the non-Inupiat employment age categories. Figure 3-NSB graphically displays the ethnic! composition information for the NSB population presented in tabular form in Table 3-NSB. Of interest in this graphic is that within the non-Inupiat category, fully 36% of the individuals are classified in ethnic groups other than "white." Based on information from the villages, primarily Barrow, this represents a significant ethnic diversification of the population over the last decade or so.

### *Population Size*

The total population of the North Slope Borough in 1988 was 5,498 persons (Table 3-NSB). The seven villages exclusive of Barrow have a combined population of 2,275. Barrow has a population of 3,223. Put another way, Barrow alone accounts for 58.6% of the population of the entire North Slope. This fact has obvious consequences for the political economy of the region, and for the relationship of the outer villages to Barrow.

Of the 2,275 persons living outside of Barrow, 11.6% live in Anaktuvuk Pass, 9.6% live in Atqasuk, 10.0% live in Kaktovik, 13.8% live in Nuiqsut, 26.0% live in Point Hope, 6.9% live in Point Lay, and 22.1% live in Wainwright. These villages range in size from 158 (Point Lay) to 591 (Point Hope). This range covers an absolute difference in population size of 443. In other words, Point Hope (the biggest village) is 3.7 times larger than Point Lay (the smallest village). The difference in population between these two villages is 2.8 times the total size of the smaller village, a very large proportional difference indeed. As large as these differences are, however, all of the NSB villages outside of Barrow are dwarfed by Barrow itself. The largest of these villages is 18.3% the size of Barrow while the smallest is only 4.9% the size of Barrow.

### *Age of Population*

The average age of the entire population of the North Slope is 25.8 years. The average age of the population of the seven NSB villages exclusive of Barrow is 25.3 years; the average age for Barrow

is 26.2 years. The range of average ages in the seven villages is 5.4 years. Kaktovik has the highest average age at 29.2 years; Point Hope the lowest at 23.8 years.

There are significant differences in average age between male and female residents, as well as between Inupiat and non-Inupiat residents. On the average, males are older than females, and non-Inupiat are older than Inupiat. For the region as a whole, the average age for males is 26.2 years; for females it is 25.3 years. For the seven NSB villages exclusive of Barrow the average age for males is 26.0 years and 24.5 years for females For Barrow itself, the average age for males is 26.4 and 25.9 for females. In all cases, it would appear that the higher average age for males is attributable to males outnumbering females in the work force, primarily due to non-Inupiat males coming to the villages for employment.

For the region as a whole, the average age difference between Inupiat and non-Inupiat residents is five years. The average age of Inupiat residents is 24.4 years; for non-Inupiat residents it is 29.4 years. For the seven NSB villages exclusive of Barrow, the age difference is even larger: the average age of Inupiat residents is 24.6 years; the average age of non-Inupiat residents is 30.9 years. For Barrow the average age of Inupiat residents is 24.3 years; the average age of non-Inupiat residents is 29.1 years. Again, in all of these cases, the differences seen between Inupiat and non-Inupiat average ages is primarily attributable to the non-Inupiat population being relatively underrepresented in the age range below prime employment years and relatively overrepresented in the "labor force" years. Although the average age of Inupiat is less than non-Inupiat, Inupiat far outnumber non-Inupiat in the older age categories, both proportionally and absolutely. Outside of Barrow, there are no non-Inupiat residents 66 years or older on the North Slope. In Barrow, 4.2% of the Inupiat component of the population is 66 years or older; in contrast only 0.8% of Barrow's non-Inupiat residents are in this same age group. Non-Inupiat individuals do not stay in the villages outside of Barrow past their employment years; very few in Barrow do, and some of those who are "past" the labor force years are, in fact, still employed.

Among the seven NSB villages exclusive of Barrow, there is a strikingly large range of variation (21.6 years) between the average ages of Inupiat and non-Inupiat residents. Nuiqsut has the largest difference between the average ages of Inupiat and non-Inupiat residents (22 years), with the average age of Inupiat residents being 23.6 years and non-Inupiat residents being 45.6 years. Point Hope has the smallest average age difference between Inupiat and non-Inupiat residents (0.4 years), with the average age of Inupiat residents being 23.8 years and non-Inupiat residents being 24.2 years. Nuiqsut is the extreme example of non-Inupiat coming to a village to work rather than making residency decisions based on childrearing considerations: there are no non-Inupiat residents in Nuiqsut under the age of 26. Point Hope, on the other hand, has the lowest average age for non-Inupiat residents with 50.7% of the non-Inupiat residents under the age of 26.

### Sex *of Population*

For the region as a whole, males comprise 52.6% of the population, females 47.4%. Another way of stating this is that there are 1.11 males for every female in the region. For the seven NSB villages exclusive of Barrow, the difference in proportion is even greater: 54.1% of the population is male and 45.9% female (1.181 male: female). In Barrow, the difference between males and

females is less than in the outer villages: the Barrow population is 51.6% male and 48.4% female (1.06:1 male:female).

There is significant variability among the seven villages exclusive of Barrow. Among these villages, Anaktuvuk Pass comes the closest to having an even distribution of males and females (50.8% to 49.2% or 1.03:1 male:female). Point Lay has the largest proportional difference between males and females (55.7 to 44.3% or 1.261 male:female).

The numerical predominance of males in the total population in several of the communities is due in large measure to the numerical predominance of males in the non-Inupiat component of the population. For the region as a whole, the Inupiat component of the population is 50.5% male and 49.5% female; the non-Inupiat component of the population is 58.2% male and 41.8% female. For the seven NSB villages exclusive of Barrow, the Inupiat component of the population is 52.7% male and 47.3% female; the non-Inupiat component of the population is 64. 1% male and 35.9% female. For Barrow, the Inupiat component of the population is 48.1% male and 51.9% female; the non-Inupiat component of the population is 57.0910 male and 43.0% female. The Inupiat component of Barrow's population is the only Inupiat or non-Inupiat component of any of the villages on the North Slope where females outnumber males, with a single exception (Anaktuvuk Pass).

Among the seven NSB exclusive of Barrow, there is a good deal of variability in sex distributions by ethnicity. Among the Inupiat component of the population, Anaktuvuk Pass is the only village where females outnumber males (males are 48.4% of the Inupiat component of the population, females 51.6%). Kaktovik, Nuiqsut, Point Hope, and Wainwright are all remarkably close in the sex distribution in the Inupiat component of their population, with males ranging between 52.8910 and 53.0%. Atqasuk falls between these villages and Point Lay, which is at the opposite end of the range from Anaktuvuk Pass. In Point Lay, Inupiat males outnumber females 56.4 to 43.6%, or in other words there are 1.30 Inupiat males to every Inupiat female in the village.

In the seven NSB villages exclusive of Barrow, non-Inupiat population components also vary in their sex distribution. Point Lay has the closest sex balance among its non-Inupiat population component with 52% male to 48% female. For the villages of Anaktuvuk Pass, Atqasuk, Kaktovik, Nuiqsut, and Point Hope, males make up between 60.0 and 64.9% of the non-Inupiat component of the population in each community. Wainwright is the village that is least balanced in sex distribution among its non-Inupiat residents: males outnumber females 79.1 to 20.9% (there are 3.7 non-Inupiat males for every non-Inupiat female).

### *Ethnicity of Population*

Excluding the 329 missing cases from the North Slope census of 1988 for which information on ethnicity does not exist, the population of the North Slope Borough is 5,169. Of this figure, 3,739 identified themselves as Inupiat, 1,430 as non-Inupiat. Inupiat residents are more-or-less divided evenly by residence in Barrow or the outer villages combined: Barrow has 1,822 Inupiat residents, representing 48.7% of the Inupiat residents of the North Slope; the seven NSB villages excluding Barrow have 1,917 Inupiat residents (combined), representing 51.3% of the Inupiat of the NSB. The non-Inupiat residents of the North Slope are distributed quite differently. Barrow has 1,179

non-Inupiat residents, representing 82.4% of all non-Inupiat residents on the North Slope; the seven NSB villages excluding Barrow have 251 non-Inupiat residents (combined), representing 17.6% of the non-Inupiat of the Slope.

For the region as a whole, the population is 72.3% Inupiat and 27.7% non-Inupiat. For the seven NSB villages excluding Barrow, the population is 88.4% Inupiat and 11.6% non-Inupiat; for Barrow these figures are 60.7 and 39.3% respectively. Among the seven NSB villages outside of Barrow, Kaktovik has the highest proportion of non-Inupiat residents (20%) and Nuiqsut has the lowest (7%); Barrow is by far and away the most "non-Inupiat" of all of the communities on the North slope.

It should be noted, however, that there is considerable variation within the non-Inupiat segments of the population in several of the villages. In Kaktovik, Nuiqsut, Point Lay, and Wainwright, the non-Inupiat segment of the population is predominantly "white." For these four villages, whites represent only between 6.1 and 18.9% of the total village population, but they represent between 90.7 and 95.0% of the non-Inupiat population segments of these villages. No other ethnic group represents more than 1.3% of the population of any of these villages (and in fact with one exception, none represent even l% of the population of any of these villages). For the villages of Anaktuvuk Pass and Atqasuk, whites represent 11.0 and 9.6% of the total populations respectively. Whites comprise 76.3% of the non-Inupiat segment of the Anaktuvuk Pass population and 80.8% of the non-Inupiat segment of the Atqasuk population. In Anaktuvuk Pass, hvo other ethnic groups represent 1.1 and 2.3% of the total population; in Atqasuk no other ethnic group represents more than 0.9% of the total population.

Point Hope has easily the most diverse non-Inupiat population segment of any of the seven NSB villages, exclusive of Barrow. Whites comprise 6.4% of the total village population; they represent only 49.3% of the non-Inupiat population segment of the community. Representatives of four other identified ethnic groups (other Alaska Native, American Indian, Hispanic, and Black) were enumerated in the village, but the largest category outside of white was "other" (26.0% of the non-Inupiat portion of the population). The category "other" is problematic for purposes of analysis because of its size and lack of definition, but based on field experience it is safe to say that Point Hope has more ethnic groups represented in its population than the other communities in the region outside of Barrow. This is most likely attributable to a combination of factors, including the fact that Point Hope is the largest of these communities, it is the oldest of these communities and has had a long history of interaction with individuals from a variety of ethnic groups, and, based on field research, its adult Inupiat residents have all lived for a period of time outside of the village (and thus have had the opportunity to bring non-Inupiat with them when they return to the village).

Barrow has the most ethnically diverse non-Inupiat population component, when measured by the number of ethnic groups represented. All of the ethnic groups noted for Point Hope are found in Barrow, along with two others: Filipino and Oriental. While whites make up fully 2S.2% of the total population of Barrow (the highest percentage of any village on the North Slope), they make up 64.8% of the non-Inupiat population segment (the lowest percentage of any NSB village, except for Point Hope). Unlike Point Hope, the category of 'other" in Barrow is not seriously problematic for analysis, as it makes up a relatively small 6.7% of the non-Inupiat component of the village population.

Another important consideration in the interpretation of ethnic diversity found in Barrow is the overall size of the village. The relatively large size of Barrow means that, unlike other NSB villages, small population percentages translate to more than a handful of individuals. For example, there are several ethnic groups such as Filipinos, Hispanics, and Orientals that make up relatively small proportions of the overall village population (4.9, 1.0, and 0.8% respectively). In absolute numbers, there are 155, 31, and 24 residents of these ethnicities respectively. (To contrast this with the demographic numbers found in the other villages, it is interesting to note that although Hispanics make up only 1.0% of the population of Barrow, there are more Hispanics in Barrow than there are whites in four of the seven NSB villages excluding Barrow where, like in Barrow, whites are by far and away the numerically dominant non-Inupiat ethnic group.) In behavioral terms, there are enough residents of each of these ethnic groups (Filipinos, Hispanics, and Orientals) to enable the formation and maintenance of ethnically based quasi-self-contained social groups in Barrow, something that is not found in the other villages. For each of these groups in Barrow, there are active kin relations between significant numbers of individuals of these groups. Migration and residency decisions are based, to a large extent, on kinship relationships and considerations. Individuals of these ethnicities also form active economic and social groups. There are enterprises in Barrow associated with each ethnicity (in terms of ownership, management, and staffing a-rid/or products), and in addition to association' dictated by kin and economic relations, individuals in these ethnic categories often socialize together, as friendship ties overlap with kinship, ethnicity, and workplace ties.

## 2. Industrial Population

To this point, we have been discussing the resident population of the North Slope Borough, but there is another population in this region. This is the "industrial population" composed of individuals working and residing in the industrial enclaves outside of the villages in the region. To a great degree, this is a "hidden population" on the North Slope, for several reasons.

Figure 4-NSB, entitled "Village and Industrial Population: 1980-1987," presents data on the relative size of the village and industrial populations on the North Slope. Of significant interest are the years 1980 and 1986. Prior to 1980, the village population of the NSB exceeded the industrial population. During the years 1980 through 1986, however, the industrial population exceeded the combined total population of all villages on the North Slope. After 1986, the village population was again larger than the industrial population.

One of the reasons the industrial population is a hidden one is that, for the most part, these individuals are not residents of the region in the sense of the region being a primary residence. Instead, for these individuals the North Slope is a work site, and their residence is elsewhere. Presumably, these individuals show up in population statistics at their primary place of residence.

Table **1-NSB**

Population Composition *
North Slope Borough **Villages**
**1980**

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Under 5 years | 183 | 188 | 371 | 20 | 32 | 52 | 203 | 220 | 423 |
| 5-9 | 145 | 146 | 291 | 23 | 22 | 45 | 168 | 168 | 336 |
| 10-14 | 156 | 182 | 338 | 23 | 14 | 37 | 179 | 196 | 375 |
| 15-19 | 219 | 223 | 442 | 21 | 25 | 46 | 240 | 248 | 488 |
| 20-24 | 199 | 162 | 361 | 50 | 38 | 88 | 249 | 200 | 449 |
| 25-29 | 171 | 139 | 310 | 111 | 66 | 177 | 282 | 205 | 487 |
| 30-34 | 108 | 85 | 193 | 86 | 47 | 133 | 194 | 132 | 326 |
| 35-39 | 87 | 63 | 150 | 42 | 24 | 66 | 129 | 87 | 216 |
| 40-44 | 79 | 58 | 137 | 40 | 15 | 55 | 119 | 73 | 192 |
| 45-49 | 76 | 47 | 123 | 35 | 11 | 46 | 111 | 58 | 169 |
| 50-54 | 61 | 51 | 112 | 16 | 15 | 31 | 77 | 66 | 143 |
| 55-59 | 34 | 36 | 70 | 9 | 2 | 11 | 43 | 38 | 81 |
| 60-64 | 27 | 24 | 51 | 6 | 3 | 9 | 33 | 27 | 60 |
| 65-69 | 34 | 36 | 70 | 1 | 2 | 3 | 35 | 38 | 73 |
| 70-74 | 18 | 12 | 30 | 2 | 0 | 2 | 20 | 12 | 32 |
| 75 and over | 25 | 12 | 37 | 1 | 0 | 1 | 26 | 12 | 38 |
| TOTAL | 1,622 | 1,464 | 3,086 | 486 | 316 | 802 | 2,108 | 1,780 | 3,888 |
| Median Age | 226 | 198 | 212 | 29.7 | 27.2 | 28.7 | 253 | 21.2 | 237 |

● Figutes exclude a total of 254 persons (57 Alaska native males, 43 Alaska Native females, 116 non-Native males and 38 non-Native females) for whom no age information was provided. Thus, a total of 4,142 persons in the North Slope Borough was surveyed by Alaska Consultants, Inc.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **2a-NSB**

**Age, Sex, and** Race Compared:
NSB Region, 7 Villages (excluding Barrow), and Barrow -1988

NSB REGION

| | Inupiat | | | Non-Inupiat | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total | % Total |
| Under 4 | 243 | 241 | 484 | 66 | 43 | 109 | 309 | 284 | 593 | 11.5% |
| 4-8 | 287 | 273 | 560 | 62 | 48 | 110 | 349 | 321 | 670 | 13.0% |
| 9-15 | 215 | 250 | 465 | 72 | 56 | 128 | 287 | 306 | 593 | 11.5% |
| 16-17 | 59 | 59 | 118 | 16 | 15 | 31 | 75 | 74 | 149 | **2.9%** |
| 18-25 | 284 | 252 | **536** | 66 | 68 | 134 | 350 | **320** | 670 | 13.0% |
| 26-39 | 385 | 410 | 795 | 308204 | | 512 | 693 | 614 | 1307 | 25.3% |
| 40-59 | 302 | 244 | 546 | 219 | 153 | 372 | 521 | 397 | 918 | 17.8% |
| 60-65 | 48 | 38 | 86 | 18 | 7 | 25 | 66 | 45 | 111 | 21% |
| 66+ | 64 | 85 | 149 | 6 | 3 | 9 | 70 | 88 | 158 | 3.1% |
| **TOTAL** | 18s7 | 1852 | 3739 | **833** | 597 | 1430 | 2720 | 2449 | 5169 | **100.0%** |
| **TOTAL** % | **36.5%** | **35.8%** | 723% | **16.1%** | 11.5% | 27.7% | 526% | 47.4% | 100.0% | |
| Number of **Missing Observations** | | | | | | | | | 329 | |
| Total Population | | | | | | | | | 5498 | |

**7 NSB VILLAGES (excluding Barrow)**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 116 | 110 | 226 | 7 | 6 | 13 | 123 | 116 | 239 | 11.0% |
| 4-8 | 161 | 142 | 303 | 17 | 12 | 29 | 178 | 154 | 332 | 15.3% |
| 9-15 | 112 | 137 | 249 | 12 | 9 | 21 | 124 | 146 | 270 | 12.5% |
| 16-17 | 28 | 24 | 52 | 0 | 3 | 3 | **28** | 27 | 55 | 25% |
| 18-25 | 157 | 126 | 283 | 10 | 4 | 14 | 167 | 130 | 297 | 13.7% |
| 26-39 | **204** | 185 | 389 | 66 | 24 | 90 | 270 | 209 | 479 | **22.1%** |
| 40-59 | 178 | 124 | 302 | 42 | 32 | 74 | 220 | 156 | 376 | 17.3% |
| 60-65 | 23 | 18 | 41 | 7 | 0 | 7 | 30 | 18 | 48 | **2.2%** |
| 66+ | 32 | 40 | 72 | 0 | 0 | 0 | 32 | 40 | 72 | 3.3% |
| ToTAL | 1o11 | **906** | 1917 | 161 | 90 | 251 | **1172** | 996 | 2168 | 100.0% |
| TOTAL % | 46.6% | 41.8% | 88.4% | 7.4% | 4.1% | 11.6% | 54.1% | 45.9% | 100.0% | |
| Number of Missing **Observations** | | | | | | | | | 107 | |
| Total Population | | | | | | | | | 2275 | |

**BARROW**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 127 | 131 | 258 | 59 | 37 | **96** | 186 | 168 | 354 | 11.8% |
| 4-8 | 126 | 131 | 257 | 45 | **36** | 81 | 171 | 167 | 338 | 11.3% |
| 9-15 | 103 | 113 | 216 | 60 | 47 | 107 | 163 | 160 | 323 | 10.8% |
| " 16-17 | 31 | 35 | 66 | 16 | 12 | **28** | 47 | 47 | 94 | 3.1% |
| 18-25 | 127 | 126 | 253 | 56 | 64 | 120 | 183 | 190 | 373 | 12.4% |
| 26-39 | 181 | 225 | 406 | 242 | 180 | 422 | 423 | 405 | 828 | 27.6% |
| 40-59 | 124 | **120** | 244 | **177** | 121 | 298 | 301 | 241 | 542 | **18.1%** |
| 60-65 | 25 | **20** | 45 | 11 | 7 | 18 | 36 | 27 | 63 | **2.1%** |
| 66+ | 32 | 45 | 77 | 6 | 3 | 9 | 38 | 48 | 86 | **2.9%** |
| **TOTAL** | 876 | 946 | **1822** | 672 | 507 | 1179 | 1548 | 1453 | 3001 | 100.0% |
| TOTAL % | **29.2%** | 315% | 60.7% | 224% | **16.9%** | 393% | 51.6% | 4s.4% | 100.0% | |
| Number of **Missing Observations** | | | | | | | | | 222 | |
| Total Population | | | | | | | | | 3223 | |

Source: Adapted from the NSB Census of Population and Economy, 1989.

Table 2b-NSB

Sex and Race Compared:
**NSB** Region, 7 Villages (excluding Barrow), and Barrow
1988

| | Inupiat | | | Non-Inupiat | | | Totaf | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total | % Total |
| NSB REGION | 1887 | 1852 | 3739 | 833 | 597 | 1430 | 2720 | 2449 | 5169 | 100.0% |
| 7 NSB VILLAGES | 1o11 | 906 | 1917 | 161 | 90 | 251 | 1172 | 996 | 2168 | 41.9% |
| Anaktuvuk Pass | 108 | 115 | 223 | 24 | 13 | 37 | 132 | 128 | 260 | 5.0% |
| Atqasuk | 99 | 82 | 181 | 12 | 8 | 20 | 111 | 90 | 201 | 3.9% |
| Kaktovik | 89 | 79 | 168 | 27 | 15 | 42 | 116 | 94 | 210 | 4.1% |
| Nuiqsut | 150 | 133 | 283 | 12 | 7 | 19 | 162 | 140 | 302 | 5.8% |
| Point Hope | 258 | 231 | 489 | 39 | 26 | 65 | 297 | 257 | 5s4 | 10.7% |
| Point Lay | 70 | 54 | 124 | 13 | 12 | 25 | 83 | 66 | 149 | 2.9% |
| Wainwright | 237 | 212 | 449 | 34 | 9 | 43 | 271 | 221 | 492 | 9.5% |
| BARROW | 876 | 946 | 1822 | 672 | 507 | 1179 | 1548 | 1453 | 3001 | 58.1% |
| Missing Observations | | | | | | | | | 329 | |
| Total Population | | | | | | | | | 54984 | |

Source Adapted from the NSB Census of Population and Economy, 1989.

Table **2c-NSB**

Average Age Compared:
NSB Region, 7 Villages (excluding Barrow), and Barrow
1988

| | NSB REGION | 7 NSB VILLAGES | Anaktuvuk Pass | Atqasuk | Kaktovik | Nuiqsut | Point Hope | Point Lay | Wainwright | BARROW |
|---|---|---|---|---|---|---|---|---|---|---|
| Entire Population | 25.8 | 25.3 | 24.4 | 24.8 | 29.2 | 25.0 | 23.8 | 25.5 | 26.1 | 26.2 |
| **Male** | 26.2 | 26.0 | 25.3 | 24.6 | 31.1 | 25.3 | 23.2 | 26.2 | 28.1 | 26.4 |
| **Female** | 25.3 | 24.5 | 23.6 | 25.2 | 26.8 | 24.7 | 24.6 | 24.6 | 23.7 | 25.9 |
| **Inupiat** | **24.4** | 24.6 | 23.0 | 24.3 | 27.8 | 23.6 | 23.8 | 23.5 | 26.0 | 24.3 |
| **Non-Inupiat** | 29.4 | 30.9 | 33.0 | 29.8 | 34.6 | 45.6 | 24.2 | 35.7 | 26.8 | 29.1 |

Source: Adapted from the NSB Census of Population and Economy, 1989.

**Figure 1-NSB**

**Inupiat and Total Population in 9□8**
**NSB Region**

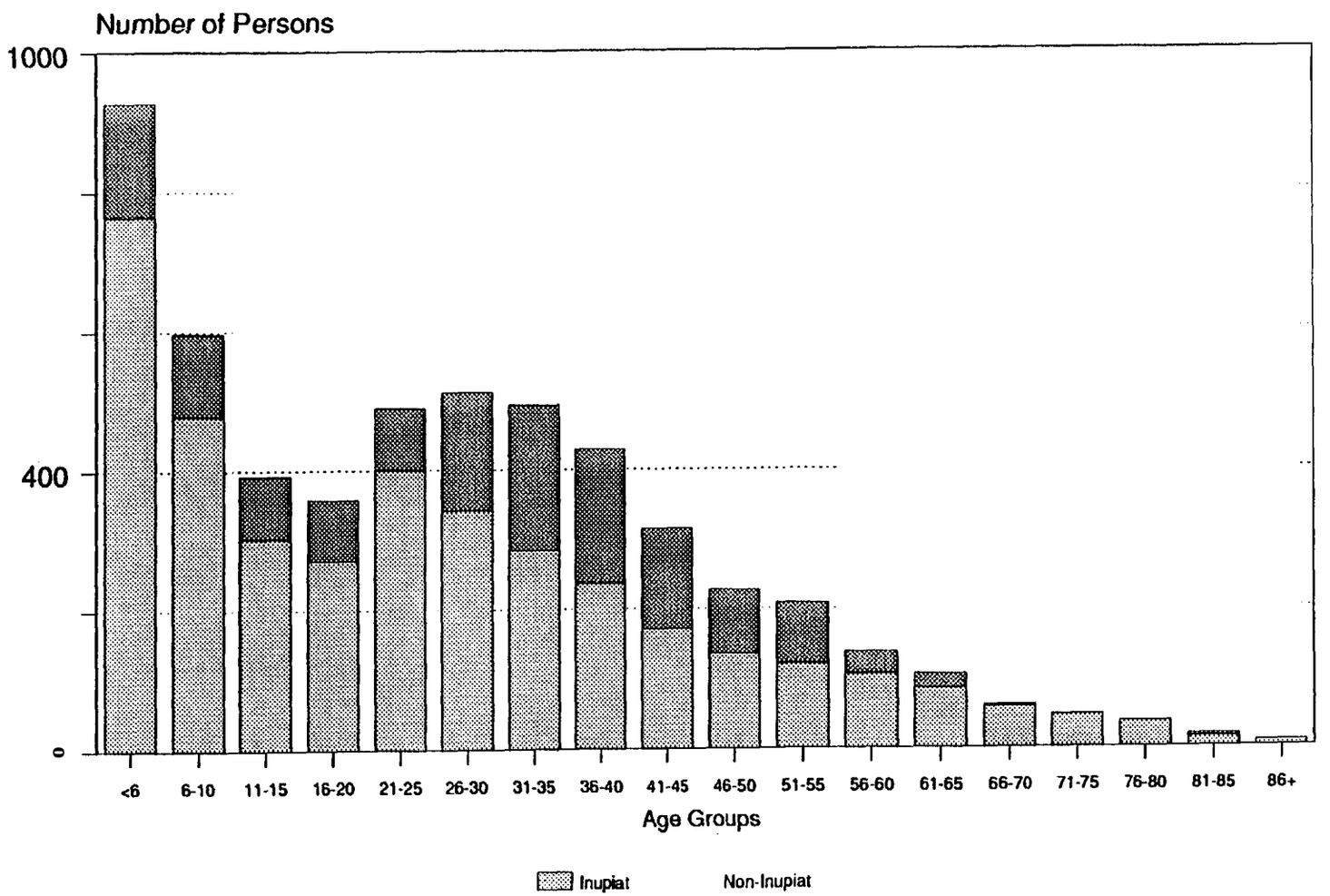


Figure **2-NSB**

**NSB Region** Population Characteristics -1988

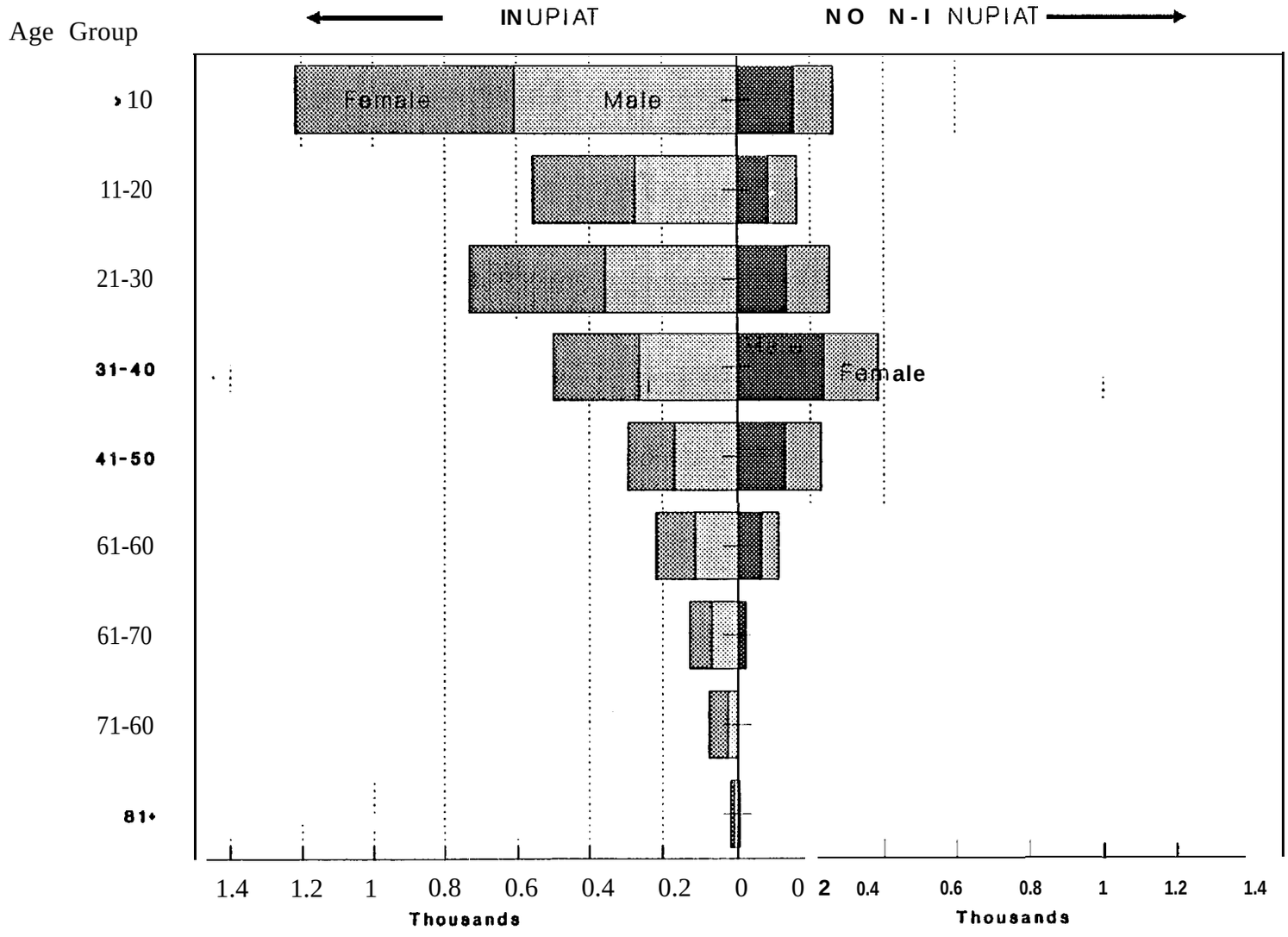
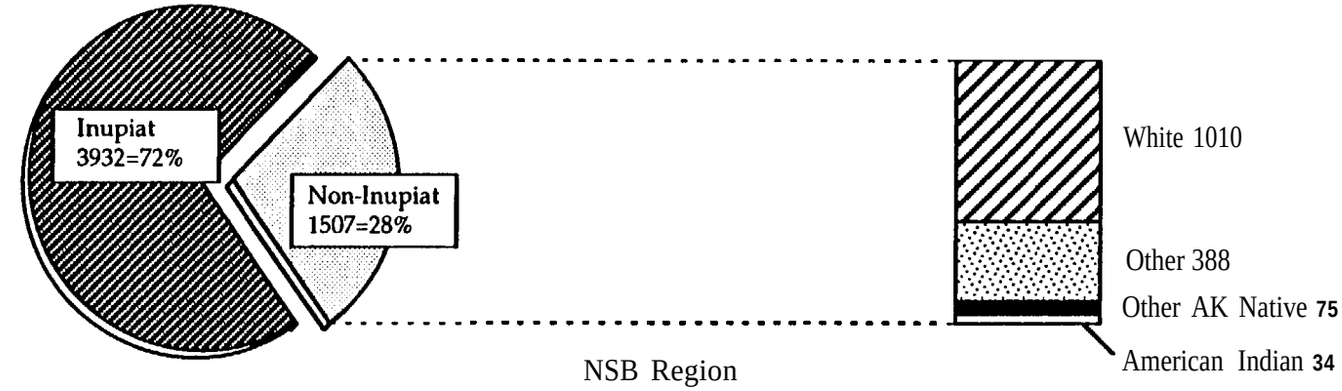


Figure **3-NSB**

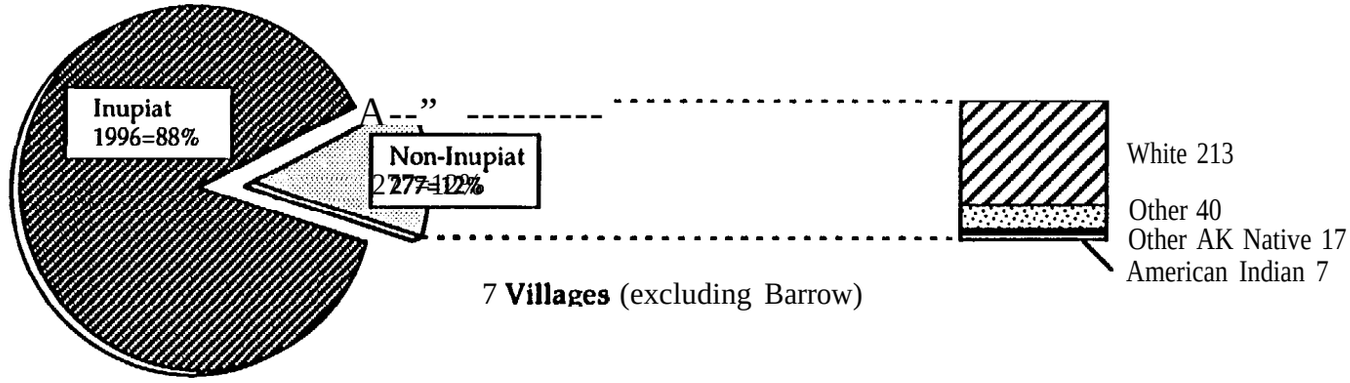
Ethnic Composition **Compared:**
**NSB** Region, **7 Villages** (excluding **Barrow),** and **Barrow** - 1988




NSB Region

Total Population
5498

Missing Observations
59




7 **Villages** (excluding Barrow)

Total Population
2275

Missing Observations
2

Barrow

Total Population
3223

Missing Observation
57

Table 3-NSB

Ethnic Composition of Population - **1988**
NSB Region

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 2002 | 1930 | 3932 | 72.3% |
| OTHER AK NATIVE | 37 | 38 | 75 | 1.4% |
| WHITE | 612 | 398 | 1010 | 18.6% |
| AMERICAN INDIAN | 22 | 12. | 34 | 0.6% |
| HISPANIC | 21 | 17 | 38 | Owe |
| FILIPINO | 77 | 81 | 158 | 2.9% |
| ORIENTAL | 8 | 16 | 24 | 0.4% |
| BLACK | 31 | 18 | 49 | 0.9% |
| OTHER | 59 | 44 | 103 | 1.9% |
| NOT ASCERTAINED | 11 | 5 | 16 | 0.3% |
| TOTAL | 2880 | 2559: | 5439 | 100.0% |
| % | 53.0% | 47.0% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | 59 | |
| TOTAL POPULATION | | | 5498 | |

Source: NSB Census of Population and Economy, 1969.

Another reason for the invisibility of this population is the fact that they work and live (while on the North Slope) in industrial enclaves, isolated from the rest of the population of the NSB. These individuals do not interact with permanent residents of the NSB (other than with those few permanent residents who work in the enclaves), they do not marry residents of the region, and they do not take part in the subsistence lifestyle of the region.

A third reason for their invisibility is the fact that this population does not participate in the political processes on the North Slope. While they (and through them, their companies) are the primary source of government revenues on the North Slope they are, due to the nature of their work environment, not a part of the governmental process. They are not eligible to vote on the North Slope.

This population is also distinct by virtue of its internal composition. Overwhelmingly non-Inupiat, the individuals who compose this population do not approach a normal population curve on age and sex indices, nor do they come close to the non-Inupiat village population. The vast majority of the industrial population is male, and all fall within the labor force age parameters.

Figure 5-NSB, entitled "NSB Resident Vs. Total Earnings, 1%9-1986" displays data on earnings by North Slope residents contrasted to total earnings on the North Slope by both residents and non-residents. There are two points of primary significance to be made regarding these data. First is the division of the span of years covered into two periods: pre-1974 and post-1974. The difference in total earnings between these two periods is enormous, with total income increasing sharply beginning in 1974. Although there have been steady declines in total earnings since 1983, the total still remains far in excess of the levels seen before the oil development years. The level of total earnings in the highest year before 1974 is approximately 7% of that of the highest year after 1974.

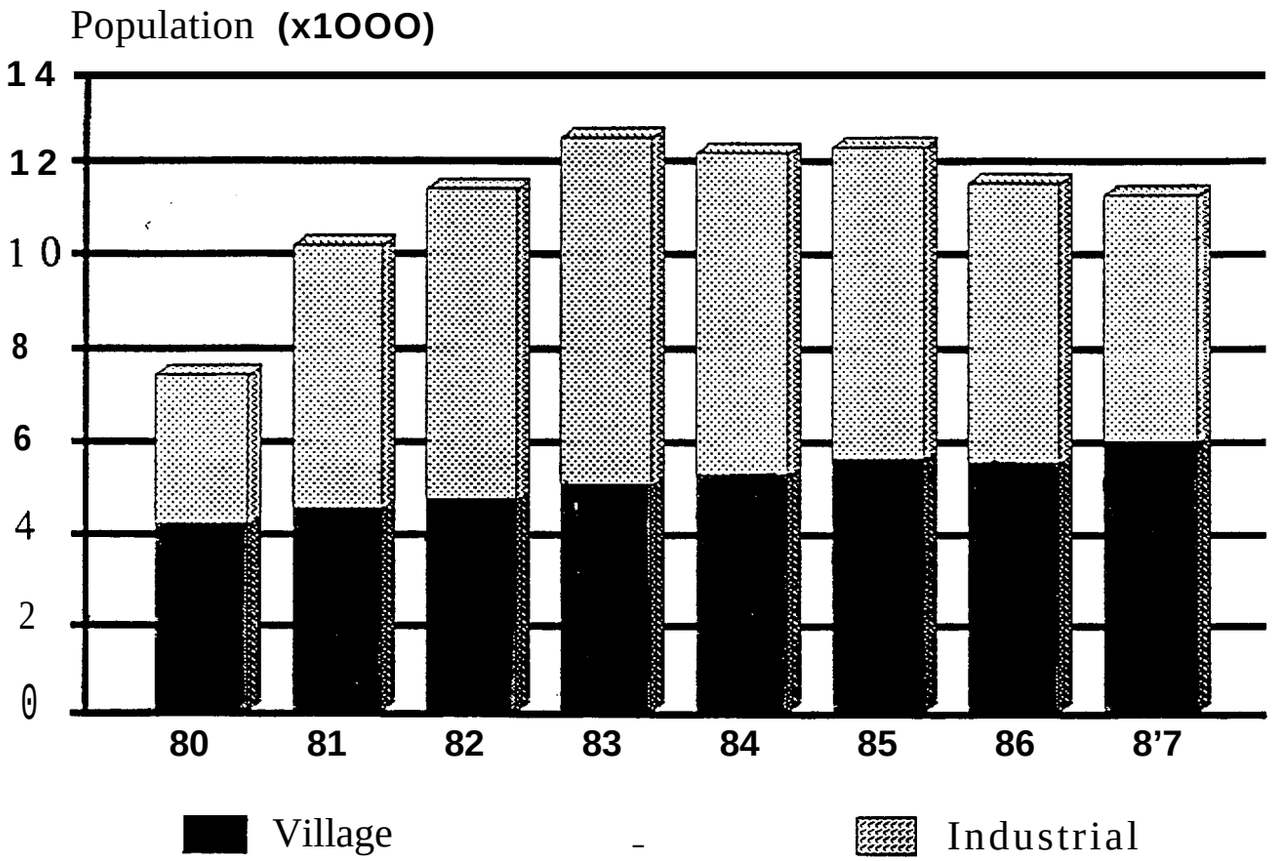
The second major point to be gleaned from these data is the disparity between the earnings of residents in comparison to total earnings. Realizing that total earnings is composed of resident and non-resident earnings, total earnings exceeded resident earnings by more than 700% at the peak in 1983, and remained well over 400% higher at the end of the period in 1986. In other words, the hidden or industrial population of the North Slope earns far in excess of the village population.

Figure 6-NSB displays resident and total per capita earnings for the years 1980 through 1986. In 1982, per capita earnings for the total population (which includes the enclave populations at Deadhorse) exceeded the per capita earnings for the resident population by nearly a factor of three. At the end of the period, 1986, the difference between total and residential population per capita earnings had lessened, but per capita income for the total population still exceeded the per capita income of the resident population by more than 200%.

It is important to note that the difference in per capita earnings between non-residents and residents is greater than the difference between total population and resident population, as the total population represents both resident and non-resident populations. Part of this difference may be accounted for by the fact that the non-resident or industrial population is composed virtually exclusively of wage earners, whereas the resident population is composed of individuals in all age categories (including persons too young or too old to be wage earners) and includes unemployed individuals. Individuals in the industrial population do not remain on the North Slope if they lose their jobs.

**Figure 4-NSB**

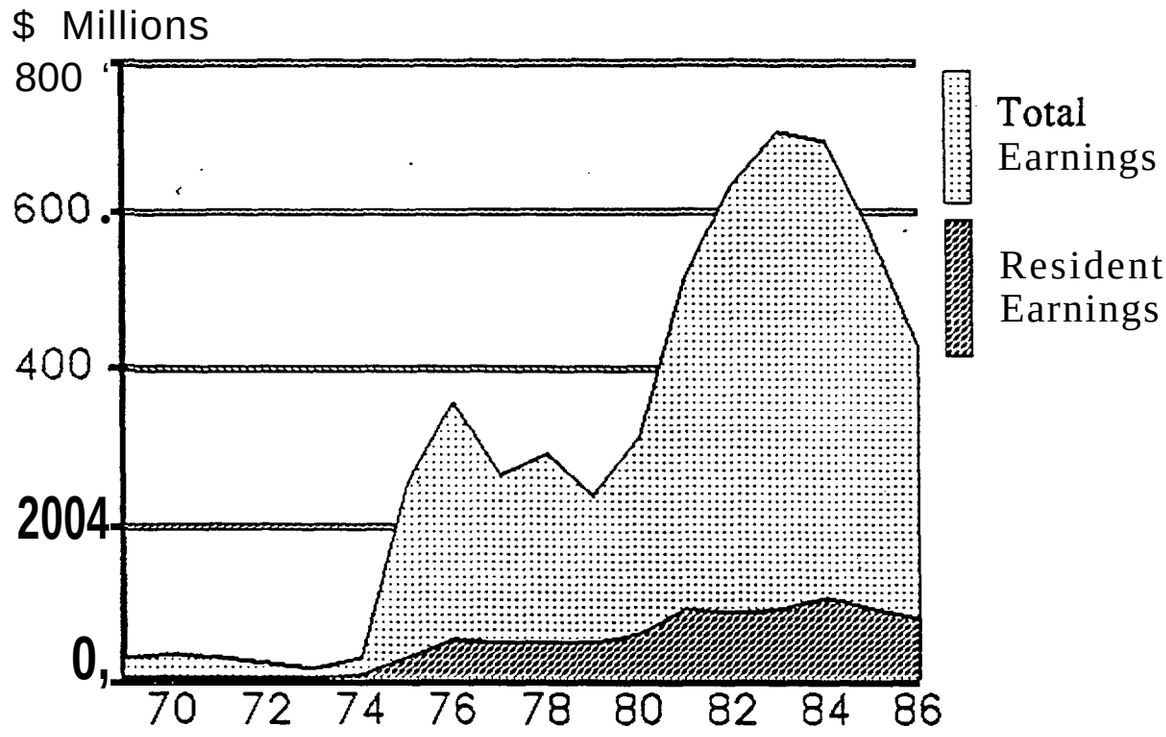
Village and Industrial Population
NSB Region: 1980-1987




Source: Alaska Department of Labor

Figure **5-NSB**

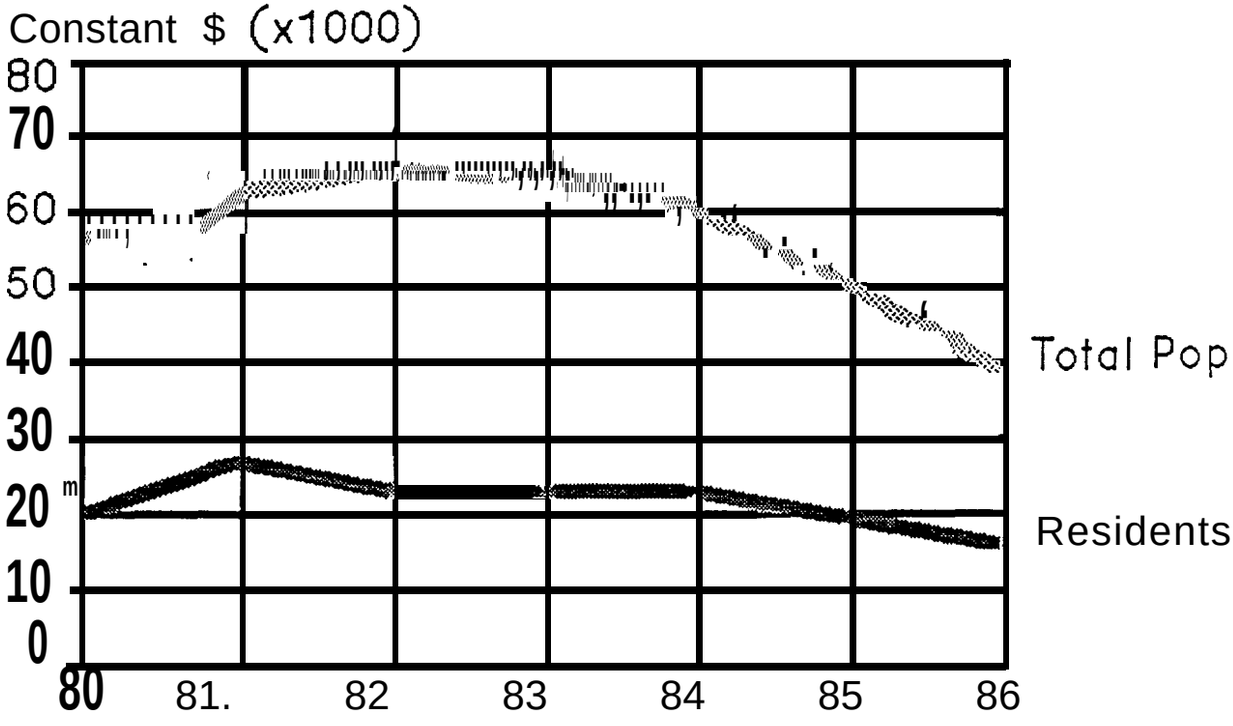
NSB Resident Vs Total ***Earnings***
1969-1986




Source: U.S. Bureau of Economic Analysis

Figure **6-NSB**

Resident and Total Per Capita Earnings
1980-1986




Source: Bureau of Economic Analysis and Alaska Dept of Labor

C. Regional Household Information

1. Household Size

Table 4-NSB displays information on household size in the North Slope Borough in 1980 by age of head of household and by whether the head of household was a Native or non-Native. (All of the information in this section applies only to the eight traditional villages of the North Slope -- data from the industrial enclaves are not included.) Of particular importance is the difference in size between Native and non-Native households, with non-Native households being much smaller on the average. Average household size for the borough is 4.0 for Inupiat households, 2.5 for non-Inupiat households, and 3.3 for all households. Non-Inupiat households are heavily biased towards one- and two-person households. The bulk of non-Native households are composed of one- and two-person households, approximately half again as many are three- and four-person households, and the number of households drops off sharply at five or more members. Native households, on the other hand, are larger and display a much stronger showing in the larger household categories. This same pattern is seen in Tables 5a-NSB and 5b-NSB, which display similar information on household totals for 1988. This pattern is consistent with data from the villages that show non-Inupiat households are generally composed of only adult wage earners, or adult wage earners with young children. As non-Inupiat children grow older and approach high school age (and the possibility of having multiple younger siblings increases), non-Inupiat families tend to move away from the North Slope.

If one examines the household size difference between Native households in 1980 and Inupiat households in 1988, it is apparent that housing programs between these years have not made a dramatic difference in household size. There is no strong tendency either way toward larger or smaller households across the household categories, with the relative minor exception of the largest households. If one examines households of 10 or more members, these households composed 3.2% of the total in 1980, whereas in 1988 they composed only 1. 1'% of the total. One interpretation of the absence of a drop in household size in spite of the construction of many new housing units in the villages is that in most of the villages, at least some of the older units are either no longer in use, or they are used as structures for purposes other than housing. This is observationally true in most villages -- Point Hope, Point Lay, Nuiqsut, and Kaktovik to a strong degree; and Barrow in a less direct and more complex manner as befits the largest and least homogeneous NSB community. Good information on the other three villages is lacking in this regard. There is no good information on the birth rate (either as a static absolute measure at one point in time or as time series information indicating whether the rate is changing) or on migration. These are additional factors which could be affecting household size, but it appears that a strong preference for newer housing to older housing is one factor maintaining current household size. Another factor, of course, is that most households are composed of what are basically nuclear families (a couple or a single parent with children). It is unlikely that average household size would decline much below that of the average family size.

*Seven NSB Villages (excluding Barrow)*

Average household size for the group is 4.1 for Inupiat households, 2.4 for non-Inupiat households, and 3.8 for all households. That is to say, in the outer villages Inupiat households are slightly larger

than for the region overall and Barrow alike, and non-Inupiat households are slightly smaller, but the overall average household size is significantly larger than either the region as a whole or Barrow alone. This is due to the relatively small percentage of non-Inupiat households in the villages. That is to say, in the outer villages where non-Inupiat households account for only 14% of the total number of households, village average household size approaches the higher Inupiat average household size figure. This is in spite of the fact that non-Inupiat households in these villages are very small indeed. Seventy-one percent of ail non-Inupiat households in these villages are one- or two-person households. If one totals the non-Inupiat households of three to five persons, less than three households per village fall within this range. For the non-Inupiat household size of six or above range, there is an average of only 0.7 households per community and, in fact, three of the five households of this range are found in a single community. (Further, at least two of these "households" are not "true" households but, rather, are commercial lodging enterprises.)

Within the seven village group there is variation in average household size worth noting. For Inupiat households, there is a range of 0.8 persons. Atqasuk and Point Hope are at the high end of the range with an average size of 4.4 persons; Kaktovik has the lowest average Inupiat household size with 3.6 persons. For non-Inupiat households the range is 2.5 persons. Nuiqsut has the lowest average size of 1.8; Wainwright has the largest with 4.3. The very high Wainwright figure can be accounted for by the presence of three very large (by North Slope non-Inupiat standards) households of seven, nine, and ten persons each. It is apparent that two of these "households" are not households in the everyday sense of the word. Only the smallest of the three was an actual household, the others were the hotel and a temporary construction camp. When these two "households" are deleted to make the figures comparable to those from other villages, the average non-Inupiat household size for Wainwright drops to 2.7 persons. When this correction is taken into account, Kaktovik has the largest average non-Inupiat household size with 2.9 persons, and the range of non-Inupiat average household size is reduced from 2.5 to 1.1. (As an informational note, we do not use the U.S. census category of "congregate housing" because the data are derived from the NSB census and they did not use this as a separate category. Their decision was no doubt based on the very few such cases which exist on the North Slope, and especially within the villages. Where we are familiar enough with the village in question to know of such cases we have made modifications in the data.)

*Barrow (Only)*

Average household size for Barrow is 3.9 for Inupiat households, 2.5 for non-Inupiat households, and 3.2 for all households. It is important to note that the overall average household size is midway between the average size of Inupiat and non-Inupiat households because in Barrow non-Inupiat households comprise fully 47% of the households in the community. This is significantly different from the situation in the other villages of the North Slope.

Table 4-NSB

Age of Head of Household* ** ***
For Alaska Natives, Non-Natives, and **All** Groups
North Slope Borough Villages, 1980

| Household Sue | 14-a | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | non-Native | Total | Native | non-Native | Total | Native | non-Native | Total | Native | non-Native | Total | Native | non-Native | Total | Native | non-Native | Total |
| 1 person | 21 | 11 | 32 | 32 | 36 | 68 | 8 | 18 | 26 | 17 | 19 | 36 | 18 | 4 | 22 | 96 | 88 | 184 |
| 2 persons | 23 | 10 | 33 | 40 | 47 | 87 | 17 | 15 | 32 | 18 | 19 | 37 | 12 | 0 | 12 | 110 | 91 | 201 |
| 3 persons | 26 | 5 | 31 | 33 | 18 | 51 | 13 | 9 | 22 | 28 | 10 | 38 | 21 | 0 | 21 | 121 | 42 | 163 |
| 4 persons | 5 | 4 | 9 | 62 | 18 | 80 | 26 | 13 | 39 | 26 | 6 | 32 | 2 | 0 | 20 | 139 | 41 | 180 |
| 5 persons | 1 | 2 | 3 | 29 | 7 | 36 | 39 | 6 | 45 | 22 | 3 | 25 | 9 | 0 | 9 | 100 | 18 | 118 |
| 6 persons | 0 | 0 | 0 | 10 | 3 | 13 | 24 | 3 | 27 | 34 | 0 | 34 | 4 | 0 | 4 | 72 | 6 | 78 |
| 7 persons | 0 | 1 | 1 | 5 | 0 | 5 | 17 | 1 | 18 | 30 | 0 | 30 | 7 | 0 | 7 | 59 | 2 | 61 |
| 8 persons | 1 | 0 | 1 | 1 | 0 | 1 | 6 | 1 | 7 | 15 | 0 | 15 | 2 | 0 | 2 | 2 | 5 | 1 | 26 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 11 | 1 | 12 | 1 | 0 | 1 | 14 | 1 | 15 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 8 | 0 | 8 | 2 | 0 | 2 | 12 | 0 | 12 |
| 11 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 2 | 1 | 0 | 1 | 4 | 0 | 4 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5“ | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 5 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| 14 persons | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 |
| TOTAL | 77 | 33 | 110 | 212 | 130 | 342 | 156 | 66 | 222 | 218 | 58 | 276 | 97 | 4 | 101 | 760 | 291 | 1,051 |

• For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household,
•- Figures exclude 64 heads of household (27 Alaska Natives and 37 non-Natives) for whom no age information was obtained.
•** Excludes three occupied units without permanent residents and one bunkhouse with 27 occupants. Includes 13 units used as group quarters.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **5a-NSB**

Household Size **Compared:**
NSB Region, 7 Villages (excluding Barrow), **and Barrow**
1988

| No. persons | NSB Region Inupiat | NSB Region Non-Inupiat | NSB Region Total | NSB Region % Total | 7 Villages (excluding Barrow) Inupiat | 7 Villages (excluding Barrow) Non-Inupiat | 7 Villages (excluding Barrow) Total | 7 Villages (excluding Barrow) % Total | Barrow Inupiat | Barrow Non-Inupiat | Barrow Total | Barrow % Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 135 | 186 | 321 | 20.3% | 69 | 26 | 95 | 16.0% | 66 | 160 | 226 | 22.9% |
| 2 | 158 | 153 | 311 | 19.7% | 78 | 33 | 111 | 18.7% | 80 | 120 | 200 | 20.2% |
| 3 | 158 | 80 | 238 | 15.1% | 67 | 9 | 76 | 12.8% | 91 | 71 | 162 | 16.4% |
| 4 | 189 | 65 | 254 | 16.1% | 94 | 7 | 101 | 17.0% | 95 | 58 | 153 | 15.5% |
| 5 | 161 | 35 | 1% | 12.4% | 78 | 3 | 81 | 13.7% | 83 | 32 | 115 | 11.6% |
| 6 | 112 | 16 | 128 | 8.1% | 57 | 1 | 58 | 9.8% | 55 | 15 | 70 | 7.1% |
| 7 | 63 | 6 | 69 | 4.4% | 28 | 1 | 29 | 4.9% | 35 | 5 | 40 | 4.096 |
| 8 | 27 | 3 | 30 | 1.9% | 20 | 1 | 21 | 3.5% | 7 | 2 | 9 | 0.9% |
| 9 | 19 | 3 | 22 | 1.4% | 13 | 1 | 14 | 2.4% | 6 | 2 | 8 | 0.8% |
| 10 | 5 | 1 | 6 | 0.4% | 3 | 1 | 4 | 0.7% | 2 | 0 | 2 | 0.2% |
| 11 | 4 | 0 | 4 | 0.3% | 2 | 0 | 2 | 0.3% | 2 | 0 | 2 | 0.2'% |
| 12 | 2 | 0 | 2 | 0.1% | 1 | 0 | 1 | 0.1% | 1 | 0 | 1 | 0.1% |
| TOTAL OCCUPIED HH | 1033 | 548 | 1481 | 100.0% | 510 | 83 | 593 | 100.0% | 523 | 456 | 988 | 100.0% |

Source: NSB Census of Population and Economy, 1989.

Table 5b-NSB

Average Household Size Compared:
NSB Region, 7 Villages (excluding Barrow), and Barrow
1988

| | Inupiat | Non-Inupiat | Total |
|---|---|---|---|
| NSB REGION | 4.0 | 2.5 | 33 |
| 7 VILLAGES | 4.1 | 24 | 3.8 |
| Anaktuvuk Pass | 4.1 | 1.9 | 3.6 |
| Atqasuk | 4.4 | 2.2 | 4.0 |
| Kaktovik | 3.6 | 29 | 3.4 |
| Nuiqsut | 4.1 | 1.8 | 3.9 |
| Point Hope | 4.4 | 23 | 4.1 |
| Point Lay | 3.7 | 2.2 | 3.4 |
| Wainwright | 3.9 | 43 | 3.9 |
| BARROW | 3.9 | 2.5 | 3.2 |

Source Adapted from the NSB Census of Population and Economy

2. Household Income and Spending Information

Figure 7-NSB displays average household income levels for the North Slope villages in 1980. This information is arranged by household size and by ethnicity of head of household. Two patterns are of note. First, the mean income for non-Native households exceeds that of Native households by almost 45%, $38,481 to $26,591 respectively. Second, non-Native households tend to be smaller than Native households. This means that the higher average income is distributed among fewer individuals. Further, based on field observations in the villages, this money is less likely to leave the non-Native households and go to other households in the villages, due to the lack of non-Native household participation in whatever sharing networks may exist.

*NSB Region*

In the region as a whole, Inupiat and non-Inupiat households are distributed by income in quite different ways. For Inupiat households, 28.5% fall in the under-$20,000 range and 29.8% fall in the $20,000 to $40,000 range, with progressively smaller percentages falling in the successively higher income categories (Tables 6a-NSB, 6b-NSB). For non-Inupiat households, the number of households grows with each higher income category. Approximately 6% of non-Inupiat households are in the $20,000 and under income category; over 53% are in the $60,000 and above category. In contrast, only 19% of Inupiat households have an income of $60,000 and above. While only accounting for 35% of the households in the region, non-Inupiat households outnumber Inupiat households in the highest income category by 1.5:1. Fifty-eight percent of Inupiat households have

an income of $40,000 or less. Seventy-eight percent of non-Inupiat households have an income of $40,000 or more.

*Seven NSB Wages (Excluding Barrow)*

For Inupiat households, 32.5% fall in the lowest income range and 38.1% fall into the $20,000 to $40,000 income category, with progressively (and sharply) smaller percentages in each higher income category. For non-Inupiat households, fully 49% fall in the highest income range ($60,000 and above), and the number of households in each successive lower income category drops off dramatically, with less than 9% of non-Inupiat households falling in the under-$20,000 range. Although non-Inupiat households account for only 13.7% of all households in these villages, more non-Inupiat than Inupiat households fall into the highest income range. Less than 7% of Inupiat households fall into the $60,000 or above income category. Seventy-one percent of Inupiat households have an income of $40,000 or less; 76% of all non-Inupiat households have an income of $40,000 or more.

*Barrow (Only)*

When examining the distribution of income across households by ethnicity, it is apparent that Barrow follows a different pattern than the rest of the region. For Inupiat households, there are more households in the lowest income category than the next higher bracket, but from the range $20,000 to $40,000 and up, there are progressively more Inupiat households in each higher income category; over 3170 of Barrow Inupiat households fall into the highest income range. This is an entirely different picture than is seen when examining the seven other NSB villages as a group. In Barrow, like the region as a whole, few non-Inupiat households are found in the lower income ranges and more are found in each successively higher income category. Fewer than 6% of non-Inupiat households in Barrow fall into the under-$20,000 income range while nearly 54% fall in the $60,000 and above range. Unlike the other villages, a majority (54.4%) of Barrow Inupiat households fall in the $40,000 and over income range. Like other villages, however, a much higher percentage of non-Inupiat than Inupiat households fall in this range (77.8%).

*Average Income: NSB Region, the NSB Villages (Excluding Barrow), and Barrow (Only)*

When all village households are examined, there are important differences between Barrow on the one hand and the other villages in the region on the other. Average household income, for the region as a whole, is $52,343. The average household income in Barrow is $61,959. The average household income in the other NSB villages is $36,201, which is 58% of the Barrow figure. One way to account for this difference is the fact that employment on the North Slope is overwhelmingly related to NSB employment either directly or indirectly, and Barrow is the seat of the NSB.

Among the seven villages outside of Barrow, there is a considerable difference ($16,798) in the average household incomes. Kaktovik has the highest average household income among these villages with $47,593 and Wainwright has the lowest with $30,795 (less than 65% of the Kaktovik figure). Kaktovik is an outlier in this range. All six of the other villages fall within $10,500 of each

other (from $30,795 to $41,136). The Kaktovik average income is nearly $6,500 higher than the next highest village. This is likely due in large measure to the fact that in the region as a whole non-Inupiat household income is higher than Inupiat household income and Kaktovik has the highest non-Inupiat population of these seven villages.

### *Proportion of Total Household Income Spent in Wage: NSB Region, the NSB Wages (Excluding Barrow), and Barrow (Only)*

The proportion of income retained in the community, as measured by the proportion. of-total household income spent in the village, varies markedly from village to village. This is an important figure because money earned by persons in the village (normally from employers based outside of the village, most frequently the NSB) and then spent in the village means additional vitality for the village economy in the form of retail sales and employment. It is this money that can, among other things, help support whatever private enterprise exists in the village. For the region as a whole, 53.6% of household income is spent in the village. Among the seven villages excluding Barrow, this average figure is 62.0%. For Barrow (only) this figure is 48.4%. In other words, in the villages outside of Barrow, where average household income is much lower than in Barrow, households spend a higher portion of their income (13.6%) for food, clothing, and other household goods in the village. One reasonable interpretation of this difference is the higher portion of long-term transient (non-Inupiat) residents in Barrow. These households are more likely to bank or invest their earnings outside of the community than are permanent residents.

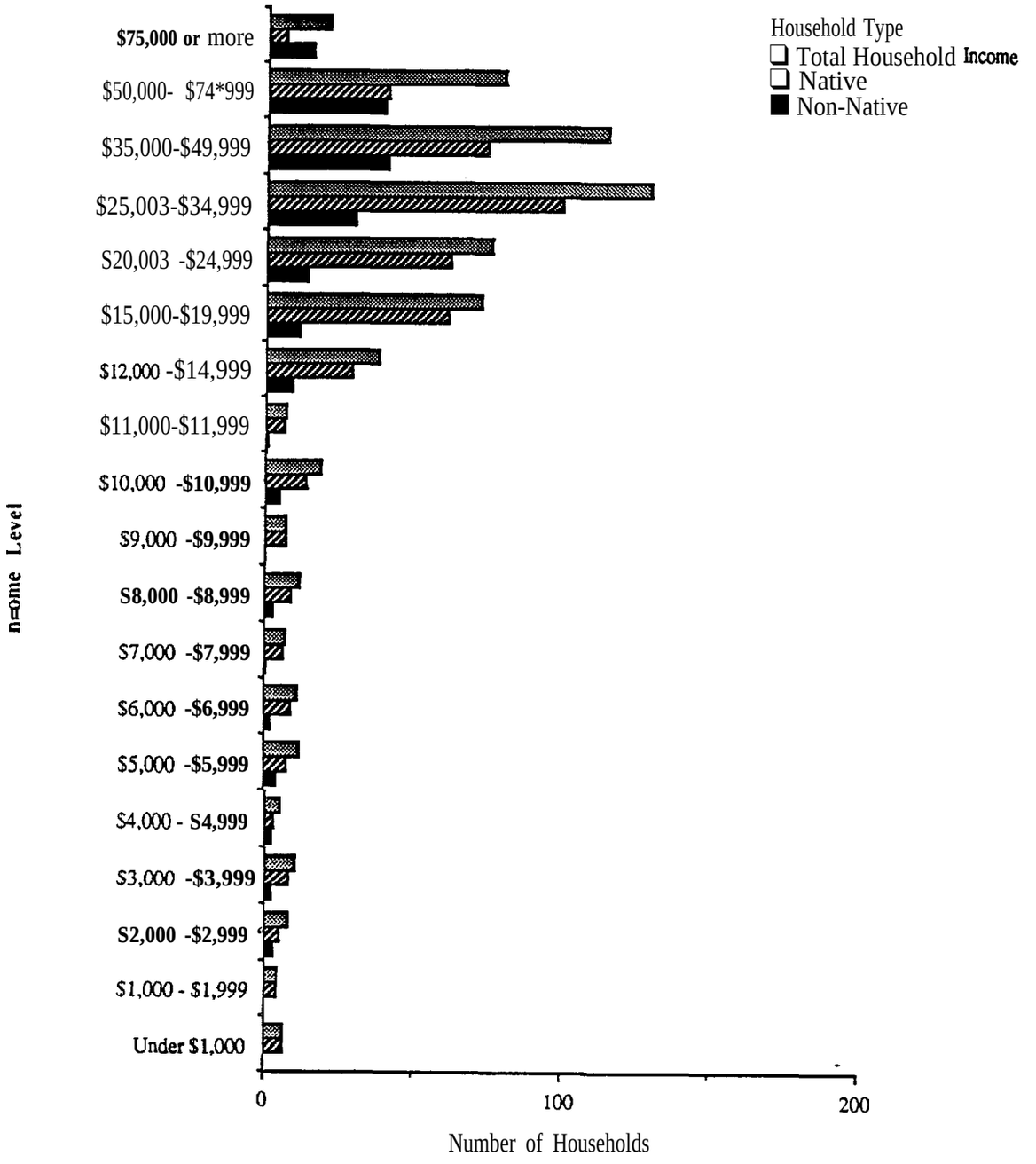
This is not to say that there are not significant differences between the North Slope villages outside of Barrow. In fact, there is a range of 24% between the villages with the highest and the lowest retention rates: in Atqasuk, fully 71.0% of household income is spent within the village; in Point Lay, only 47.0% of household income is spent within the village.

### *Monthly Housing Payment: NSB Region, the NSB Villages (Excluding Barrow), and Barrow (Only)*

The average monthly housing payment (including rent and mortgage) in the region as a whole is $447. For the seven NSB villages excluding Barrow, this figure is $201; for Barrow this figure is $593. In this case, average figures are quite misleading as to the true picture of the cost of housing to the "average" family. In the villages outside of Barrow, there is a sharp difference in housing expenses for Inupiat and non-Inupiat households. Inupiat families overwhelmingly live in NSB-subsidized housing and pay mortgage payments of approximately $100 per month. (The median monthly housing payments in five of the seven villages is $100; in another it is $114.) Non-Inupiat families overwhelmingly live in NSB-owned housing and pay rent that is substantially higher than NSB housing mortgages, to the extent that the housing expenses of the few non-Inupiat families virtually double the overall village average. NSB housing in the outer villages is never sold to non-Inupiat residents; when NSB housing is rented to Inupiat residents these residents typically qualify for NSB housing subsidies and rent payments are a fraction of that charged to non-Inupiat long-term transient residents.

Figure 7-NSB

Average Household Income Distribution*
North Slope Borough Villages, 1980




• Figure-a exclude 471 households (326 Alaska Native and 145 non-Native) for whom no income information was obtained.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey.
Prepared for the North Slope Borough. Public Works Department. Anchorage, September 1980.

Table **6a-NSB**

Household Income and Spending Compared:
NSB Region, 7 Villages (excluding Barrow), and Barrow
1988

| | NSB Region | | | | 7 vii (excluding Barrow) | | | | Barrow | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HH Inc. Category** | **Inupiat** | **Non-Inupiat** | **Total** | **% Total** | **Inupiat** | **Non-Inupiat** | **Total** | **% Total** | **Inupiat** | **Non-Inupiat** | **Total** | **% Total** |
| Under $20,000 | 236 | **28** | 264 | 20.6% | 137 | 6 | 143 | 29.2% | 99 | 22 | 121 | 15.3% |
| $20,000-$40,000 | 247 | 73 | 3241 | 25.0% | 161 | 10 | 171 | 35.0% | 86 | 63 | 149 | 18.9% |
| $40,000-$60,000 | **189** | 110 | 299 | 23.4% | **96** | 18 | 114 | 23.3% | 93 | 92 | 185 | 23.4% |
| $60,000 & Above | 156 | 240 | 3% | 31.0% | 28 | 33 | 61 | 12.5% | **128** | 207 | 335 | 42.4% |
| **Total** | 828 | 451 | 1279 | 100.070 | 422 | 67 | 489 | 100.0% | 406 | 384 | 790 | 100.0% |
| Number of Missing **Observations** | | | 302 | | | | 104 | | | | 198 | |
| **Total** Occupied Households | | | 1581 | | | | 593 | | | | 988 | |
| | | | Median | **Average** | | | Median | **Average** | | | Median | **Average** |
| Household Income | | | $45,195 | $52,343 | | | n/a | $36,201 | | | $52,500 | $61,959 |
| Proportion of Total HH Income Spent in Village (1) | | | 56.2% | 53.6% | | | **n/a** | 62% | | | 50% | 48.4% |
| Monthly Housing Payment (2) | | | $425 | **$447** | | | **n/a** | $201 | | | $614 | $593 |
| Monthly **Heating** Costs | | | $123 | $155 | | | n/a | $249 | | | $60 | $98 |
| Monthly Electricity Costs | | | $52 | $83 | | | **n/a** | **$88** | | | $50 | **$81** |

**Notes:** (1) For food, clothing, and other household goods.
**(2)** Includes rent and **mortgage.**

Source Adapted from the NSB **Census** of Population and Economy, 1989.

Table **6b-NSB**

Household Income and Spending -1988
7 Villages (excluding Barrow)

| | Anaktuvuk Pass | Atqasuk | Kaktovik | Nuiqsut | Point Hope | Point Lay | Wainwright | 7 vii (excl. Barrow) |
|---|---|---|---|---|---|---|---|---|
| HH Income | $32,500 | $35,057 ‘ $47,593 | | $41,136 | $36,705 | $33,603 | $30,795 | $36,201 |
| Proportion of Total HH Income Spent in Village | 58.0% | 71.0% | 62.0% | 53.4% | 66.0% | 47.0% | 68.0% | 62.0% |
| Monthly Housing Payment (1) | $187 | $185 | $227 | $183 | $212 | $346 | $159 | $201 |
| Monthly Heating Costs | $198 | $307 | $292 | $215 | $252 | $230 | $262 | $249 |
| Monthly Electricity costs | $ 9 8 | $107 | $75 | $114 | $% | $44 | $69 | $88 |

Notes: (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source Adapted from, the NSB Census of Population and Economy, 1989.

The housing situation in Barrow is significantly different from that found in the outer villages. In the seven NSB villages excluding Barrow, the NSB has constructed enough houses that demand is nearly if not completely filled for both housing for purchase by resident Inupiat families and rental housing for NSB non-Inupiat employees. In some of the villages, these NSB-built homes are nearly the only types of housing available in the community. In Barrow there is both a shortage of NSB-built houses and more housing options available due to the history of construction in the community. Barrow housing more closely approximates a supply and demand type of housing market, and the cost of housing is, on the average, higher than in the other villages. It should be recalled that average household income is significantly higher in Barrow than in the other communities as well. It is the case, however, that Barrow residents still spend a higher percentage of their income on housing: when figured on an annual basis, 11.5% of Barrow household income goes toward housing payments; an average 6.7% of household income is spent on housing payments in the other seven NSB villages.

Within the seven villages outside of Barrow, there is a $159 range in the average monthly housing payment. Anaktuvuk Pass has the lowest average monthly housing payment at $187; Point Lay has the highest at $346, which is 1.8 times the Anaktuvuk Pass figure. The highest of the village averages is still only 58% of the Barrow average.

***Monthly Heating Costs: NSB Region, the NSB Villages (Excluding Barrow), and Barrow (Only)***

Monthly heating costs for the region as a whole are $155. For the seven villages outside of Barrow, this figure is $249; for Barrow the figure is $98. Although the cost in the seven outer villages is a good deal higher than the Barrow figure (254% higher), it is important to note that this is still a subsidized figure well below what the market cost of heating in the villages would be. Nearly all homes heat with diesel fuel, and this is supplied to the villages by the NSB. The NSB buys fuel in bulk and pays the cost of shipping the fuel to the villages. The fuel is stored in the villages in tank farms built by the NSB. In each village, the local Native corporation acts a fuel distributor. The understanding between the NSB and the local corporations is that the corporation will sell fuel to residential customers at a price that will cover the cost and overhead associated with fuel delivery, and it is up to the local corporation to set this price. In other words, the residents of the village do not pay for either the fuel or the cost of getting the fuel to the village, they pay only for the cost of distributing the fuel once it is in the storage tanks in the village. While the corporations are supposed to sell this fuel only to residential customers, there are known cases where this fuel was sold to contractors operating in the villages. In these cases, the local corporation inflated the price of the fuel and earned extra income for the corporation while providing a convenient service for the contractor, and as long as the corporation does not abuse this arrangement the NSB chooses not to create difficulties over it.

Within the seven NSB villages excluding Barrow, there is a range of $109 between the highest and lowest average heating payments. Atqasuk has the highest average with $307 per month; Anaktuvuk Pass has the lowest with $198. While these costs are low on an absolute scale, given the arctic environment and the costs of transportation, the lowest of these is more than twice as high as Barrow, and the range between the lowest and highest is greater than the cost in Barrow.

The fact that Barrow residents only pay $1,176 per year per household for heating so far north of the Arctic Circle is attributable to the gas fields near the community. The low cost of heating in Barrow provided the political impetus for the fuel subsidization program to the villages. The NSB government created the free diesel program in order to make living expenses more equitable between Barrow and the other North Slope villages.

***Monthly Electricity Costs: NSB Region, the NSB Villages (Excluding Barrow), and Barrow (Only)***

Monthly electricity costs in the region do not vary nearly as much as heating costs. For the region as a whole, households spend an average of $83 per month. For Barrow, this figure is $81; for the seven villages exclusive of Barrow the figure is $88. Within the seven villages, there is a range of $70 in monthly heating costs. Point Lay households, on the average, pay the least for electricity ($44 per month); Nuiqsut households pay the most ($114 per month).

## D. Population and Education

Information on educational attainment in the North Slope region is found in Tables 7-NSB and 8-NSB. The first of these displays educational attainment for Inupiat residents of the region, the second for non-Inupiat residents. Non-Inupiat residents display much higher levels of attainment than do Inupiat residents, however, it must be borne in mind that the vast majority of non-Inupiat who move to the North Slope do so for job opportunities that require some degree of formal education or training. One circumstance that has changed in recent years is that education is available in the villages through high school and beyond. How this will change educational attainment patterns over the long run remains to be seen. Beyond educational attainment, the availability of education in the villages has influenced population dynamics in a number of other ways. It has allowed the high school-aged population cohort to remain in the village. Although there are no firm data to quantify the fact, a number of residents in the villages detailed how following education outside of the community, a significant number of individuals delay their return to the community, for several months to several years, as a result of opportunities and exposure gained while on the "outside." There is no information what percentage of these individuals do eventually return to their village of origin, as we were only able to talk to those who had returned, and they would not venture a guess. No one keeps track of this statistic, although the NSBSD is beginning to take an interest in doing so.

### 1. Inupiat Residents Only

***College***

On the regional level, 1.6% of the Inupiat population has completed college, and 4.7% have attended some college. There is a sharp difference between Inupiat residents of Barrow and the villages outside of Barrow in level of college experience. For the seven NSB villages outside of Barrow, 0.5% of the Inupiat residents have completed college and 2.7% of the Inupiat residents have some college education. For Barrow, 2.6% of the Inupiat residents have completed college; 6.8% have some college.

There are pronounced differences for college experience among age groups, and few Inupiat in the oldest age groups have attended college. For the region as a whole, only three Inupiat residents age 60 or older have completed college, which represents 1.3% of this population segment. All of these individuals live in Barrow. If one adds the individuals 60 and over who have some college, a total of six individuals in the region have some exposure to, or have completed college. Five of these six live in Barrow.

### *Vocational/Technical School*

For the region as a whole, 0.8% of the Inupiat population has completed vocational or technical school. For the seven NSB villages exclusive-of Barrow, this figure is 0.6%; for Barrow it is 1.1 %. Stated another way, nearly three-quarters of all Inupiat vocational or technical school graduates on the North Slope are residents of Barrow.

### *High School or GED*

For the region as a whole, 24.5% of Inupiat residents have a high school diploma or a GED as their highest level of education attained. For the seven NSB villages excluding Barrow, this figure is 25.990; for Barrow itself this figure is 23.0%. This does not imply that the non-Barrow population is more highly educated overall; this proportion is higher for the villages because it represents the highest level achieved. To look at overall achievement another way, if one sums the residents who have finished high school or have a GED with vocational or technical school graduates and with residents who have college experience, in the region as a whole 31.6% of Inupiat residents have a high school/GED education or more. In the seven NSB villages outside of Barrow this figure is 29.7%; for Barrow it is 33.6%. If one looks at the figures for individuals with more than a high school education (college experience or vocational/technical graduates), 7. 1% of the Inupiat residents of the region fall into this category, For the seven NSB villages excluding Barrow, this figure is 3.8%; for Barrow itself it is 10.6%.

### *Education and Controlling for Age*

When examining highest level of education attained as a function of proportion of population for high school and above, it is more meaningful to control for age rather than examining the population as a whole. Excluding individuals under the age of 26, one is left with a population segment where individuals are old enough to have had time to complete high school and higher education programs, should they care to do so (the next younger census age grouping is 18-25 years, and so would include individuals still in high school). For the region as a whole, there are 1,573 Inupiat residents age 26 or over in the 1988 census database for whom there is educational information; this figure is 803 for the seven NSB villages exclusive of Barrow and 770 for Barrow itself.

In the region as a whole, 3.4% of Inupiat residents, age 26 and above, have completed college and/or have some education beyond that mark. For the seven NSB villages exclusive of Barrow,

this figure is 1.1%; for Barrow it is 5.7%, a very large difference indeed. In this same age group, 8.8% of the **Inupiat** residents of the region have had some college. For the seven NSB villages exclusive of Barrow this figure is 5.0%; for Barrow it is 12.7%. Vocational or technical school graduates are not numerous, but again Barrow residents far outdistance the residents of the other villages in their completion rates: 1.5% of the **Inupiat** residents of the region, age 26 or older, have completed **vocational/technical training;** this figure is 1.l% for the seven NSB villages outside of Barrow and 1.9% for the residents of Barrow.

Again, for the age category of age 26 and above, 39.2% of the **Inupiat** residents of the region have completion of high school or GED as their highest level of educational attainment. For the seven NSB villages exclusive of Barrow, this figure is 42.1%; for Barrow itself the figure is 36.1%. **Forty-**two percent of **Inupiat** residents, age 26 and above, of the region as a whole did not complete high school. For the seven NSB villages outside of Barrow this figure is 44.8%; for Barrow it is 38.4%.

If one groups high **school/GED** completion with higher education, 52.9% of **Inupiat** residents age 26 or older in the region. as. a whole have completed high **school/GED** or gone on to higher education. For the seven NSB villages outside of Barrow, this figure is 49.3%; for Barrow itself it is **56.4%.**

If one separates out higher education by itself (combining vocational or technical school graduation with college attendance or completion) for **Inupiat** residents, the difference in level **of** educational achievement between the residents of Barrow and the seven other villages is even more pronounced. For the region as ‘a whole, 13.7% of **Inupiat** residents age 26 and older have some form of higher education. For the seven NSB villages exclusive of Barrow, this figure is 7.2%; for Barrow it is 20.3%. In other words, of the 215 **Inupiat** residents of the North Slope who (according to the NSB 1988 census) have some form of higher education, 157 (73%) live in the single community of Barrow. This is attributable, to a very large degree if not entirely, to the fact that Barrow is the seat of the NSB government. The NSB government, directly and indirectly, provides the vast majority of employment in the region, and its central bureaucracy and various departments (also centered in Barrow) account for nearly all of the upper administrative (and other) positions in the region presently filled by **Inupiat** that require some form of higher education.

2. **Non-Inupiat** Residents **Only**

College

For the region as a whole, 28.3% of the **non-Inupiat** residents of the North Slope have completed college and an additional **18.5%** have some college experience. For **non-Inupiat** residents of the seven NSB villages excluding Barrow, these figures are 31.6 and 13.2% respectively, for Barrow they are 27.6 and 19.6%. In a reversal of the pattern seen among **Inupiat** residents of the North Slope, the **non-Inupiat** segment of the population of the outer villages has more formal education than the **non-Inupiat** population segment of Barrow. This is attributable to the fact that in the outer villages, **non-Inupiat** employment is strongly biased toward professional positions; in Barrow there is a much wider range of employment available to **non-Inupiat** residents in both the public and private sectors.

### *Vocational/Technical School*

For the region as a whole, 2.2% of the non-Inupiat population are vocational or technical school graduates. For the seven NSB villages exclusive of Barrow this figure is 2.0%; for Barrow it is 2.3%. When the absolute numbers are considered, 27 of the 32 non-Inupiat vocational/technical' school graduates living on the North Slope reside in Barrow. This is consistent with the fact that Barrow has a more diverse employment market than the outer villages, offering non-Inupiat other than professional employment opportunities.

### *High School or GED*

For the region as a whole, 19.6% of non-Inupiat residents list completion of high school or GED as their highest level of educational achievement. For the seven NSB villages outside of Barrow, this figure is 20.0%; for Barrow itself, 19.6%.

For the region as a whole, 4.0% of non-Inupiat residents report that they did not finish high school. This compares with 3.6% of non-Inupiat individuals in the outer villages and 4.1% in Barrow itself.

If one examines the percentages of non-Inupiat residents who have a high school diploma/GED or more formal education, this figure is 68.6% for the region as a whole. For the seven NSB villages exclusive of Barrow, it is 68.0%; for Barrow, it is 69.0%.

### *Education and Controlling for Age*

Excluding individuals who are under 26 years of age, there are 919 non-Inupiat residents of the North Slope for whom educational data are available. For the seven NSB villages exclusive of Barrow, this figure is 170. For Barrow itself it is 749.

Considering only those persons 26 years of age and older, for the region as a whole 42.8% of non-Inupiat residents are college graduates, and 23.4% have at least some college. For the seven NSB villages exclusive of Barrow, 46.5% are college graduates and 15.3% have some college. For Barrow itself, these figures are 41.9 and 25.2% respectively.

In the region as a whole, only 2.8% of non-Inupiat residents age 26 and older are graduates of vocational/technical schools. For the seven NSB villages outside of Barrow, this figure is 2.9%. For Barrow, it is 2.8%.

For the region as a whole, 24.7% of non-Inupiat residents age 26 and over list a high school diploma or GED as their highest level of education attained. For the seven NSB villages outside of Barrow, this figure is 25.9%; for Barrow it is 24.4%. Only 4.5% of non-Inupiat residents age 26 or over in the region as a whole did not finish high school. For the seven NSB villages outside of Barrow this figure is 4. 1%. For Barrow, it is 4.5%.

Table **7-NSB**

Highest Level of Education Attained by Age Group
**Inupiat** Residents Compared
NSB Region, **7 Villages** (excluding Barrow), and Barrow -1988

NSB Region

| | College+ | Some College | Voc. Tech Grad | Hi. Sch or GED | Not Finish High Sch | Still in School | Not in Sch. Yet | Not Ascertained | Total |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | o | o | 0 | o | 0 | 6s | 398 | 16 | 482 |
| 4-8 | 0 | 0 | 0 . | o | 0 | 527 | 30 | 2 | 559 |
| 9-15 | 0 | 0 | 0 | 0 | 7 | 456 | 1 | 1 | 456 |
| 16-17 | 0 | 0 | 0 | 3 | 20 | 91 | 0 | 1 | 115 |
| 18-25 | 5 | 3s | 7 | 293 | 150 | 32 | 3 | 4 | 532 |
| 26-39 | 31 | 87 | 9 | 459 | 192 | 1 | 2 | 15 | 7% |
| 40-59 | 19 | 48 | 15 | 149 | 280 | 0 | 3 | 29 | 543 |
| 60-65 | 0 | 2 | 0 | 3 | 72 | 0 | 1 | 7 | 85 |
| 66+ | 3 | 1 | 0 | 5 | 112 | 0 | 4 | 24 | 149 |
| Total | 5s | 176 | 31 | 912 | 833 | 1175 | 442 | 99 | 3726 |
| % Total | 1.6% | 4.7% | Oil% | 245% | 224% | 315% | 119% | 27% | 00.0% |

Number of Missing Observations 243
Total Population (Inupiat) 3%9

7 Villages (excluding Barrow)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 0 | 0 | o | o | o | 35 | 176 | 15 | 226 |
| 4-8 | 0 | 0 | 0 | 0 | 0 | 290 | 11 | 2 | 303 |
| 9-15 | 0 | 0 | 0 | 0 | 3 | 245 | 0 | 1 | 249 |
| 16-17 | 0 | 0 | 0 | 2 | 5 | 44 | 0 | 1 | 52 |
| 18-25 | 1 | 12 | 2 | 156 | 86 | 21 | 0 | 3 | 281 |
| 26-39 | 4 | 26 | 3 | 248 | 100 | 0 | 0 | 9 | 390 |
| 40-59 | 5 | 13 | 6 | 85 | 174 | 0 | 0 | 18 | 301 |
| 60-65 | 0 | 0 | 0 | 2 | 32 | 0 | 0 | 6 | 40 |
| 66+ | o | 1 | 0 | 3 | 54 | 0 | 0 | 14 | 72 |
| Total | 10 | 52 | 11 | 4% | 454 | 635 | 185 | 69 | 1914 |
| % Total | 05% | 2.7% | 0.6% | 25.9% | 23.7% | 33.2% | 9.s% | 3.6% | 100.0% |

Number of Miaaing Observations 106
Total Population (Inupiat) 2020

Barrow

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 0 | 0 | o | o | o | 33 | 222 | 1 | 256 |
| 4-8 | 0 | 0 | 0 | 0 | 0 | 237 | 19 | 0 | 256 |
| 9-15 | 0 | 0 | 0 | 0 | 4 | 211 | 1 | 0 | 216 |
| 16-17 | 0 | 0 | 0 | 1 | 15 | 47 | 0 | 0 | 63 |
| 18-25 | 4 | 26 | 5 | 137 | 64 | 11 | 3 | 1 | 251 |
| 26-39 | 27 | 61 | 6 | 211 | 92 | 1 . | 2 | 6 | 406 |
| 40-59 | 14 | 35 | 9 | 64 | 106 | 0 | 3 | 11 | 242 |
| 60-65 | 0 | 2 | 0 | 1 | 40 | 0 | 1 | 1 | 45 |
| 66+ | 3 | 1 | 0 | 2 | 58 | 0 | 4 | 10 | 77 |
| Total | 48 | 124 | 20 | 416 | 379 | 540 | 255 | 30 | 1812 |
| % Total | 2.6% | 6.8% | 1.1% | 23.0% | 20.9% | 29.s% | 14.1% | 1.7% | 100.0% |

Number of Missing Observations 137
Total Population (Inupiat) 1949

Source: Adapted from the NSB Census of Population and Economy, 1989.

Table **8-NSB**

Highest Level of Education Attained by Age Group
**Non-Inupiat** Residents **Compared:**
NSB Region, 7 **Villages** (excluding Barrow), and Barrow -1988

**NSB** Region

| | College+ | Some College | Voc Tech Grad | Hi. Sch or GED | Not Finish High Sch | Still in School | Not in Sch. Yet | Not Ascertained | Total |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 0 | 0 | o | 0 | 0 | 17 | 88 | 7 | 112 |
| 4-8 | 0 | 0 | 0 | 0 | 0 | 103 | 6 | 2 | 111 |
| 9-15 | 0 | 0 | 0 | 0 | 5 | 117 | 4 | 2 | 128 |
| 16-17 | 0 | 1 | 0 | 1 | 7 | 22 | 0 | 1 | 32 |
| 18-25 | 13 | 49 | 6 | 54 | 5 | 5 | 1 | 1 | 134 |
| 26-39 | 187 | 143 | 16 | 138 | 18 | 1 | 1 | 11 | 515 |
| 40-59 | 195 | 67 | 10 | 78 | 16 | 0 | 1 | 3 | 370 |
| 60-65 | 9 | 4 | 0 | 9 | 3 | 0 | 0 | 0 | 25 |
| 66+ | 2 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 9 |
| **Total** | 406" | 265 | 32 | 282 | 58 | 265 | 101 | 27 | 1436 |
| **% Total** | 28.3% | 18.5% | 2.2% | 19.6% | 4.0% | 18.5% | 7.0% | 1.9% | 100.0% |

Number of Miaaing Observations 93
Total Population (Non-Inupiat) 1529

7 **Villages (excluding Barrow)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | 0 | 0 | o | o | 0 | 2 | 10 | 1 | 13 |
| 4-8 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 29 |
| 9-15 | 0 | 0 | 0 | 0 | 1 | 20 | 0 | 0 | 21 |
| 16-17 | 0 | 0 | 0 | o | 1 | 2 | 0 | 0 | 3 |
| 18-25 | 0 | 7 | 0 | 6 | 0 | 0 | 0 | 1 | 14 |
| 26-39 | 26 | 17 | 2 | 33 | 5 | 0 | 0 | 7 | 90 |
| 40-59 | 49 | 8 | 3 | 10 | 1 | 0 | 0 | 2 | 73 |
| 6045 | 4 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 7 |
| 66+ | o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 79 | 33 | s | 50 | 9 | 53 | 10 | 11 | 250 |
| % **Total** | 31.6% | 13.2% | 2.0% | 20.0% | 3.6% | 21.2% | 4.0% | 4.4% | 100.0% |

Number of Miaaing Observations 5
Total Population (Non-Inupiat) 255

**Barrow**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Under 4 | o | 0 | 0 | 0 | 0 | 15 | 78 | 6 | 99 |
| 4-8 | 0 | 0 | 0 | 0 | 0 | 74 | 6 | 2 | 82 |
| 9-15 | 0 | 0 | 0 | 0 | 4 | 97 | 4 | 2 | 107 |
| 16-17 | 0 | 1 | 0 | 1 | 6 | 20 | 0 | 1 | 29 |
| 18-25 | 13 | 42 | 6 | 48 | 5 | 5 | 1 | 0 | 120 |
| 26-39 | 161 | 126 | 14 | 105 | 13 | 1 | 1 | 4 | 425 |
| W-59 | 146 | 59 | 7 | 68 | 15 | 0 | 1 | 1 | 297 |
| 60-65 | 5 | 3 | 0 | 8 | 2 | 0 | 0 | 0 | 18 |
| 66+ | 2 | 1 | 0 | 2 | 4 | 0 | 0 | 0 | 9 |
| **Total** | 327 | 232 | 27 | 232 | 49 | 212 | 91 | 16 | 1186 |
| % **Total** | 27.6% | 19.6% | 2.3% | 19.6% | 4.1% | 17.9% | 7.7% | 13% | 100.0% |

Number of Missing Observation 88
Total Population (Non-Inupiat) 1274

Source Adapted from the NSB Census of Population and Economy, 1989.

Combining the various levels of educational achievement, 93.7% of non-Inupiat residents, age 26 or older, of the North Slope region have completed high school/GED and/or have gone on to post-secondary education. For the villages outside of Barrow, this figure is 90.6%; for Barrow itself the figure is 94.3%. For the region as a whole, 69.0% of non-Inupiat residents have at least some post-secondary education. For the seven NSB villages outside of Barrow, this figure is 64.7%; for Barrow itself it is 69.970.

E. Marriage Patterns

Table 9-NSB displays marital status by ethnicity for the North Slope Borough in 1988. These data are for individuals aged 16 and above (which is the same lower threshold definition used for labor force calculations). Again, major differences are seen between the Inupiat and non-Inupiat portions of the population. Within the Inupiat portion of the population, 55.9% fall in the not married' category (composed of widowed, divorced, separated, and never married subcategories). Within the non-Inupiat portion of the population, on the other hand, a strong majority of the population (58.3%) is married. For Inupiat, "never married" persons are slightly more numerous than married persons; for non-Inupiat, married persons outnumber "never married" persons by more than two to one. Non-Inupiat individuals, however, are much more likely to be divorced (12.9%) than are Inupiat individuals (4.7%).

**Table** 9-NSB

Marital Status by **Ethnicity** -1988
NSB **Region**

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILI AGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| **NOW MARRIED** | 454 | 519 | 973 | 364260 | | 624 | 1597 | 48.7% |
| WIDOWED | 31 | 85 | 116 | 1 | 8 | 9 | 125 | 3.8% |
| DIVORCED | " 49 | 56 | 105 | 73 | 66 | 138 | 243 | 7.4% |
| SEPARATED | 17 | 21 | 36 | 12 | 7 | 19 | 57 | 1.7% |
| NEVER MARRIED | 579 | 396 | 975 | 177 | 104 | 281 | 1256 | 38.3% |
| TOTAL | 1130 | 1077 | 2207 | 627 | 444 | 1071 | 327s | 100.070 |
| % | 34.5% | 32.9% | 67.3% | 19.1% | 13.5% | 32.7?'0 | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | 34 | |
| TOTAL POPULATION (sge 16+) | | | | | | | 3312 | |

**Note: Figures include** persons age 16 and shove.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989

SECTION II: ECONOMY

The availability of jobs in the village as a result of the effects of the formation of the NSB, the passage of ANCSA, and the development of oil on the North Slope has significantly influenced population dynamics on the North Slope. Some of these changes are highlighted in the following section on the regional economy.

A. Historical Overview

The precontact economic history of people on the North Slope is known only in general, and is open to a good deal of speculation. Certainly there is no detailed consensus, and local differences which existed. before contact with non-Natives cannot be discussed because of lack of data (Oswalt 1%7; Dumas 1984). A review of the available information has been developed for the Point Lay Case Study (in draft), and the interested reader is referred there (and to its sources) for more information. The focus of this report is primarily on the development of, and similarities and differences between, the communities of the North Slope in the historical period.

After contact, it is possible to discuss general processes and site-specific differences. The regional economy which resulted, of which each village was and is only a component, combined traditional patterns with an increasing dependence on the availability of cash. The postcontact factors that affected local population dynamics are also ones that fundamentally influenced the local economy. These are whaling, fur trading, reindeer herding, oil development, transfer payments, ANCSA, and the development of the NSB. Each figured predominately in a relatively short period of time, but these periods overlap somewhat. The whalers were the first non-Natives who had a significant effect on the Inupiat, in the 1880s (explorers and missionaries had contacted the Inupiat somewhat earlier). Charles Brewer founded Cape Smythe Whaling and Trading Company in Barrow in 1886. John B. Driggs established the school in Point Hope in 1890. The school was established in Barrow in the same year as well. Whaling ceased as an economically viable activity in the early 1900s. Reindeer herding began around the turn of the century, but did not develop as an industry until later, and after herds increased to a substantial level in teens and twenties, declined on the North Slope in the 1930s, and disappeared in the early 1940s. Fur trading overlapped the decline of whaling and the rise of reindeer herding (perhaps coexisting for a time with the latter) in the 1920s.

The 1940s and 1950s were a period when there were few jobs in most of the North Slope communities and many of the smaller and more marginal locations (Point Lay, the Meade River area, the Colville River area, Anaktuvuk Pass, and Kaktovik, to a degree) experienced a period of depopulation. The construction of the DEW Line in the 1950s helped stabilize Wainwright, Barrow, and Kaktovik, and provided important employment opportunities for Point Hope residents. Point Lay seems to have benefited in the short term from the DEW Line, but vanished as a community around 1958, until it was refounded as part of the NSB in 1972. Exploration for oil also provided jobs for local Natives and stabilized populations in the coastal communities. Atqasuk remained as an area used only seasonally. Anaktuvuk Pass was the focus of a small number of families, but was apparently increasing in size as a community even before the formation of the NSB. Clearly, without the formation of the NSB, Anaktuvuk Pass would not be nearly as large as it is today.

Oil development, ANCSA, the formation "of the NSB, and the establishment of various transfer payment programs have shaped the present political economy of the North Slope. Most of these will be developed at least in brief form below.

## 1. Sociocultural Change in the Latter Transitional Era (1880-1927)

The first significant modem ethnography of a north Alaska Native group was produced more than a century after contact. Given the scarcity of relevant documentary ethnohistorical evidence, it is not surprising that there is substantial disagreement about the nature and timing of acculturative change among the Eskimo. Some authors argue that despite whatever persistent traits in Eskimo culture may seem to both predate and postdate contact, few features of postcontact Eskimo society were unaffected by the contact experience. Other authors, taking a far more conservativist standpoint, argue that Eskimo culture remained fundamentally unaffected by the initial contact experience, and only after much more extensive contact, the spread of epidemic disease, and the increased administrative subjugation of Natives to non-Native governmental and religious authority, was there any significant change in Eskimo culture. Other authors argue that the core of Eskimo society remained fundamentally unaffected during most of the postcontact period, and that only recently have any changes been occurring. It can be very difficult to gauge just what the significant processes of change were, when they occurred, and whether changes in one aspect or area were indicative of other concurrent significant changes. Different aspects of culture are affected differently during the course of the acculturational process. Much change is at the microlevel, or is long-term, or is oscillatory, or takes place without being documented. Thankfully, we only have to be aware of this problem, and not discuss it at length, as the specific charge of this project was to examine institutions, rather than other aspects of culture or behavior.

It must be reemphasized that whatever period we might choose to term "traditional" is itself a period of dynamic cultural change and alteration, no matter what dates that period is supposed to have. The cultural practices that might ***seem*** to exist in the timeless ethnographic present actually were in a complex context of change and reformulation. In that sense, it could be said that we do not have any knowledge about Eskimo culture from any period when it was not undergoing some sort of reformulation.

Without question, the period of first contact in the 1850s introduced the north Alaska Eskimo to the technology of Euro-American whaling. This technology was significantly more effective at killing whales and other sea mammals than aboriginal Eskimo technology, and after an initial period of resistance, was widely adopted. Since Eskimo economy was firmly based on the exploitation of resources, a change in resource exploitation abilities, unless equably distributed throughout the Eskimo area, would have given some individuals or groups an improved success rate while reducing the importance of other groups. It is this potentiai for imbalance success rates and the implications such an imbalance has for the preexistent aboriginal system of mutual dependencies that may have been the most significant feature of early acculturative change among the Eskimo. Chance (1966:2-3) says:

> As explorers, whalers, and other whites moved north, the Eskimo world changed dramatically. The introduction of the rifle, iron and steel implements, drugs and medicines, and other items of Western manufacture resolved many of the earlier technological problems of the Eskimo; this in turn, stimulated changes in other spheres of their life. Although the use of the rifle made hunting easier, it reduced the need for sharing and cooperation among kin groups, lessened the prestige of the hunter, and brought into question the validity of the traditional religion by raising doubts about the importance of certain rituals and taboos associated with hunting. The questioning of religion affected the traditional means of social control in that the threat of supernatural punishment for deviation from Eskimo practices lost much of its force.

Some scholars take issue with Chance, while others mostly support his position. We have no interest in propping up Chance's interpretation, nor in writing revisionary ethnography. Chance's interpretation does find support in the similar responses to contact and to the technological and economic changes of the post-contact situation that have been widely reported throughout the rest of Native North America (Wolf 1982, Washburn 1988, Cronon and White 1988, Yerbury 1986, Walens n.d.). It also cannot be denied that with the introduction of new technology, begun at contact but continuing today with snow machine and jet-unit outboard motors, that the individual can do more for himself. Even whaling crews have decreased in size as technology has reduced the absolute number of people to man a boat to three and as the time pressures of alternative activities has increased. At the same time that the absolute need for cooperation in subsistence pursuits has decreased, we would argue that the ideological need remains the same or perhaps has assumed even more importance. Subsistence is the core of Inupiat identity, and in a fundamental way governs how Inupiat interact not only with the natural world, but also how Inupiat interact with each other. The study of "value systems" is notoriously difficult, while a focus on behavior is often quite sterile. Many of the difficulties of the topic of subsistence, and especially changes in the pattern of subsistence, would seem to be a result of the muddling of these two different approaches.

Chance (1966:62-63) argues that although dramatic social changes occurred in the early 1900s, traditional patterns of leadership began to reemerge in the period between 1930-45, when economic necessity required a partial return to a primary subsistence orientation. Chance further maintains (1966, 1984) that most sociopolitical (institutional) groups in contemporary Eskimo society are instigated and organized by non-Natives. Throughout his 1966 book, Chance delineates a pattern, starting at the beginning of the twentieth century, of decreasing group interdependency and increasing individualism, isolation, and alienation, which he ties to changes in the economic situation the Inupiat faced. He feels that even subtle and seemingly temporary historical events, such as the brief period during the 1920s and 1930s when fox trapping altered winter patterns of family interaction, have had lasting psychological effects on Inupiat social patterns.

In contrast to 'Chance, Hughes (1971:399) feels that technological innovations may not have dramatically affected labor and social patterns at the start of the contact period. Seals were still hunted individually, and not communally as in central Canada; nor did the use of the rifle lessen

the importance for Eskimo of the interior of hunting caribou in a communal fashion. Eventually, of course, caribou hunting did become a more individual activity, and cooperative caribou drives lessened in frequency and centrality.

VanStone (1984:153) emphasizes the difference between the situation of the southwestern Alaskan Natives, who by the middle of the nineteenth century had been "brought within the orbit of various coastal and interior trading posts," and the Natives of northwestern Alaska, where despite the several coastal explorations, the interior areas were to remain unexplored until the beginning of the twentieth century. VanStone also feels that even the extensive and well-outfitted search for the Franklin expedition (184S-1852) affected the North Alaskan Eskimo population only slightly (1977:153).

Even before the advent of direct and extended contact with whites in the mid-nineteenth century, the existing north Alaskan Eskimo trade network permitted the widespread diffusion of Euro-American artifacts. This trade was an essential part of the survival of both inland and coastal peoples because it functioned to distribute local foods and manufactures across a wide region and to mitigate the effect of shortages in one or another item. The entire north Alaska area was linked together in a network of trade relations that also connected to the Siberian Eskimo, and to the Bering Sea Eskimo and Aleuts to the south. Although authors disagree on the direct effects of contact on the traditional trade networks, it seems most likely that with the advent of whalers, beginning in 1848, the patterns of precontact trade relations were overturned more or less suddenly. As long as outside goods had been obtainable only intermittently, traditional trade interdependencies would have remained useful. Yet, once there was a dependable annual source of Euro-American goods, coastal Eskimo could obtain goods directly from the whalers, and their trade linkages to the inland Eskimo evaporated. Many inlanders, no longer able to obtain the trade goods they needed from their former partners among the coastal Eskimo, abandoned their territories and resettled along the coast themselves.

At first, the Euro-American whalers arrived annually and left before the formation of the pack ice in the fall. The goods they exchanged in return for meat, whalebone, and furs included such items such as rifles and ammunition, liquor, flour, tobacco, matches, lead, and molasses (VanStone 1984:155). Even though these whalers were present only on a seasonal and intermittent basis, the amount of influence they had on Eskimo society should not be underestimated. Evidence from the northwest coast (Walens, n.d.), where ships' logbooks and sailors' journals have been more fully researched, shows that long before the arrival of missionaries, members of the ships' crews actively promulgated Christian doctrines to the Indians. Furthermore, northwest coast Indians made significant alterations in the political organization of their society in a manner that was in concordance with white political structure, in order that they might better exploit their newfound economic opportunities. The records for whaling in Hudson Bay have been similarly discussed in detail by Ross (1971, 1975, 1979). It would be reasonable to expect that many of his conclusions about the social effects of Euro-American whaling upon the Inuit of the eastern Arctic would probably also hold true in the western Arctic, given the cultural and historical similarities between the two areas.

A significant difference in the amount of contact between whites and Eskimos occurred when steam vessels were introduced into Arctic whaling in the 1880s. These ships, which carried crews of as many as several hundred men, could overwinter in the Arctic and the amount of contact

between whites and Eskimos increased. In 1897, for example, 275 men on an icelocked whaling ship were marooned for the winter in Barrow, where they were housed and fed by the local Native population. 'Whaling and trading stations were set up in several areas and Eskimos worked as deckhands and guides on the ships or were put to work provisioning the whalers, by hunting or making caribou clothing. Eventually some Eskimos set themselves up as whalers, in competition with the Euro-Americans and their Native allies, paying wages to other Eskimos (Chance 1966:14). A season's wages would be enough for a man to buy supplies to last through the winter. It is generally believed that whatever and however serious the effects of the first several decades of contact may have been, the effects of this second portion of contact experience were severely disruptive to Eskimo society. Lawless sailors, whiskey, disease, and depletion of game were significant new problems for the Eskimo peoples (Hughes 1971:396). Burch feels that the effects that accompanied and resulted from this increased contact, especially the virtual elimination of whales and walrus from nearby waters, were so great that the onset of year-round Euro-American presence marks the end of what he calls the "traditional period" of north Alaska Eskimo history (Burch 1981:16, 23). VanStone argues to the contrary (1984:159), saying that the adoption of a mixed subsistence-wage economy was a relatively easy step for the northwestern Alaskan Eskimo to take.

The effect of epidemic diseases was an extremely serious one in the Arctic, as it was elsewhere in North America. Native Americans seem to have had little resistance to disease organisms that were endemic in the Euro-American population. As Cronon and White state (1988:422):

> Wherever Indians encountered Europeans for any extended period of time, disease and depopulation were the eventual results . . . . Mortality rates varied with the specific disease organism, population density, the season of the year, a community's historical immunity, and so forth, but at their worst they could range as high as 80 or 90% . . . . The indirect effects of disease may have been at least as important as direct ones in bringing environmental change to North American Indian habitats. The strain placed on economic subsistence practices, hierarchies of political power, and ritual belief systems in societies drastically reduced must have been quite extraordinary . . . . Villagers were forced to move into new alliances with each other, shuffling the decks of kin networks and political alliances to accommodate their altered circumstances. These changes, like depopulation itself, were bound to have significant effects on the ways Indians used the plants and animals around them.

By the time whaling on the north Alaska coast ended, at the beginning of World War I, its direct and indirect effects had dramatically changed Eskimo cultural patterns. A traditional subsistence lifestyle was no longer possible. The spread of diseases brought about serious depopulation, promoting resettlement of the remaining population to a handful of coastal communities. The introduction of alcohol brought a set of social problems of its own. There were the beginnings of administrative takeover of Native governance by non-Native entities, both governmental and

non-governmental. Moreover, there had been the development of a mixed subsistence and commodity-production market economy that significantly altered the economic principles that directed Eskimo economic choices and alternatives (Hughes 1971 :398). Comparable conditions were manifested among the Eskimo cultures of the eastern Arctic (Ross 1971, 1975, 1979).

On a regional level, the historical and economic processes at work had some general patterning. Contact initiated by whalers, with the accompanying change vectors of disease, alcohol, and other Western goods, tended to concentrate Inupiat population in coastal communities. The increased death rates among coastal (contact) populations would have left these productive regions underpopulated, had not Inupiat from the interior moved to the coast. Interior peoples were motivated to move because of the greater access to both subsistence and Euro-American resources on the coast. "This dynamic essentially depopulated the interior, especially when combined with the effects of disease on interior populations. In any event, Barrow, Point Hope, and Wainwright were the main settlements during this period. Few people lived east of Barrow until Thomas Gordon established a trading post in Kaktovik in 1923, and even after that date the Colville River area had only a few steady inhabitants (the area east of Barrow was, however, used for reindeer herding for a time). The Prudhoe Bay area had a few seasonal users, but no permanent population. Until the mid-1940s and 1950s other parts of the coast between Barrow and Point Hope contained populations, however, who were not drawn into the more settled communities because of other economic opportunities (reindeer, trapping) or the lack of economic opportunities elsewhere. The reindeer herd stationed for a time at Icy Cape and then in the Point Lay region is one example. There were also people who used subsistence sites between Point Hope and Wainwright on a regular, seasonal basis but did not live permanently in those areas. A few people also maintained an "old style" life by living mainly off the land in a nomadic way.

2. Schools in the Latter Transitional Era

One very important step in the process of Eskimo history began during the 1890s, when schools were erected in various North Slope villages. At first, the schools were associated directly with church missions, but later they were administered by the United States government. See Beaver 1984, especially p. 432, for a discussion of the distribution of Protestant missions in Alaska; and Dorais and D'Anglure, 1984 for a discussion of Roman Catholic missions in the Arctic. Those villages that were selected to have schools, notably Point Hope, Wainwright, and Barrow, benefited significantly from that fact, and those that did not obtain schools suffered concomitantly. The presence of a school and its non-Native personnel gave a village status and recognition (both among the Natives themselves and among the non-Natives off-slope), as well as providing a source of goods, subsidies, and wage income. This in large part explains the rise and fall of the Inupiat population at Icy Cape and Point Lay (and the smaller communities in that immediate area) during this time. When schools were open, population rose. When schools closed, or were moved from one community to another (Icy Cape to Point Lay), populations moved as well. Medical and non-medical missionaries arrived in north Alaskan immunities at about the same time, giving an additional institutional basis to village identity. One adjunct of the economic and administrative benefits that accrued to the limited number of villages where schools and missions were founded was that such villages would have presented a more attractive living situation than those villages which did not. Thus, Inupiat from outlying areas would have been induced directly or indirectly to resettle in such magnet villages. Again, comparable processes in reaction to the formation of

schools and missions can be found among the peoples of the northwest coast (Walens n.d.) and elsewhere.

### 3. Economy in the Latter Transition Era

The end of the whaling era required some significant economic adjustments on the part of the Inupiat population, as they desired continued access to Euro-American goods that had been made available through their work for the whalers (whether this work was on the ships, supplying meat, or some other task). The whalers were undeniably responsible for sharp declines in the bowhead whale and walrus populations, and are thought to be the prime cause for the local extinction of muskoxen on the North Slope. The role of non-Natives in the ultimate decline of the caribou population is less certain, as the natural cyclical variations in caribou population are not well understood. In any event, it would have been very difficult for Inupiat to return to a subsistence lifestyle similar to that of his ancestors because of a reduction in the availability of subsistence resources. Fish were probably still abundant and readily available, but big game was for a number of reasons more difficult to obtain. That was, in fact, one of the stated reasons for the introduction of reindeer. Second, the Eskimo had become fairly dependent on Western goods, which could be obtained only in trade (Chance 1966:16-18, 42-43). The loss of the wages and other cash income that the whaling industry had provided forced the Eskimo to seek other sources of cash. This search took several general forms, most notably reindeer herding, fur trapping, and, by the 1930s, subsidies. Cash subsidies, such as pensions, relief aid for dependent children, unemployment compensation and other government subsidies, and wage employment in governmental and other institutional programs, remain an essential source of income even today (Chance 1966:17).

The introduction of reindeer to resolve the problem of the depletion of game was begun by Sheldon Jackson, who in 1882 moved to Alaska to serve both as Presbyterian superintendent of missions and territorial superintendent of education (Beaver 1984455). He was active in fostering missions throughout Alaska. His use of reindeer herds established at missions and mission schools had both a humanitarian and a proselytizing aspect to it, providing food and income for Eskimo entrepreneurs while at the same time requiring them to become more familiar with and even more committed to Christianity. For several decades, this plan was phenomenally successful. The herd at Wainwright expanded from 2,300 to 22,000 between 1918 and 1934. However, within a few years after this there was a sharp decline in the reindeer population throughout the entire region. Chance (1966:15-16) estimates that the 1,250 reindeer that had been imported from Siberia between 1892 and 1902 increased to more than 600,000 by 1932, that by 1940 only 200,000 remained, and by 1950 fewer than 25,000. The herds in Barrow experienced a similar history. The Point Lay herd apparently was dissipated even earlier, as informants say reindeer herding ended in the Point Lay area by 1940. While the reindeer industry did give some Inupiat economic opportunities, it never did seem to provide the large scale economic support that had been hoped for. The decline of the herds and lack of economic success of the enterprise do not appear to have a clear cause. Various reasons have been suggested, including overgrazing, concentration of ownership, non-Native competition in the industry, lack of motivation to live away from villages in order to herd reindeer, and lack of proper marketing. Whatever the cause(s), the reindeer industry was essentially a one (or two) generation affair which temporarily affected settlement and economic patterns.

For a short time from the 1920s onward, fox trapping became important as a source of cash income for north Alaska Eskimo (Chance 1966:16). While there was little technological change involved in fox trapping, the changeover in the emphasis on trapping had some important and persistent social effects. First, traditionally hunting had been a cooperative endeavor, but trapping was a more individualistic activity (Chance 1966:16). Similar patterns are widely documented for the Indians of the Subarctic (Yerbury 1986). Also, fox trapping took place in the winter, and thus seriously affected the pattern of friendly socialization, cooperation, and communality that had dominated the wintertime in traditional times. Once fox trapping became an essential source of cash income, wintertime became a season of loneliness and isolation, with individual families staying in their own winter fox-trapping territories rather than returning to winter communities.

On a pragmatic level, running a trap line requires at least a semi-exclusive use area and thus a dispersed population. This fostered a continued use of areas where there was no permanent population (Colville-Prudhoe area, Anaktuvuk Pass and the mountains, areas between Barrow and Point Hope) so that knowledge of these areas and their resources was maintained. This would prove beneficial in the 1970s when these areas were resettled after the passage of ANCSA and the formation of the NSB.

After 1929, when the price of fox pelts declined, there was some return to traditional subsistence activities. Sea mammal and caribou populations had risen somewhat (Chance 1966:16), at least in part because of the reduced hunting pressure during the period of reindeer herding. Still, there was not a return to prior patterns of socioeconomic existence. Village qalgis (ceremonial houses), which had been viewed critically by missionaries, and the social life and ceremonial activities that had been associated with them, all but disappeared. With the end of the qalgi as a center of interaction, an important force for communality in north Alaska Eskimo society disappeared. The development of inoperative stores changed the status of those particular Eskimo families who could gain control of the stores, while at the same time increasing the interdependency of Natives by reducing the control of non-Natives over the trading process (Chance 1966:16-17). The Inupiat population remained for the most part centered in a limited number of settlements - Point Hope, Wainwright, Point Lay (although this village would vanish in 1958), Barrow, and Kaktovik (although this village was not firmly established until 1951 or so).

4. Consolidation and Dispersal: 1927-1950s

There are numerous sources for this period, but perhaps the most accessible are the village oriented volumes published by the North Slope Borough (Arundale and Schneider 1982, Hoffman et al. 1978, Ivie and Schneider 1978, Jacobson and Wentworth 1982, Neakok et al. 1985, Schneider et al. 1980). For purposes of this report, the significant aspect of this period is that some communities remained as permanent settlements during this period, even gaining population, while other communities and land use areas were essentially abandoned. Point Hope, Wainwright, and Barrow continued as the main settlements, although population Fluctuated. Wainwright in the only one of the three not · to show constant population growth. Point Lay had a relatively complex population history, closely related to the opening and closing of area schools, but essentially reached a population peak in 1939 and then declined until it vanished as a community in 1958. The Anaktuvuk Pass area was essentially abandoned during this period. The Meade River area

was in use and individuals were enumerated by the U.S. Census 'during this period, but this population steadily declined (and was gone by 1970). The Colville River area was also abandoned except for seasonal use. Kaktovik was a center for settlement, but remained quite small. During this period there were few wage employment opportunities and most Inupiat returned to a subsistence resource orientation. Most did so within the context of life in a settled community, however, and so vast areas of the North Slope were only used seasonally. Transfer payment programs were for the first time effectively implemented on the North Slope, but little quantitative information is available on their effects. It is probable that this was one additional factor influencing people to remain in the settled villages.

5. Renewed Economic Activity: 1950s-1970

The same village-specific works cited for the preceding section also provide a good factual base for generalizations about 1950-1970. This period saw the construction of the DEW Line and the real beginning of the exploration for oil on the North Slope. These opportunities greatly increased the chances for Inupiat to earn money and again shifted the economic emphasis. Point Lay was the only settled community to be adversely affected by the DEW Line. Reportedly, the village of Point Lay was so disrupted by alcohol and other aspects of the DEW Line built nearby that by 1958 the entire population (except for one couple employed by the DEW Line) had moved away. The Meade River and Colville River use areas were still not inhabited except perhaps by a family or two, and seasonal use may have declined in this period. Kaktovik was the village benefiting most from this period, as the construction of a DEW Line station there attracted Inupiat workers and firmly established the permanency of the village. Barrow and Wainwright also were near new DEW Line stations which served as factors in strengthening the local economies. A DEW Line station was also built in the locality of Point Hope, but was distant enough that its effects on Point Hope were somewhat muted in terms of direct social interaction between DEW Line personnel and the villagers, however, the economic influence was indeed significant. During the construction seasons of 1951 -1953,' approximately thirty men from Point Hope worked on the construction of the White Alice radar station (the immediate technological predecessor of the contemporary DEW Line station) at Cape Lisburne, approximately fifty miles northeast of Point Hope. Beyond the immediate employment, this opportunity had a significant influence on future employment and emigration from the village for employment opportunities due to the fact that Point Hope workers were provided with their first opportunity to join unions while working at Cape Lisbume. According to VanStone:

> Many men joined a building trades union at that time, a factor that has contributed greatly to their subsequent success in obtaining summer employment. Most Point Hope men are well aware of the advantages of union membership and try hard to keep up their monthly dues payments even during the winter months when cash is scarce. A few men have become skilled carpenters and a scattering of other unions are also represented in the village. By communicating with the office of the union local in Fairbanks, it is possible for a man to be sent directly to the location of employment.

> It is not required that a man make the trip to Fairbanks to be hired "off the bench" there. (1962:61)

The data do not exist for other villages to know if this was a region-wide pattern, or if Point Hope was unique to the degree individuals took advantage of union membership opportunities offered by DEW Line construction.

Statehood, achieved in 1959, did not have any great effects on the North Slope. Point Hope, Wainwright, Barrow, and Kaktovik were incorporated as cities under state law. Social services improved at least minimally, especially in Barrow. The economic interests which were at least partially behind the statehood initiative were for the most part not resident on the North Slope, however, and so few benefits flowed that way. Much of the potential for the state's economy lay under the North Slope, but was only potential at this time.

Exploration in the Naval Petroleum Reserve did begin in earnest during this period and provided employment. It is suspected that this activity may have encouraged people to begin returning to the Brooks Range - Anaktuvuk Pass region during this time, but the relationship between the population movements and these activities are not clear. Because of the oil exploration activities, certain minimal services were available to people living in this area that had not been available before. Employment opportunities with the exploration teams, both as laborers and guides, were also available in the area. There was still no school or other community facilities in the area, of course, so that no village as such can be said to have existed. Air strips and industrial/service enclaves (such as at Umiat) did exist.

The most important result of the oil exploration, of course, was the discovery of the Prudhoe Bay oil field and the decision to develop it commercially. The economic and political pressure to encourage this development and build the Alaska pipeline in large part was responsible for the Alaska Native Claims Settlement Act, and the formation of the North Slope Borough. While the two are separable events, they are so interconnected and so dominate the present North Slope polity and economy that they must be considered together. ANCSA is economic in form, but has clear ideological (political) origins, and as ANCSA corporations are operating on the North Slope at the present, is certainly a political as well as an economic settlement. The NSB is a political organization, but in effect gives the Inupiat of the North Slope much more effective control over local resources than would have ever been possible under ANCSA. The two working together contain the potential for the establishment of a modem Inupiat political economy. This is the topic of the next section.

### 6. ANCSA, the Formation of the NSB, and the Present: 1970-1988

The period since the passage of the Alaska Native Claims Settlement Act (here treated as roughly 1970 through the ethnographic present of 1988) is more complicated than previous periods because it is ongoing. Not only are the issues not fully resolved, but many are also not even yet fully defined. Perhaps the most accessible introduction to ANCSA and its effects on the people of Alaska are Arnold 1976, Burch 1984, and Chance 1984. Berger 1985 is perhaps one of the better sources for presenting Native views of ANCSA to a non-Native audience, as it summarizes and

discusses the testimony of Natives about ANCSA. Berger headed the commission that heard the testimony and was and is respected by all concerned for his understanding of Native issues throughout the Arctic. The work of McBeath (1981, 1982), Morehouse and L.cask 1978, and Tremont 1981 deals more specifically with the North Slope region of Alaska and the how ANCSA has affected the political institutions of that region. More recent work by Morehouse (1987,1988) addresses the more general political effects that ANCSA has had on Alaskan Natives.

Once local Inupiat realized the scale of the likely oil development in Prudhoe Bay, and that other strikes were likely, they realized that unless they had a strong and unified local polity that they would be overwhelmed. North Slope Inupiat also realized that the taxing authority of such a polity would allow them, working in conjunction with the corporations formed under ANCSA, to provide many of the services which until that time Inupiat on the North Slope had to do without. Included in this agenda was the reestablishment of villages at Point Lay, Atqasuk, and Nuiqsut. There were advantages under ANCSA in the refounding of such villages. Each such village increased the total amount of land available to be selected for use by Inupiat. The location of these villages ensured an Inupiat presence near anticipated industrial development (for oil, coal, or other resources) and left no part of the North Slope without an Inupiat settlement. The refounding of these villages also reasserted the Inupiat claim to historical land use of the entire North Slope which, although extinguished by ANCSA in exchange for title to a limited amount of land and a monetary settlement, established a moral legitimacy to their claims. The three "new" villages also allowed people who had (or whose parents had) historically used these areas to return to them.

ANCSA and incorporation of the NSB generally has had the effect of stabilizing populations by providing income to local residents. Capital Improvement Programs and local wage labor opportunities have resulted in increased housing supplies, better community services, and other incentives to remain in the community. At the same time, most of the economic opportunities available in Wainwright are channeled through the NSB and do not attract non-Inupiat to the village to any great extent. Thus, Wainwright has not experienced any difficulty in maintaining its identity as an Inupiat village. In this it is typical of all the NSB villages other than Barrow. Barrow has become the political and population center of the NSB, and is now 40% non-Inupiat. The outer villages are at risk of seeing their interests, where they differ from those of the population of Barrow, sacrificed to those of Barrow because of the structural arrangements of centralized planning. All NSB departments are centered in Barrow. The NSB Assembly meets in Barrow and all but one or two members of the assembly live in Barrow. The professional staff that prepares the information for policy makers all live in Barrow. Because of the differences in size and composition between the population of Barrow and the outer villages, and the difference in influence that those populations have in affecting policy decisions, the outer villages are well aware that many NSB policies and programs are more appropriate for Barrow than for the other Native communities of the NSB. This is one reason that relations between the NSB and the outer villages can be cool at times, even though the NSB is absolutely essential to the day-today operation of all NSB communities. The relationship is one that is often characterized by tension and wariness.

Ideally, we would wish that the reader at this point be familiar with the political and economic structure of the NSB. The contemporary economy is so entangled with ANCSA corporations, village and regional government, and subsistence ideology that many of the important issues are very difficult to understand even with a firm grasp of the North Slope context. However, a written report is necessarily linear and can only address one topic at a time. We have chosen at this

juncture to describe certain aspects of the contemporary economy. A full treatment of formal institutional structure will be found in that section.

B. Population, Labor Force, and Employment Among NSB Traditional Communities

Population, labor force, and employment are important indicators of economic activity. Population is a measure of the size of the total economy. Over the eight-year period from 1980 to 1988 total population among all eight NSB communities increased from 4,142 to 5,498 according to U.S. Census and NSB census figures respectively. This represents a strong, 3.6% average annual rate of growth, and is among the highest of any region in Alaska for this eight-year time period.

The labor force represents the supply of labor in a community. It includes employed and unemployed persons age 16 to 65 that are eligible and willing to work. Persons not counted in the labor force include the young and aged, the disabled, and those with family commitments that prevent them from entering the job market. The labor force is not fixed. It depends on the age composition of population as well as other factors like the educational background and technical skills of those participating in the job market. Labor force participation also depends on the kinds of jobs available to the community. Addressing the needs of the NSB village labor force is among the most important targets of the CIP planning process

1. The Labor Force in 1980

The 1980 labor force in each of the villages has been described using information from the 1980 NSB census. In this section we will discuss borough-wide information from this same census. As might be expected, Barrow figures overwhelm those of the outer villages, but most trends among the Inupiat population are still fairly representative of all NSB villages. Even most of the trends (although not the absolute numbers or comparisons to the Inupiat work force) for the non-Inupiat population are fairly generalizable.

Table 1O-NSB is a total summary table of NSB employment by sector broken out by sex and ethnicity. Most of the following discussion will be based on Tables 11-NSB through 21-NSB, which are actually portions of Table 1O-NSB further broken out by age. Most of this discussion could have been based on Table 1O-NSB, but it is sometimes difficult to abstract so much information from such a dense information source. Also, while the age information may not be explicitly used here, readers may find it useful for their own purposes.

Table 11-NSB is a breakout of all employed persons on the North Slope by age category, sex, and ethnicity. It is interesting in several regards. For every 100 Natives who are employed, there are over 70 non-Natives who also are employed. This is for a general population where for every 100 Inupiat there are only 39 non-Inupiat. Ethnic regional employment patterns are clearly different. About one-third of employed Inupiat are women, roughly equivalent to the 30% of employed non-Natives who are women. Employed Inupiat are concentrated into the 20-29 age groups, whereas non-Inupiat are concentrated in the 25-34 age groups. Most of those for whom age information is missing are non-Inupiat, which certainly supports the view that non-Inupiat are more likely to be transient workers about whom little is known, while Inupiat workers are more permanent. For

males aged 25-44 there are nearly as many non-Inupiat as Inupiat employed, while for women this is true only for those aged 24-34. If those non-Inupiat for whom no ages are known are factored in, non-Inupiat employees probably outnumber Inupiat employees in these age groups. The majority of these non-Inupiat employees work in Barrow, and it rapidly becomes clear that the non-Inupiat population has a much higher rate of employment than does the Inupiat population. This is verified by an examination of Table 22a-NSB.

Contract construction sector employment is detailed by age, sex, and ethnicity in Table 12-NSB. Non-Natives outnumber Inupiat by about five to three. Males vastly outnumber females. Workers are concentrated in the lower age groups, although a large number of non-Native workers' ages are unknown.

Table 13-NSB concentrates on those employed in the construction sector by local governments. Males greatly outnumber females (six to one overall) and Inupiat greatly outnumber non-Inupiat (about five to one). Clearly, local hire is practiced by most local governments on the North Slope, and it would seem that most non-Inupiat are either single or, if married, are on the slope only to work and have a home and a family elsewhere. The young age of the non-Inupiat employees, especially compared to the full range of ages for the Inupiat employees, would tend to support this conclusion.

Table 14-NSB details the non-construction employment of local governments by age, sex, and ethnicity. The total number of people employed is somewhat less than twice the number in the construction sector (Table 13-NSB). Local governments employ more people, both Inupiat and non-Inupiat, in this sector than in the construction sector. Since Inupiat only outnumber non-Inupiat by about 1.3 to 1, however, it is clear that non-Natives are much more likely to be employed in the non-construction sector than in construction. It is also apparent, looking at the ratio of males to females for both ethnic groups, that women are preferentially employed in the non-construction sector. The age distribution of employees for non-Inupiat is much wider in the non-construction sector than in the construction sector, so that one is inclined to think that these jobs are perhaps administrative, or at least more permanent, in nature. It is suspected that Inupiat jobs in the non-construction, local government sector are service or support staff positions such as secretaries, clerks, and so on.

Table 15-NSB details the finance sector by age, sex, and ethnicity. The numbers are too small to have much meaning and it is not clear what positions exist in Barrow that fit into this category. Non-Native positions are almost evenly split between the sexes, while male Inupiat outnumber female non-Inupiat. Inupiat employed in" this sector outnumber non-Inupiat by more than two to one.

Table 16-NSB provides similar information on the mining sector. This is presumed to be mostly employment in the oil industry. There is no non-Native employment in this sector. This makes some sense in that non-Natives working in the oil fields who are recruited from off-slope are not enumerated as residents of the North Slope. Presumably, no non-Inupiat "residents" of the North Slope are hired by the oil companies, either by coincidence or as a matter of policy. Only thirty Inupiat were employed in this sector in 1980, which generally agrees with most informants reports that employment in the oil industry for Inupiat is low. Of these thirty, twenty four (87%) are males.

Federal government employment is detailed by age, sex, and ethnicity in Table 17-NSB. About 100 people are employed in this sector, making it about the same size as the financial sector. However, about 71% of federal employees are non-Inupiat, and they are predominantly male. Inupiat federal employees are evenly split in terms of sex. Ages are widely distributed except that non-Inupiat cluster in the 25-34 age group, with a large number of cases with ages unknown.

The transportation, communications, and public utilities sector is about the same size as the federal employment sector (Table 18-NSB). This sector is also more non-Inupiat (56%) than Inupiat (44%). Males outnumber females (five to one for non-Inupiat, three to one for Inupiat). Ages for Inupiat again tend to be widely distributed while for non-Inupiat they are concentrated in the 25-34 age groups.

Table 19-NSB provides information on service sector employment. It is a relatively small sector, as most services are provided by the NSB and are enumerated elsewhere. Most of these jobs are in Barrow and many would be with BUECI, the privately run cooperative utility. Employment in this sector is split evenly between non-Native and Native. Males outnumber females overall, but female Native employees outnumber male Native employees. Employees tend to cluster in the 25-29 year age group.

The trade sector (Table 20-NSB) is also small, and is evenly split between non-Native and Native employees. Males outnumber females among non-Natives, but are about even for Natives. People in this sector tend to be young, and there are a good number for whom ages are unknown.

Employment by the state government on the North Slope is very low. Somewhat more Inupiat than non-Inupiat are employed by the state, and more females than males. The numbers are so low, however, that any general statements are probably more misleading than they are useful.

Table 1O-NSB

Composition of Employment by Race and Sex * **
North Slope Borough Villages
July 1980

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 26 | 4 | 30 | 0 | 0 | 0 | 26 | 4 | 30 |
| Contract Construction | 71 | 5 | 76 | 118 | 7 | 125 | 189 | 12 | 201 |
| Transportation, Communication, and Public Utilities | 36 | 11 | 47 | 50 | 10 | 60 | 86 | 21 | 107 |
| Trade | 18 | 17 | 35 | 23 | 11 | 34 | 41 | 28 | 69 |
| Finance, Insurance, and Real Estate | 47 | 29 | 76 | 17 | 14 | 31 | 64 | 43 | 107 |
| Services | 15 | 20 | 35 | 27 | 9 | 36 | 42 | 29 | 71 |
| Government | | | | | | | | | |
| Federal | 16 | 13 | 29 | 45 | 26 | 71 | 61 | 39 | 100 |
| State | 3 | 4 | 7 | 1 | 4 | 5 | 4 | 8 | 12 |
| Local | 428 | | 653 | 211 | 128 | 339 | 639 | 353 | 992 |
| Construction | (249) | ( : ) | (292) | (51)"(7) | | (58) | (300) | (50) | (350) |
| Non-Construction | (179) | (182) | (361) | (160) | (121) | (281) | (339) | (303) | (642) |
| TOTAL | 660 | 328 | 988 | 492 | 209 | 701 | 1,152 | 537 | 1,689 |

● Employment was not necessarily full-time or permanent. People were asked only to fist their employer or major source of income.

•● EmPIWmt figures exclude 121 Alaska Natives (59 males and 62 females) and 1 non-Native who listed various forms of assistance, primarily Social Security, as their major source of income. Employment figures also exclude 947 Alaska Natives (400 males and 547 females) and 100 non-Natives (32 males and 68 females) aged 16 and over for whom no employment information was provided or who claimed to be unemployed.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

Table **11-NSB**

Composition of Employment by **Age, Race,** and Sex * **
North **Slope** Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 37 | 43 | 80 | 14 | 10 | 24 | 51 | 53 | 104 |
| 20-24 | 119 | 61 | 180 | 42 | 28 | 70 | 161 | 89 | 250 |
| 25-29 | 116 | 65 | 181 | 107 | 48 | 155 | 223 | 113 | 336 |
| 30-34 | 78 | 39 | 117 | 80 | 39 | 119 | 158 | 78 | 236 |
| 35-39 | 65 | 37 | 102 | 41 | 21 | 62 | 106 | 58 | 164 |
| 40-44 | 57 | 29 | 86 | 40 | 13 | 53 | 97 | 42 | 139 |
| 45-49 | 58 | 16 | 74 | 31 | 7 | 3 8 | 89 | 23 | 112 |
| 50-54 | 45 | 17 | 62 | 16 | 14 | 30 | 61 | 31 | 92 |
| 55-59 | 25 | 8 | 33 | 8 | 2 | 10 | 33 | 10 | 43 |
| 60-64 | 17 | 5 | 22 | 6 | 2 | 8 | 23 | 7 | 30 |
| 65-69 | 6 | 1 | 7 | 1 | 1 | 2 | 7 | 2 | 9 |
| 70-74 | 5 | 0 | 5 | 1 | 0 | 1 | 6 | 0 | 6 |
| 75 and over | 3 | 0 | 3 | 1 | 0 | 1 | 4 | 0 | 4 |
| Age unknown | 29 | 7 | 36 | 104 | 24 | 128 | 133 | 31 | 164 |
| TOTAL | 660 | 328 | 988 | 492 | 209 | 701 | 1,152 | 537 | 1,689 |

● Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source **Alaska** Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table 12-NSB

Composition of Contract Construction Sector
Employment by **Age, Race,** and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 1 | 0 | 1 | 2 | 0 | 2 | 3 | 0 | 3 |
| 20 - 24 | 15 | 2 | 17 | 3 | 3 | 6 | 18 | 5 | 23 |
| 25-29 | 13 | 0 | 13 | 17 | 2 | 19 | 30 | 2 | 32 |
| 30-34 | 8 | 0 | 8 | 12 | 0 | 12 | 2 0 | 0 2 | 0 |
| 35-39 | 9 | 1 | 10 | 7 | 1 | 8 | 11 | 1 | 12 |
| 40-44 | 5 | 1 | 6 | 8 | 0 | 8 | 13 | 1 | 14 |
| 45-49 | 4 | 0 | 4 | 7 | 1 | 8 | 11 | 1 | 12 |
| 50-54 | 8 | 1 | 9 | 3 | 0 | 3 | 11 | 1 | 12 |
| 55-59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-64 | 1 | 0 | 1 | 2 | 0 | 2 | 3 | 0 | 3 |
| 65-69 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 5 | 0 | 5 | 56 | 0 | 56 | 61 | 0 | 61 |
| TOTAL | 71 | 5 | 76 | 118 | 7 | 125 | 189 | 12 | 201 |

● Employment was not necessarily full-time or permanent. People were asked onfy to list their employer or major source of income.

Source **Alaska** Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **13-NSB**

Composition of **Local** Government Construction Sector Employment
by **Age, Race,** and Sex*
North Slope Borough Villages, 1980

| Age Range | Alaska **Native** | | | Non-Native | | | **Total** | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | **17** | **7** | 24 | 4 | 1 | 5 | 21 | 8 | 2 8 |
| 20-24 | **58** | **7** | 65 | 19 | 5 | 24 | 77 | 12 | 89 |
| 25-29 | **41** | **10** | 51 | 13 | 1 | 14 | 54 | 11 | 65 |
| 30-34 | 2 7 | 4 | 31 | 2 | 0 | 2 | 29 | 4 | 33 |
| 35-39 | 21 | 4 | 25 | 0 | 0 | 0 | 21 | 4 | 2 5 |
| 40-44 | 2 4 | 5 | 29 | 2 | 0 | 2 | 26 | 5 | 31 |
| 45-49 | 21 | 2 | 23 | 3 | 0 | 3 | 24 | 2 | 2 6 |
| 50-54 | 11 | 3 | 14 | 0 | 0 | 0 | 11 | 3 | 14 |
| 55-59 | 11 | 1 | 12 | 2 | 0 | 2 | 13 | 1 | 14 |
| 60-64 | 4 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 4 |
| 6S -69 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and wer | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Age unknown | 10 | 0 | 10 | 6 | 0 | 6 | 16 | 0 | 16 |
| TOTAL | 249 | 43 | 292 | 51 | 7 | 58 | **300** | 50 | 350 |

● Employment was not **necessarily** full-time or permanent. People were asked onfy to list their employer or major source of income.

source: **Alaska** Consultants, Inc., North Slope Borough **Housing Survey,** prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **14-NSB**

Composition of Local Government Non-Construction Sector Employment
by **Age, Race,** and Sex*
North Slope Borough Villages, 1980

| Age Range | **Alaska** Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 8 | 14 | 22 | 1 | **2** | **3** | 9 | 16 | 25 |
| 20-24 | **22** | **26** | **48** | 11 | 13 | 24 | 33 | 39 | 72 |
| 25-29 | 34 | 41 | 75 | 34 | 29 | 63 | 68 | 70 | 138 |
| 30-34 | 29 | **28** | **57** | 41 | 30 | 71 | 70 | 58 | 128 |
| 35-39 | 19 | **27** | **46** | 16 | 13 | 29 | 35 | 40 | 75 |
| 40-44 | 18 | 15 | 33 | 19 | 11 | 30 | **37** | 26 | 63 |
| 45-49 | 13 | 11 | 24 | 11 | 3 | 14 | 24 | 14 | 38 |
| **50-54** | 12 | 8 | **20** | 6 | 7 | 13 | 18 | 15 | 33 |
| **55-59** | 7 | 4 | 11 | 4 | 1 | 5 | 11 | 5 | 16 |
| **60-64** | 7 | 3 | 10 | 1 | 0 | 1 | 8 | 3 | 11 |
| **65-69** | 1 | 0 | 1 | 0 | 0 | 0 | **1** | **0** | **1** |
| **70-74** | 2 | 0 | 2 | 0 | 0 | 0 | **2** | **0** | **2** |
| **75** and wer | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Age unknown | 7 | 5 | 12 | 15 | 12 | 27 | 22 | 17 | 39 |
| TOTAL | 179 | 182 | 361 | 160 | 121 | 281 | 339 | 303 | 642 |

● Emplqment was not **necessarily** full-time or permanent. People were asked onfy to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing **Survey,** prepared for the North Slope **Borough,** Public Works Department. Anchorage, September 1980.

## Table 15-NSB

Composition of Finance, Insurance and Real Estate Sector Employment by Age, Race, and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 0 | 2 | 2 | 0 | 3 | 3 | 0 | 5 | 5 |
| 20-24 | 6 | 11 | 17 | 1 | 0 | 1 | 7 | 11 | 18 |
| 25-29 | 10 | 6 | 16 | 3 | 3 | 6 | 13 | 9 | 22 |
| 30-34 | 7 | 4 | 11 | 2 | 1 | 3 | 9 | 5 | 14 |
| 35-39 | 7 | 0 | 7 | 3 | 1 | 4 | 10 | 1 | 11 |
| 40-44 | 1 | 2 | 3 | 1 | 0 | 1 | 2 | 2 | 4 |
| 45-49 | 4 | 1 | 5 | 2 | 0 | 2 | 6 | 1 | 7 |
| 50-54 | 5 | 1 | 6 | 2 | 2 | 4 | 7 | 3 | 10 |
| 55-59 | 2 | 0 | 2 | 0 | 1 | 1 | 2 | 1 | 3 |
| 60 - 64 | 2 | 0 | 2 | 1 | 1 | 2 | 3 | 1 | 4 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 2 | 2 | 4 | 2 | 2 | 4 | 4 | 4 | 8 |
| TOTAL | 47 | 29 | 76 | 17 | 14 | 31 | 64 | 43 | 107 |

● Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 16-NSB

Composition of Mining Sector Employment by Age, Race, and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 1 | 3 |
| 20-24 | 9 | 1 | 10 | 0 | 0 | 0 | 9 | 1 | 10 |
| 25-29 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 30-34 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 1 | 3 |
| 35-39 | 3 | 1 | 4 | 0 | 0 | 0 | 3 | 1 | 4 |
| 40-44 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 45-49 | 4 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 4 |
| 50-54 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 55-59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0. | 0 | 0 |
| Age unknown | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL | 2 6 4 3 0 | | | 0 | 0 | 0 | 2 6 4 3 0 | | |

• Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **17-NSB**

Composition of Federal Government Sector Employment
by **Age, Race,** and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| **15-19** | 1 | 3 | 4 | **0** | **0** | **0** | 1 | 3 | 4 |
| **20 - 24** | 3 | 1 | 4 | 3 | 3 | 6 | 6 | 4 | 10 |
| **25 - 29** | 0 | 1 | 1 | 8 | 4 | 12 | 8 | 5 | 13 |
| **30-34** | 0 | 1 | 1 | 7 | 2 | 9 | 7 | 3 | 10 |
| **35-39** | 4 | 2 | 6 | 5 | 2 | 7 | 9 | 4 | 13 |
| **40-44** | 1 | 1 | 2 | 5 | 1 | 6 | 6 | 2 | 8 |
| **45-49** | 2 | 2 | 4 | 1 | 2 | 3 | 3 | 4 | 7 |
| **50-54** | 1 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 5 |
| **55-59** | **1** | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| **60-64** | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| **65-69** | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 |
| **70-74** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **75** and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 1 | 0 | 1 | 14 | 10 | 24 | 15 | 10 | 25 |
| TOTAL | 16 | 13 | 29 | 45 | 26 | 71 | 61 | 39 | 100 |

● Employment was not necessarily full-time or permanent. People were asked only to list their **employer** or major source of income.

Table **18-NSB**

Composition of Transportation, Communications, and
Public Utilities Sector Employment by **Age, Race,** and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| **15-19** | **2** | **2** | **4** | **2** | **0** | **2** | 4 | 2 | 6 |
| **20-24** | **3** | **4** | **7** | **3** | **1** | **4** | 6 | 5 | 11 |
| **25-29** | **7** | **1** | **8** | **17** | **4** | **21** | 24 | 5 | 29 |
| **30-34** | **3** | **0** | **3** | **11** | **4** | **15** | 14 | 4 | 18 |
| **35-39** | 1 | 1 | **2** | **6** | **0** | **6** | 7 | 1 | 8 |
| **40-44** | **3** | **1** | **4** | **2** | **0** | **2** | 5 | 1 | 6 |
| 45-49 | 7 | **0** | 7 | **3** | **0** | **3** | 10 | 0 | 10 |
| **50-54** | **5** | **2** | **7** | 1 | **0** | **1** | 6 | 2 | 8 |
| **55-59** | **1** | **0** | 1 | **0** | **0** | **0** | 1 | 0 | 1 |
| **60-64** | **2** | **0** | **2** | **0** | 1 | **1** | 2 | 1 | 3 |
| **65-69** | 1 | **0** | 1 | **0** | **0** | **0** | 1 | 0 | 1 |
| **70-74** | **0** | **0** | **0** | 1 | **0** | **1** | 1 | 0 | 1 |
| **75 and over** | **0** | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 |
| **Age** unknown | 1 | 0 | 1 | **4** | **0** | **4** | 5 | 0 | 5 |
| TOTAL | 36 | 11 | 47 | 50 | 10 | 60 | 86 | 21 | 107 |

*Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source (both): Alaska Consultants, Inc., North Slope Borough Housing **Survey,** prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 19-NSB

Composition of Services Sector Employment by Age, Race, and Sex •
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 3 | 6 | 9 | 1 | 1 | 2 | 4 | 7 | 11 |
| 20-24 | 1 | 4 | 5 | 2 | 1 | 3 | 3 | 5 | 8 |
| 2s -29 | 5 | 3 | 8 | 10 | 3 | 13 | 15 | 6 | 21 |
| 30-34 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 0 | 4 |
| 35-39 | 1 | 1 | 2 | 2 | 2 | 4 | 3 | 3 | 6 |
| 40-44 | 3 | 1 | 4 | 2 | 1 | 3 | 5 | 2 | 7 |
| 45-49 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 2 |
| 50-54 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 3 |
| 55-59 | 1 | 1 | 2 | 2 | 0 | 2 | 3 | 1 | 4 |
| 60-64 | 0 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 |
| 65-69 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL | 15 | 20 | 35 | 27 | 9 | 36 | 42 | 29 | 71 |

*Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 20-NSB

Composition of Trade Sector Employment by Age, Race, and Sex *
North Slope Borough Villages, 19S0

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 3 | 7 | 10 | 4 | 3 | 7 | 7 | 10 | 17 |
| 20-24 | 2 | 4 | 6 | 0 | 2 | 2 | 2 | 6 | 8 |
| 25-29 | 2 | 2 | 4 | 5 | 0 | 5 | 7 | 2 | 9 |
| 30-34 | 2 | 1 | 3 | 1 | 1 | 2 | 3 | 2 | 5 |
| 35-39 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 2 | 3 |
| 40-44 | 1 | 3 | 4 | 1 | 0 | 1 | 2 | 3 | 5 |
| 45-49 | 2 | 0 | 2 | 2 | 1 | 3 | 4 | 1 | 5 |
| 50-54 | 1 | 0 | 1 | 1 | 2 | 3 | 2 | 2 | 4 |
| 55-59 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 60-64 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| Age unknown | 1 | 0 | 1 | 7 | 0 | 7 | 8 | 0 | 8 |
| TOTAL | 18 | 17 | 35 | 23 | 11 | 34 | 41 | 28 | 69 |

*Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **21-NSB**

Composition of State Government **Sector** Employment
by **Age, Race,** and Sex *
North Slope Borough Villages, 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| **15-19** | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| **20-24** | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| **25-29** | 2 | 1 | 3 | 0 | 2 | 2 | 2 | 3 | 5 |
| **30-34** | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| **35-39** | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| **40-44** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **45-49** | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| **50-54** | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| **55-59** | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| **60-64** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **65-69** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **70-74** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **75 and over** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Age** unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 3 | 4 | 7 | 1 | 4 | 5 | 4 | 8 | 12 |

● Employment waa not necessarily full-time or permanent. People were **asked** only to list their employer or major source of income.

Source: **Alaska** Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

## *2. The* Labor Force in 1988 and Beyond

Detailed information comparable **to** that for the 1980 census is not yet available. The NSB Planning Department has released information used in the following discussion of the present and projected labor force in its contributions to the NSB budgetary process. It may be that these figures will **be** revised in the future, but the trends will **remain** the same and such changes would not be expected to be large.

Between 1980 and 1988, the **labor** force among all eight NSB **communities** increased from 2,222 to 2,572. During this eight-year **time** period, labor force expansion lagged **behind** village population growth. The number of young adults that entered the labor force was relatively modest during the early and mid-1980s.

The definition of total employment used by the Borough in their census figures is simply the count of persons employed, including those classified as permanent, full-time, temporary, and part-time. Using this definition, total employment increased from 1,689 to 2,442 between 1980 and 1988. As with the population, this represents very strong growth. The gap between total employment and

total labor force represents the count of unemployed persons. Between 1980 and 1988, this unemployment gap decreased and the rate of unemployment (i.e., the number of persons unemployed divided by the total labor force) fell from 24% to 5.3'%0 for all eight NSB traditional communities. A fuller discussion of labor force participation can be found in the next section.

The rate of unemployment is probably the single most important measure of economic success. The evidence outlined above and shown in Figures 8a-NSB, 8b-NSB, and 8c-NSB overwhelmingly suggest that from the standpoint of employment, the NSB economy experienced substantial gains during the 1980s.

Also, Figures 8a-NSB, 8b-NSB, and 8c-NSB show the number of direct NSB government employees on the payroll. The count of NSB government employees does not include indirect employment that is nevertheless tied to NSB government spending. For example, the NSB government employment figures do not include UIC or SKW construction employees that may be working on a borough-funded project. Those workers are counted elsewhere as private sector employees. As with total population and employment, NSB direct government employment registered strong gains from 642 in 1980 to 1,460 in 1988. Furthermore, NSB employment increased as a proportion of total employment. Thus, between 1980 and 1988, the NSB municipal government played an increasing role in the NSB regional economy, not counting the additional indirect, private sector employment contributions associated with NSB government funding.

In spite of these gains and the improved unemployment situation, problems associated with unemployment persist. Results from the NSB Census of Population and Economy suggest that relatively high levels of underemployment were present in NSB communities in 1988. Persons classified as underemployed worked part of the year, but were unemployed for at least one month because they could not find a job. By comparison, persons who worked part of the year and indicated other reasons for not working, such as not wanting a job, having family responsibilities, or being a student were not counted as underemployed. As shown in Figures 8a-NSB, 8b-NSB, and 8c-NSB, 16% of the labor force among all eight NSB communities in 1988 was classified as underemployed (but as pointed out in the next section on labor force participation, the bulk of these are Inupiat, who have an underemployment rate of 24.6 percent overall, compared to the non-Inupiat underemployment rate of 7.5 percent). These persons would have worked more if more jobs were available.

The levels of total population, labor force, total employment, and NSB government employment were projected for the year 1994. This projection for the entire NSB regional economy is shown in the right-hand set of bars labeled "1994" in Figure 8a-NSB. The method used to produce this was to project population, labor force, and employment separately for each NSB community and then add them together for the region as a whole. The starting point for these village projections was the 1988 results from the NSB Census of Population and Economy.

Village population was projected by assuming that population growth rates observed between 1980 and 1988 for each village would continue to 1994. We assumed that slower rates than those observed historically would prevail for population growth in Point Lay and Atqasuk. We assumed that Barrow population would grow at an annual average rate of 1.6% per year, reflecting the actual population growth rate between 1985 and 1988. Point Hope population was projected to

grow at an annual average rate of 1.8%, reflecting actual population growth between 1986 and 1988.

Village labor force was projected by simply advancing the population in the 10-to-15 and 60-to-65 age groups. Thus, the younger population replaces older population in the labor force. Other factors affecting village labor force participation were assumed to resemble those that prevailed in 1988. The results indicate that future NSB labor force expansion would outpace total population growth over the next six years because the current 1988 NSB population has a disproportionate concentration of young labor force entrants, as compared with labor force participants at the middle and high end of the age distribution. Village total employment was projected by asking, - "How much of the future labor force must be employed in order to hold the overall rate of unemployment at 5%?" Finally, the level of NSB government employment in each village was projected by assuming that direct NSB government employment as a proportion of total village employment in 1988 would prevail in 1994.

Projections made for individual villages were consolidated into the single borough-wide projection, labeled "1994" in Figure 8b-NSB. This analysis suggests that NSB regional population will grow from a 1988 level of 5,498 to 6,115 in 1994. The labor force will grow to a level of 2,985 in 1994. The amount of total employment needed to support this labor force and maintain acceptable levels of unemployment was projected to be 2,810 in 1994. Finally, the amount of total NSB government employment needed to support this level of total employment was projected to grow from 1,460 to 1,681 between 1988 and 1994. This represents a 15% increase over the 1988 level of direct NSB government employment.

In sum, future labor force expansion and population growth are likely to depart from patterns exhibited during the 1980s. Over the next six years the total NSB labor force will grow more rapidly than population because the disproportionately high number of young adults projected to enter the labor force will more than offset those persons projected to retire. Thus, the NSB labor supply will increase rapidly and place greater demand on NSB resources to maintain acceptable levels of employment. Furthermore, the NSB government must also address the need to reduce levels of underemployment.

The information displayed graphically in Figure 8a-NSB, 8b-NSB, and 8c-NSB is presented in tabular form in Tables 22a-NSB, 22b-NSB, and 22c-NSB, and 23a-NSB, 23b-NSB, and 23c-NSB below. These tables offer specifics about the composition of employment on the North Slope.

Figure 8a-NSB

Population, Labor Force, and Employment
NSB Villages, Barrow, and NSB Region

Total Population
Total Labor Force
Total Employment
NSB Employment

NSB Planning Department
Census of Population and Economy, 1989.

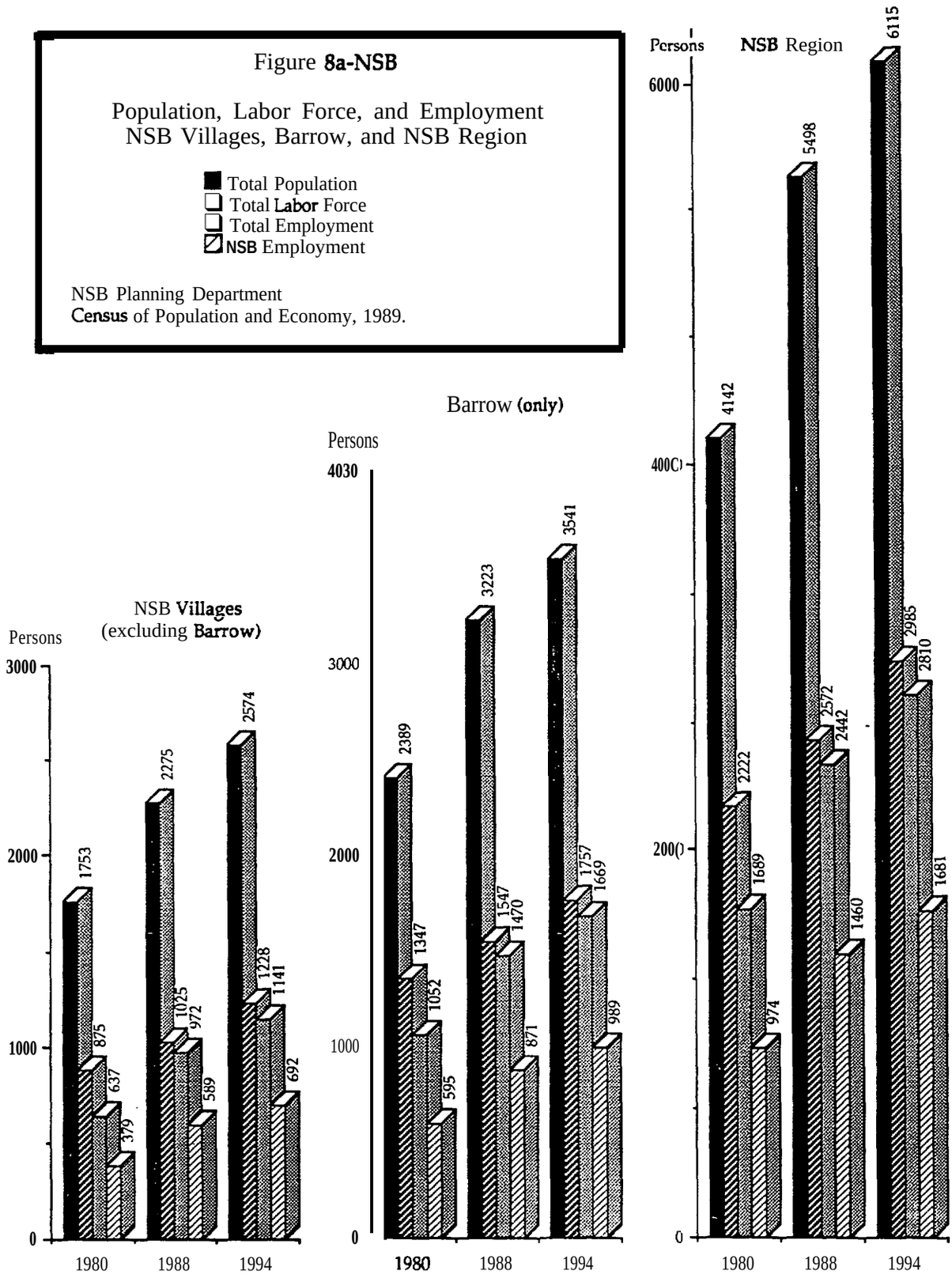
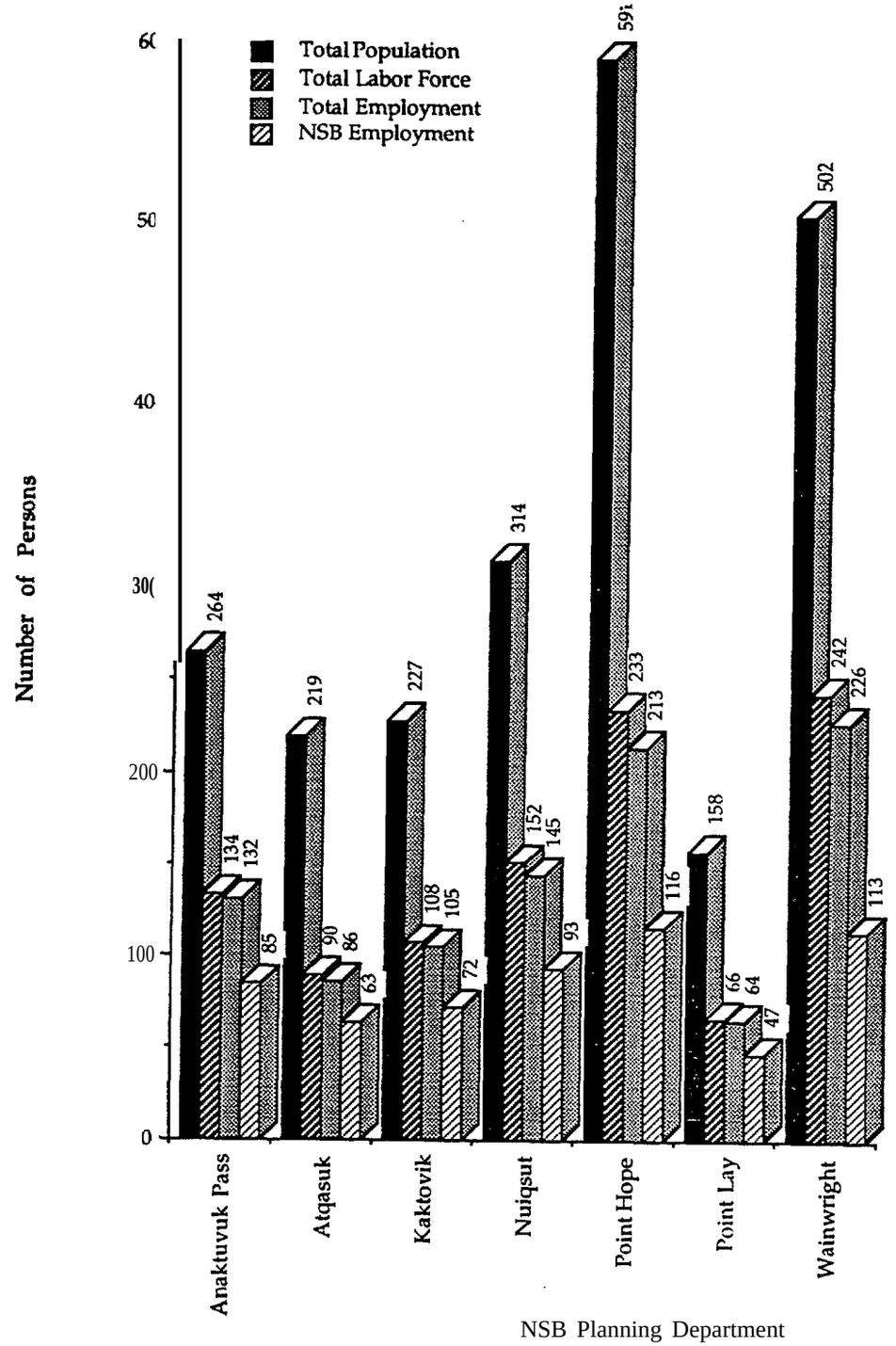


Figure **8b-NSB**

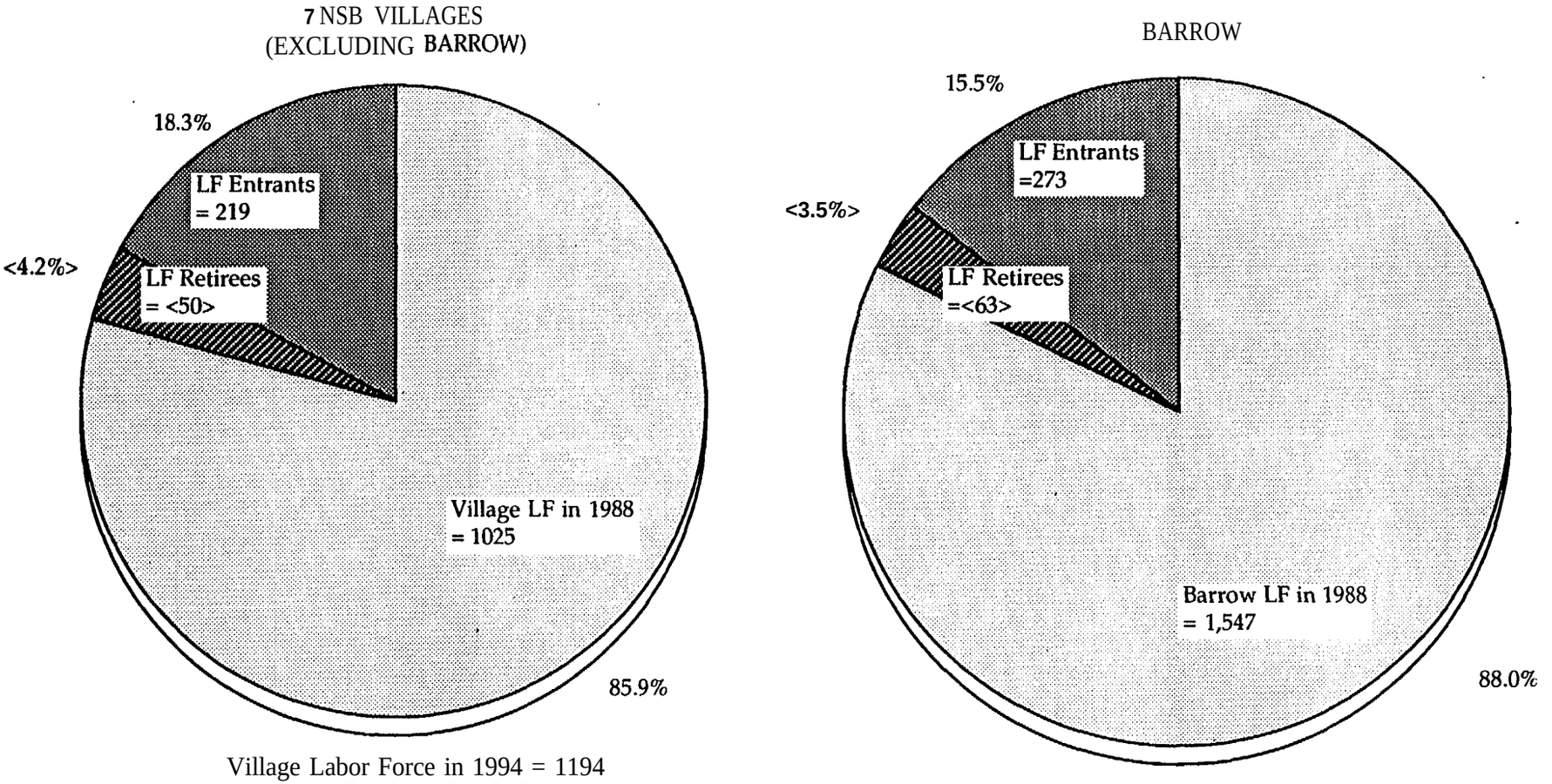
Summary of Population, Labor **Force,** and Employment
7 NSB Villages




NSB Planning Department
Census of Population and Economy, 1989.

Figure **8c-NSB**

Projected **Change** in NSB Labor Force Composition
1988-1994




Village Labor Force in 1994 = 1194
Net Gain = 169 (14.1%)

Barrow Labor Force in 1994 = 1757
Net Gain = 210 (12%)

- Labor Force **in** 1988
- Labor Force Retirees in 1988-1994
- Labor Force Entrants 1988-1994

Table 22a-NSB

Occupation Composition of Employment by Sex and **Ethnicity**
NSB Region -1988

| Occupation GROUPS | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| EXEC. ADMIN. MGR. | 98 | 94 | 192 | 127 | 67 | 194 | 386 | 15.3% |
| PROFESSIONAL | 1 | 3 | 4 | 28 | 27 | 55 | 59 | 2.3% |
| TEACHER | 3 | 24 | 27 | 43 | 81 | 124 | 151 | 6.0% |
| TEACHER AIDE | 6 | 48 | 54 | 1 | 20 | 21 | 75 | 3.0% |
| TECHNICIAN | 17 | 48 | 65 | 29 | 32 | 61 | 126 | 5.0% |
| ADMIN. SUPPORT | 35 | 189 | 224 | 22 | 102 | 124 | 348 | 13.8% |
| SERVICE | 75 | 178 | 253 | 106 | 62 | 168 | 421 | 16.7% |
| OPERATOR/MECHANIC | 236 | 11 | 247 | 92 | 4 | 96 | 343 | 13.6% |
| PILOT | 1 | | 1 | 9 | | 9 | 10 | 0.4% |
| LABORER | 180 | 53 | 233 | 39 | 2 | 41 | 274 | 10.9% |
| CRAFTSMAN | 154 | 1 | 155 | 85 | 1 | 86 | 241 | 9.6% |
| ARTISAN | | 6 | 6 | 1 | | 1 | 7 | 0.3% |
| ARMED FORCES | 4 | | 4 | 2 | | 2 | 6 | 0.2% |
| TRAPPER/HUNTER | 2 | | 2 | | | 0 | 2 | 0.1% |
| OTHER | 47 | 13 | 60 | 9 | 3 | 12 | 72 | 2.9% |
| TOTAL EMPLOYED | 859 | 668 | 1527 | 593 | 401 | 994 | 2521 | 100.0% |
| % OF TOTAL | 34.1% | 26.5% | 60.6% | 23.5% | 15.9% | 39.4% | 100.0% | |
| LABOR FORCE | 931 | 715 | 1646 | 604 | 409 | 1013 | 2659 | |
| % OF TOTAL | 35.0% | 26.9% | 61.9% | 22.7% | 15.4% | 38.1% | 100.0% | |
| TOTAL UNEMPLOYED | 72 | 47 | 119 | 11 | 8 | 19 | 138 | |
| UNEMPLOYMENT RATE | 7.7% | 6.6% | 7.2% | 1.8% | 2.0% | 1.9% | 5.2% | |
| TOTAL UNDER-EMPLOYED | 278 | 127 | 405 | 57 | 19 | 76 | 481 | |
| UNDER-EMPLOYMENT RATE | 29.9% | 17.8% | 24.6% | 9.4% | 4.6% | 7.5% | 18.1% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment,
(2) The occupation category "OTHER' indudes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor fores. employed+ underemployed+ unemployed.
(5) Unemployment rata = persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Table **22b-NSB**

Occupation Composition of Employment by Sex and **Ethnicity**
7 Villages (excluding Barrow) - 198S

| Occupation Groups | INUPIAT Male | Female | Total | NON-INUPIAT Male | Fem | Total | TOTAL Male | Female | Total | % of Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Exec. Admin. Mgr. | 47 | 28 | 75 | 18 | 6 | 24 | 65 | 34 | 99 | 9.5% |
| Professional | 0 | 1 | 1 | 3 | 2 | 5 | 3 | 3 | 6 | 0.5% |
| Teacher | 1 | 12 | 13 | 22 | 29 | 51 | 23 | 41 | 64 | 6.1% |
| Teacher Aide | 3 | 30 | 33 | 0 | 4 | 4 | 3 | 34 | 37 | 3.5 % |
| Technician | 4 | 27 | 31 | 6 | 4 | 10 | 10 | 31 | 41 | 3.9% |
| Admin. Support | 22 | 73 | 95 | 5 | 10 | 15 | 27 | 83 | 110 | 10.5% |
| Service | 48 | 107 | 155 | 27 | 14 | 41 | 75 | 121 | 196 | 18.7% |
| Operator/Mechanic | 148 | 4 | 152 | 12 | 1 | 13 | 160 | 5 | 165 | 15.8% |
| Pilot | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.070 |
| Laborer | 97 | 43 | 140 | 4 | 0 | 4 | 101 | 43 | 144 | 13.8% |
| Craftsman | 93 | 0 | 93 | 31 | 0 | 31 | 124 | 0 | 124 | 11.9% |
| Artisan | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 4 | 4 | 0.2% |
| Armed Forces | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | 0.3% |
| Trapper/Hunter | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0.1% |
| Other | 40 | 8 | 48 | 4 | 0 | 4 | 44 | 8 | 52 | 5.0% |
| Total Employed | 507 | 337 | 844 | 133 | 69 | 202 | 640 | 406 | 1046 | 100.0% |
| % of Total | 48..5% | 32.2% | 80.7% | 12.7% | 6.6% | 19.3% | 61.2% | 3S.8% | 100.0% | |
| Labor Force | 541 | 364 | 905 | 133 | 69 | 202 | 674 | 433 | 1107 | |
| % of Total | 48.9% | 32.9% | 81.8% | 12.0% | 6.2% | 18.2% | 60.9% | 39.1% | 100.0% | |
| Tot Unemployment | 34 | 27 | 61 | o | 0 | 0 | 34 | 27 | 61 | |
| Unemployment Rate | 6.3% | '7.4% | 6.7% | 0.0% | 0.0% | 0.0% | 5.0% | 6.2% | 5.5% | |
| Tot Under-employ | 179 | 86 | 265 | 15 | 8 | 23 | 194 | 94 | 288 | |
| Under-emp Rate | 33.1% | 23.6% | 29.3% | 11.3% | 11.6% | 11.4% | 2S.8% | 21.7% | 20.6% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployed refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate = persons unemployed **divided** by the **labor** force.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Table **22c-NSB**

Occupation Composition of Employment by **Sex and Ethnicity**
Barrow - 19SS

| OCCUPATION GROUPS | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| EXEC. ADMIN. MGR. | 51 | 66 | 117 | 109 | 61 | 170 | 287 | 19.5% |
| PROFESSIONAL | 1 | 2 | 3 | 25 | 25 | 50 | 53 | 3.6% |
| TEACHER | 2 | 12 | 14 | 21 | 52 | 73 | 87 | 5.9% |
| TEACHER AIDE | 3 | 18 | 21 | 1 | 16 | 17 | 38 | 2.6% |
| TECHNICIAN | 13 | 21 | 34 | 23 | 28 | 51 | 85 | 5.8% |
| ADMIN. SUPPORT | 13 | 116 | 129 | 17 | 92 | 109 | 238 | 16.1% |
| SERVICE | 27 | 71 | 98 | 79 | 48 | 127 | 225 | 15.3% |
| OPERATOR/MECHANIC | 88 | 7 | 95 | 80 | 3 | 83 | 178 | 12.1% |
| PILOT | 1 | | 1 | 9 | | 9 | 10 | 0.7% |
| LABORER | 83 | 10 | 93 | 35 | 2 | 37 | 130 | 8.8% |
| CRAFTSMAN | 61 | 1 | 62 | 54 | 1 | 55 | 117 | 7.9% |
| ARTISAN | | 2 | 2 | 1 | | 1 | 3 | 0.2% |
| ARMED FORCES | 1 | | 1 | 2 | | 2 | 3 | 0.2% |
| TRAPPER/HUNTER | 1 | | 1 | | | 0 | 1 | 0.1% |
| OTHER | 7 | 5 | 12 | 4 | 4 | 8 | 20 | 1.4% |
| TOTAL EMPLOYED | 352 | 331 | 683 | 460 | 332 | 792 | 1475 | 100.0% |
| % OF TOTAL | 23.9% | 22.4% | 46.3% | 31.2% | 22.5% | 53.7% | 100.0% | |
| LABOR FORCE | 390 | 351 | 741 | 471 | 340 | 811 | 1552 | |
| % OF TOTAL | 25.1% | 22.6% | 47.7% | 30.3% | 21.9% | 52.3% | 100.0% | |
| TOTAL UNEMPLOYED | 38 | 20 | 58 | 11 | 8 | 19 | 77 | |
| UNEMPLOYMENT RATE | 9.7% | 5.7% | 7.8% | 2.3% | 2.4% | 2.3% | 5.0% | |
| TOTAL UNDER-EMPLOYED | 99 | 41 | 140 | 42 | 11 | 53 | 193 | |
| UNDER-EMPLOYMENT RATE | 25.4% | 11.7% | 18.9% | 8.9% | 3.2% | 6.5% | 12.4% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate = persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Table **23a-NSB**

Industry Composition of Employment by Sex and **Ethnicity**
NSB Region - 198S

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % Of |
|---|---|---|---|---|---|---|---|---|
| INCUSTRY CROUP | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| PRIVATE SECTOR | | | | | | | | |
| FISHERIES | 1 | | 1. | 3 | 1 | 4 | 5 | |
| MINING | 31 | 8 | 39 | 7 | | 7 | 46 | |
| construction | 58 | 6 | 64 | 28 | 3 | 31 | 95 | |
| TRANSP/COMM/PUBLIC UTIL | 17 | 28 | 43 | 61 | 16 | 79 | 122 | |
| TRADE | 13 | 13 | 26 | 22 | 21 | 43 | 69 | |
| FINANCE/INSUR/REAL EST | 1 | 2 | 3 | 2 | 8 | 10 | 13 | |
| BUSINESS/REPAIR SERV | 10 | 5 | 15 | 16 | 6 | 24 | 39 | |
| ENTERTMT/REC/TOURIST SER | 2 | 4 | 6 | 7 | 7 | 14 | 20 | |
| HEALTH, SOCIAL, & EDUC SER | 2 | 6 | 8 | 8 | 9 | 17 | 25 | |
| SELF-EMPLOYED | 3 | 12 | 15 | 13 | 10 | 23 | 38 | |
| NATIVE CORP & AFFILIATE | 163 | 9 3 | 2 5 6 | 46 | 9 | 5 5 | 311 | |
| OTHER | 9 | 6 | 15 | 16 | 10 | 28 | 43 | |
| SUBTOTAL | 310 | 181 | 491 | 231 | 104 | 335 | 825 | 33.0% |
| NSB GOVERNMENT | | | | | | | | |
| HEALTH | 18 | 102 | 120 | 31 | 71 | 102 | 222 | |
| PUBLIC SAFETY | 4 | 2 | 6 | 40 | 8 | 48 | 54 | |
| MUNICIPAL SERV | 212 | 28 | 240 | 88 | 13 | 81 | 321 | |
| FIRE DEPT | 6 | 2 | 6 | 4 | | 4 | 12 | |
| SEARCH & RESCUE | 5 | 3 | 8 | 7 | 1 | 6 | 16 | |
| HOUSING | 52 | 19 | 71 | 24 | 7 | 31 | 102 | |
| WILDLIFE MGT | 7 | 1 | 8 | 6 | 3 | 9 | 17 | |
| RELI & MJP | 86 | 66 | 152 | 6 | 7 | 13 | 165 | |
| LAW OFFICE | | | 0 | 2 | 4 | 6 | 5 | |
| ADMIN & FINANCE | 5 | 39 | u | 9 | 12 | 21 | 85 | |
| PLANNING | 5 | 17 | 22 | 9 | 5 | 14 | 36 | |
| INDUSTRIAL DEVELOPWENT | 1 | 2 | 3 | 1 | 1 | 2 | 5 | |
| HIGHER EDUCATION CENTER | 1 | 3 | 4 | 2 | 4 | 6 | 10 | |
| MAYOR'S oFFICE & ASSEMBLY | 10 | 12 | 22 | 3 | 2 | 5 | 27 | |
| OTHER NSB | 11 | 11 | 22 | 6 | 1 | 7 | 29 | |
| SUBTOTAL | 423 | 307 | 730 | 218 | 139 | 3s7 | 1087 | 43.4% |
| NSS SCHOOL DISTRICT | 52 | 133 | 185 | 99 | 135 | 234 | 419 | 16.7% |
| NSB SUBTOTAL | 475 | 440 | 915 | 317 | 274 | 591 | 1508 | 60.1% |
| OTHER LOCAL GOV'T | 21 | 37 | 56 | 6 | 7 | 13 | 71 | 26-% |
| STATE GOV'T | 4 | 4 | 6 | 5 | 7 | 12 | 20 | 0.8% |
| FEDERAL GOV'T | 11 | 11 | 22 | 32 | 22 | 54 | 76 | 3.0% |
| ARMED FORCES | 4 | 1 | 5 | 2 | | 2 | 7 | 0.3% |
| SUBTOTAL AU GOV'T | 515 | 493 | 1003 | 3s2 | 310 | 672 | 1660 | 67.0% |
| GRAND TOTAL | 825 | 674 | 1499 | 533 | 414 | 1007 | 2506 | 100.0% |
| %& TOTAL | 32.9% | 26.9% | 59.s% | 23.7% | 16.5% | 402% | 100.0% | |

Notes:
(1) figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989,

Table **23b-NSB**

Industry Composition of Employment by Sex and **Ethnicity**
7 **Villages** (excluding Barrow) -1988

| Industry Group | INUPIAT Male | Female | Total | NON-INUPIAT Male | | To | TOTAL Male | Female | Total | % of Total |
|---|---|---|---|---|---|---|---|---|---|---|
| PRIVATE SECTOR | | | | | | | | | | |
| Fisheries | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 2 | |
| Mining | 14 | 6 | 20 | 4 | 0 | 4 | 18 | 6 | 24 | |
| Construction | 23 | 2 | 25 | 9 | 1 | 10 | 32 | 3 | 35 | |
| Transp/Comm/Public Util | 8 | 6 | 14 | 4 | 2 | 6 | 12 | 8 | 20 | |
| Trade | 6 | 7 | 13 | 1 | 2 | 3 | 7 | 9 | 16 | |
| Finance/Insur/Real Est | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Business/Repair Serv | 5 | 1 | 6 | 2 | 0 | 2 | 7 | 1 | 8 | |
| Entertmt/Rec/Tour Serv | 1 | 0 | 1 | 2 | 1 | 3 | 3 | 1 | 4 | |
| Health, Social, Educ Ser | 1 | 2 | 3 | 2 | 0 | 2 | 3 | 2 | 5 | |
| Self-Employed | 0 | 6 | 6 | 1 | 0 | 1 | 1 | 6 | 7 | |
| Native Corp & Affiliate | 98 | 57 | 155 | 24 | 1 | 25 | 122 | 58 | 180 | |
| Other | 3 | 3 | 6 | 5 | 0 | 5 | 8 | 3 | 11 | |
| **Subtotal** | 160 | 90 | 250 | 55 | 6 | 61 | 215 | 96 | 311 | 31.0% |
| NSB GOVERNMENT | | | | | | | | | | |
| Health | 5 | 46 | 51 | 3 | 7 | 10 | 8 | 53 | 61 | |
| Public Safety | 2 | 1 | 3 | 9 | 2 | 11 | 11 | 3 | 14 | |
| Municipal Serv | 143 | 13 | 156 | 12 | 1 | 13 | 155 | 14 | 169 | |
| Fire Dept | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | |
| Search & Rescue | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | |
| Housing | 23 | 9 | 32 | 4 | 1 | 5 | 27 | 10 | 37 | |
| Wildlife Mgt | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | |
| RELI & MJP | 71 | 53 | 124 | 0 | 1 | 1 | 71 | 54 | 125 | |
| Law Office | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | |
| Admin & Finance | 1 | 2 | 3 | 1 | 1 | 2 | 2 | 3 | 5 | |
| Planning | 1 | 2 | 3 | 0 | 0 | 0 | 1 | 2 | 3 | |
| Industrial Development | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 | |
| Higher Education Center | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | |
| Mayor's Office & Assembly | 5 | 6 | 11 | 0 | 1 | 1 | 5 | 7 | 12 | |
| Other NSB | 2 | 1 | 3 | 4 | 0 | 4 | 6 | 1 | 7 | |
| Subtotal | 258 | 135 | 393 | 34 | 16 | 50 | 292 | 151 | 443 | 64.2% |
| NSB School Dist | 35 | 77 | 112 | 36 | 44 | 80 | 71 | 121 | 192 | 19.1% |
| NSB Subtotal | 293 | 212 | 505 | 70 | 60 | 130 | 363 | 272 | 635 | 63.3% |
| Other Local Gov't | 7 | 23 | 30 | 0 | 2 | 2 | 7 | 25 | 32 | 3.2% |
| State Gov't | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 1 | 3 | 0.3% |
| Federal Gov't | 7 | 4 | 11 | 6 | 2 | 8 | 13 | 6 | 19 | 1.9% |
| Armed Forces | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | 0.3% |
| **Subtotal** all Gov't | 312 | 240 | 552 | 76 | 64 | 140 | 388 | 304 | 692 | 69.0% |
| Grand Total | 472 | 330 | 802 | 131 | 70 | 201 | 603 | 400 | 1003 | 100.0% |
| % of Total | 47.1% | 32.9% | 80.0% | 13.6% | 7.0% | 20.0% | 60.1% | 39.9% | 100.0% | 100.0% |

Notes:
(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989.

Table **23c-NSB**

Industry Composition of Employment by Sex and **Ethnicity**
Barrow - 19SS

| INDUSTRY GROUP | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| PRIVATE SECTOR | | | | | | | | |
| FISHERIES | 1 | | 1 | 2 | | 2 | 3 | |
| MINING | 17 | 2 | 19 | 3 | | 3 | 22 | |
| CONSTRUCTION | 35 | 4 | 39 | 19 | 2 | 21 | 60 | |
| TRANSP/COMM/PUBLIC UTIL | 9 | 20 | 29 | 57 | 16 | 73 | 102 | |
| TRADE | 7 | 6 | 13 | 21 | 19 | 40 | 53 | |
| FINANCE/INSUR/REAL EST | | 2 | 2 | 2 | 8 | 10 | 12 | |
| BUSINESS/REPAIR SERV | 5 | 4 | 9 | 14 | 8 | 22 | 31 | |
| ENTERTMT/REC/TOURIST SER | 1 | 4 | 5 | 5 | 6 | 11 | 16 | |
| HEALTH, SOCIAL, & EDUC SER | 1 | 4 | 5 | 6 | 9 | 15 | 20 | |
| SELF-EMPLOYED | 3 | 6 | 9 | 12 | 10 | 22 | 31 | |
| NATIVE CORP & AFFILIATE | 65 | 36 | 101 | 22 | 8 | 30 | 131 | |
| OTHER | 6 | 3 | 9 | 13 | 12 | 25 | 34 | |
| SUBTOTAL | 150 | 91 | 241 | 176 | 98 | 274 | 515 | 34.3% |
| NSB GOVERNMENT | | | | | | | | |
| HEALTH | 13 | 56 | 69 | 28 | 64 | 92 | 161 | |
| PUBLIC SAFETY | 2 | 1 | 3 | 31 | 6 | 37 | 40 | |
| MUNICIPAL SERV | 69 | 1s | 84 | 56 | 12 | 68 | 152 | |
| FIRE DEPT | 5 | 2 | 7 | 4 | | 4 | 11 | |
| SEARCH & RESCUE | 5 | 2 | 7 | 7 | 1 | a | 15 | |
| HOUSING | 29 | 10 | 39 | 20 | 6 | 26 | 65 | |
| WILDLIFE MGT | 4 | 1 | 5 | 6 | 3 | 9 | 14 | |
| RELI & MJP | 15 | 13 | 28 | 6 | 6 | 12 | 40 | |
| LAW OFFICE | | | o | 2 | 3 | 5 | s | |
| ADMIN & FINANCE | 4 | 37 | 41 | 8 | 11 | 19 | 60 | |
| PLANNING | 4 | 15 | 19 | 9 | 5 | 14 | 33 | |
| INDUSTRIAL DEVELOPMENT | | 2 | Z | | 1 | 1 | 3 | |
| HIGHER EDUCATION CENTER | | 2 | 3 | 2 | 3. | 5 | 8 | |
| MAYOR'S OFFICE & ASSEMBLY | 5 | 6 | 11 | 3 | 1 | 4 | 15 | |
| OTHER NSB | 9 | 10 | 19 | 2 | 1 | 3 | 22 | |
| SUBTOTAL | 166 | 172 | 337 | 164 | 123 | 307 | 644 | 42.8% |
| NSB SCHOOL DISTRICT | 17 | 56 | 73 | 63 | 91 | 154 | 227 | 15.1% |
| NSB SUBTOTAL | 182 | 228 | 410 | 247 | 214 | 461 | 871 | 58.0% |
| OTHER LOCAL GOV'T | 14 | 14 | 28 | 6 | 5 | 11 | 39 | 2.6% |
| STATE GOV'T | 2 | 3 | 5 | 5 | 7 | 12 | 17 | 1.1% |
| FEDERAL GOV'T | 4 | 7 | 11 | 26 | 20 | 46 | 57 | 3.8% |
| ARMED FORCES | 1 | 1 | 2 | 2 | | 2 | 4 | 0.3% |
| SUBTOTAL ALL GOV'T | 203 | 253 | 456 | 286 | 246 | 532 | 988 | 65.7% |
| GRAND TOTAL | 353 | 344 | 697 | 462 | 344 | 806 | 1503 | 100.0% |
| % OF TOTAL | 23.5% | 22.9% | 46.4% | 30.7% | 22.9% | 53.6% | 100.0% | |

Notes:
(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989.

*3.* Labor Force Participation

The question of labor force participation on the North Slope is a complex one, and is potentially made more confusing by the definition of "employed" and "unemployed" used by the NSB census. As the preceding section described, anyone working at the time of the census was considered employed. This could be expected to inflate the employment numbers by including temporary jobs, and the NSB census does indeed document a low rate of unemployment. Those people not looking for work were excluded from the labor force and not counted as unemployed, so this would also tend to inflate the rate of employment. Since increasing employment in the villages is one of the primary Political/economic goals of the NSB, the NSB has a vested interest in demonstrating that it is succeeding in these goals. Given the non-standard definition of employment used in the census, however, it would be wise to examine these numbers in greater depth to develop an interpretative context. This section concentrates on Inupiat labor force participation, since that is clearly the major problematic area, with some discussion of non-Inupiat labor force participation near the end.

The census numbers show a low rate of unemployment, accompanied by a fairly low rate of underemployment. This is countered by individual informant accounts that there is actually a very high rate of unemployment in the villages. This is the fundamental discrepancy that must be explained, or at least examined. The official NSB position is thus that there is a potential problem in the villages with employment, and that the NSB is dealing with it. A common village-level perception is that the employment problem is fundamentally more intransigent than the NSB government thinks.

There are several key questions. One concerns the distinction between temporary and permanent jobs. Another is why there is such a discrepancy between the NSB census figures and local village informants' perceptions as to unemployment rates. A third would address the types of jobs that exist in the villages, what sort of positions are created by the NSB, and if there are any employment opportunities available that are not readily filled. A fourth question would ask why some people do not seek employment. As might be expected, all of these issues are interconnected.

As previous section have indicated, almost all employment is with some part of the NSB or on a NSB-funded project. Most temporary jobs are NSB positions, and in fact have historically been funded for eight or nine months of the year for those individuals who have wanted to work that steadily. In some cases these jobs are with regular NSB departments and eventually lead to full-time regular positions. Thus, the Seniors' Assistance program started out under the Mayor's Job Program (MJP) with the hiring of part-time temporary people in all of the villages to help with housekeeping and other chores for the Elders. This has since been formalized as a permanent program. Similarly, a housing improvements program (RELI) began as a temporary Mayor's Job Program and has also since been made permanent. The MJP had historically been used as a discretionary program, most active just before and after elections. With the budgetary crunch and the need to regularize expenditures, as well as achieve maximum efficiency, such programs have either been formalized or abandoned. Since the NSB census was taken at a time when the MJP was in full swing (and in fact many of the census takers were employed by the MJP), these jobs had a significant effect in increasing the rate of employment as measured by the census. There were, and still are, some seasonal construction jobs with private firms contracted to the NSB for various CIP projects, but these have been winding down in the past several years and are no longer

a major source of village jobs. There are still some temporary jobs in the villages, but many less than when the NSB census was taken, since the MJP has been terminated. It is not known what percentage of the MJP positions which existed at the time of the census were turned into full-time regular positions, but it was certainly a significant portion of them and perhaps close to 100%.

There are certain factors which increase the perceptual level of unemployment at the village level above that reflected in the statistics of the NSB census. Those people not looking for work were not included as members of the labor force for purposes of calculating rates of unemployment. In most cases these individuals were women with young children, and some village informants complaining about high unemployment fail to consider that these individuals would have a very difficult time working a wage job, since few villages have daycare facilities and babysitters are surprisingly difficult to find in the villages. Some of the people excluded from the NSB census labor force calculations were "discouraged" workers. These would be individuals who either believe there is no job available for them or who have simply given up. In most cases they say they would be willing to work if the right job were available.

A common perception of the MJP positions, and of temporary positions currently available, is that the jobs were not very desirable and that the pay was low (at least in terms of North Slope scales). The reference point is, for men, a job with the NSB in the Municipal Services Department or working as a carpenter or heavy equipment operator for thirty dollars an hour. Preferred work for women appears to be secretarial and administrative in nature. Temporary work commonly pays fifteen dollars an hour (the old MJP rate) and is considered low. There are also certain permanent positions that are treated essentially as temporary jobs. That is, no one seems to want to keep them for very long, either because the pay is relatively low (by village standards) or the duties are unpleasant. Teacher's Aide positions and store clerk positions are typical of these sorts of jobs. In some villages the Seniors' Assistance jobs also have this characteristic. There is essentially a double tier of jobs in most of the villages. Inupiat men occupy most of the high-paying NSB jobs with prestige. Inupiat women occupy some of the administrative/secretarial positions, but for the most part are relegated to the second tier of lower-paying NSB jobs, along with the younger men. It is these lower-paying jobs where turnover is a constant problem. From the employee's perspective, however, these lower-paying jobs often require more effort and work than the higher-paying, higher-prestige jobs. The legacy of the old CIP program, where many people were paid regardless of the quality of their work, is also still cited as a contributory factor to the relatively irregular work habits of a significant portion of the work force.

There are also many jobs available outside of the villages, primarily with the oil industry, but few individuals take advantage of these opportunities. The oil companies have Inupiat hire programs, but most informants regard these as public relations programs more than serious employment opportunities. These informants claim that they are usually hired as temporary workers and are always eventually laid off, while non-Inupiat employees are always hired as permanent employees. Oil company representatives say that this is so because Inupiat employees seldom if ever want a permanent position, and should they want one it is certainly available. The oil companies offer a wide range of training programs, and most of these programs are full at the start of instruction. The completion rate is low, however, and even those who complete the training then are often unwilling to work away from the village at the job that would use their training. This unwillingness to work outside of the village is not a matter of pay, as the rate of pay and benefits is quite good. Rather, it seems to be mostly social. Inupiat say that among non-Inupiat, and perhaps especially

those they came into contact with as oil company employees especially, they feel uncomfortable. It is not clear if it is because of overt discrimination or more subtle behavioral cues, or because of some characteristic of Inupiat. Most Inupiat informants state that there is an inherent anti-Inupiat bias in the oil industry, or at least among the oil industry work force. Even if this is so, there are still an enormous number of employment opportunities for Inupiat that are simply not taken. Another factor Inupiat also mention that make employment outside of the village difficult is that it requires too much travel and too much time away from their families. It appears to be the case that subsistence harvest activities are sufficiently flexible so that the integration of subsistence activities and work out of the village does not present a large problem. Essentially, wage earners adapt their subsistence schedules to the time they have available.

In summary, the issue of labor force participation is a complex one. The NSB census likely overstates the rate of permanent employment, but probably not by a great deal, given the qualifications discussed above. Many village informants who talk about high unemployment rates really mean that there are few desirable jobs open within the village. In most cases there will be undesirable jobs available within the village, and there are certainly employment opportunities available outside of the village, but within the region, with the oil companies.

Perhaps one of the most important reasons that unemployment is perceived as higher in the villages than may appear to be the case from the regional statistics is the quite different population characteristics between the seven outer villages on the one hand and the NSB taken as a whole (and dominated by the characteristics of Barrow) on the other. The outer villages are - predominately Inupiat, so that the labor force in the outer villages is predominately (81%) Inupiat. The labor force for the entire NSB (using NSB census figures as the best available information) is only 61% Inupiat (39% non-Inupiat). From Table 22a-NSB, it is readily apparent that unemployment and underemployment are concentrated among the Inupiat population. Of 138 unemployed individuals, 119 (86%) are Inupiat, with men outnumbering women about 1.5 to 1. Of 481 underemployed individuals, 405 (84%) are Inupiat, with men outnumbering women 2.2 to 1. Since Inupiat men are perceived as the primary economic providers in most households, it is apparent that in the villages unemployment and underemployment are most heavily concentrated in those employment groups for whom wage employment is the behavioral norm. This could be especially galling to outer village Inupiat when compared to the NSB-reported non-Native unemployment rate of zero percent in the outer villages, combined with a low underemployment rate. Table 22b-NSB would seem to indicate that overall rates of unemployment in the outer villages are still low for Inupiat, but that underemployment is significantly higher. It would seem that even if the statistical rate of unemployment is the NSB is relatively low that there is a basis in fact for the perception that Inupiat unemployment and underemployment in the outer villages may be unacceptably high, especially for male Inupiat. Barrow also has elevated unemployment and underemployment rates for Inupiat as compared to non-Inupiat, but not as extreme as for the outer villages.

## C. The Regional Economy and the Prudhoe-Kuparuk Industrial Complex

Geographically, the NSB region consists of two mutually exclusive economic jurisdictions: the Prudhoe-Kuparuk Industrial Complex (PKIC) and the eight traditional NSB communities. Together, these entities account for over 90% of all jobs with the NSB region. However, they function

largely as independent systems. As an industrial enclave, the PKIC supported over 5,000 year-round jobs in 1988. Nevertheless, it directly accounted for less than two percent of total resident employment." In 1988, the NSB regional government directly supported about 1,500 jobs distributed across the region. Only a handful of these jobs were situated at the PKIC. As a group, the Arctic Slope Regional Corporation and its Native and Village Corporation affiliates represent the third largest employer on the North Slope. In 1988, the North Slope Native Corporations and affiliates employed over 300 people, representing about 12% of resident employment. In order to understand the role of PKIC in the regional economy, we will briefly review the complex itself.

### 1. The Prudhoe-Kuparuk Industrial Complex

The Prudhoe-Kuparuk Industrial Complex is centered in the largest oil fields in North America, as well as several smaller yet highly-productive fields. It provides a significant degree of domestic security from the whims of world oil markets and is the source of billions of dollars in petroleum industry profits and revenues to the State of Alaska. It is also a significant element in the North Slope Borough regional economy. On the one hand, PKIC functions as a self-sufficient enclave, largely insulated from the regional populations and economies of the eight traditional communities contained with the NSB municipal boundaries. On the other hand, it is the foundation of general fund revenues for the NSB municipal government.

The populations of the traditional communities and the Prudhoe-Kuparuk Industrial Complex, as well as military population, are shown in Table 24-NSB for selected years. The figures for industrial population shown in Table 24-NSB are equal to the Alaska Department of Labor count of oil-related workers in Semite Area 10. The total population base increased fourfold between 1970 and 1984. Modest declines in total population after 1984 reflect reductions in industrial population. Population in NSB traditional communities increased gradually but steadily during the time period shown in Table 24-NSB.

The population figures shown in Table 24-NSB represent the basis for the official count of population used for the purposes of limiting NSB municipal property taxes as determined in Section 29.45.080 of the Alaska Statutes. This population count is critically important to the NSB government operating budget and to the NSB economy as a whole.

### 2. Employment at Prudhoe-Kuparuk and the Villages

Table 25-NSB shows annual average employment and employment composition for the entire NSB region for selected years over the period 1970 to 1986. Total employment, including construction and operations in the Prudhoe-Kuparuk area, increased nearly tenfold over the ten-year period from 1974 to 1984. The upward pattern of total employment exhibited through the early 1980s, sharply reversed after 1984, reflecting the impact of falling world oil prices on North Slope oil and gas development and operations.

Table **24-NSB**

Population in the North **Slope** Borough Region[1]
1970-1987

| Year | Traditional Community | Industrial[2] (Service Area 10) | Military | TOTAL |
|---|---|---|---|---|
| 1970 | 3,027 | - o - | - NA - | 3,027[3] |
| 1980 | 4,199 | 3,104 | 132 | 7,4% |
| 1984 | 5,319 | 6,683 | 193[4] | 12,195 |
| 1986 | 5,520 | 5,662 | 193[4] | 11,375$ |
| 1987 | 5,927 | 5,338 | 193[4] | 11,458 |

Notes: [1]0 fficial taxcap population figures for a given budget period are based on actual population figures for prior years and may differ from figures in this table.
[2]Alaska Department of Labor Census Subarea 321.
[3]Total for 1970 excludes military population and tradition community population in Point Lay.
[4]Based on 1982 estimate.
[5]0 fficial NSB tax cap population for fiscal year 1990.

Source: Alaska Department of Labor, Population Estimates, 1970-1987.

Table 25-NSB

**Total** Employment by Major Industry Group
North Slope Borough **Region**[1]
1970-1986

| Year | Construction | State & Local[2] | Federal | Military | Trade[3] | Total |
|---|---|---|---|---|---|---|
| 1970 | 926 | 100 | 265 | 173 | 418 | 1,882 |
| 1974 | 582 | 483 | 285 | 161 | 472 | 1,983 |
| 1980 | 3,534 | 1,157 | 251 | 68 | 1?350 | 6,360 |
| 1984 | 6,096 | 1,488 | 143 | 42 | 2,407 | 10,176 |
| 1986 | 3,844 | 1,551 | 118 | 48 | 2,238 | 7,799 |

Notes [1]Includes Prudhoe-Kuparuk operations.
[2]Local government represents over 97% of total employment in this category after 1980.
[3]Includes a small amount of employment in the transportation, communication, and public utilities sector.

Source U.S. Department of Commeree, Bureau of Economic Analysis, Full- and Part-Time Employment by Major Industry, 1970-1986.

The composition of total employment has shifted dramatically during the time period represented in Table 25-NSB. In 1970, state and local government accounted for only 5% of total employment. By 1986, state and local government employment as a proportion of total employment increased to 19% (primarily NSB positions in Barrow and the outer villages). Also, employment in the trade and services industries increased from 22 to 28% over this same period (this and the "construction" category contain some "enclave" workers). After 1980, NSB government employment accounts for nearly all of state and local government employment shown in Table 25-NSB. The NSB government accounts for most of the direct increases in total NSB employment during this period. Furthermore, it is likely that the strength of the NSB government sector is indirectly responsible for the increased presence of trade and services employment in the total NSB employment base. Whereas the NSB government once played a minor role in the North Slope economy, it now represents a chief determinant of economic stability for the region as a whole. This is especially true in view of the recent employment decline registered in the oil and gas sector.

Table 26-NSB compares non-government, private sector employment in Service Area-10 (SA-1O) with non-government employment in the entire NSB region for the period 1980 through 1987. SA-10" refers to geographic boundaries, designated by the Alaska Public Utilities Commission, that include all oil and gas fields and production facilities associated with the Prudhoe-Kuparuk Industrial Complex. The table shows that between 1980 and 1987, non-government employment in SA- 10 increased steadily as a proportion of total non-government employment across the entire NSB region. By 1987, over 85% of all regional non-government employment was concentrated in the SA-10, Prudhoe-Kuparuk area. In addition to direct mining and construction activity, this would include employment associated with the many oil service companies involved in transportation, communication, and general services.

In spite of these patterns, the direct employment link between the PKIC and the NSB regional economy is modest. According to 1988 results from the NSB Census of Population and Economy, about 2% of total NSB village employment is tied to the mining industry, including petroleum development and operations in SA-10.

### *3.* Wage and Salary Earnings

Table 27-NSB compares resident and non-resident wage-and-salary earnings for persons who worked in the NSB region. Table 27-NSB shows that wage-and-salary earnings, including federal, state, borough, and local government, were only a fraction of total earnings of workers within the NSB boundaries. This further illustrates the disparity between Prudhoe-Kuparuk oil and gas operations and the NSB regional economy. Most income earned within the NSB is spent outside of the regional economy.

Table 26-NSB

Total Non-Government Employment
in the North Slope Borough
1980 to 1987

| Year | Service Area 10 (1) | Entire NSB (2) | 8A 10 as a % of NSB (1)/(2) |
|---|---|---|---|
| 1980 | 3,104 | 4,711 | 65.9% |
| 1981 | 5,584 | 7,321 | 76.3% |
| 1982 | 6,517 | 8,152 | 79.9% |
| 1983 | 7,352 | 8,707 | 84.4% |
| 1984 | 6,683 | 7,949 | 84.1% |
| 1985 | 6,556 | 7,824 | 83.8% |
| 1986 | 5,855 | 7,009 | 83.5% |
| 1987 | 5,209 | 6,106 | 85.3% |

Notes: (1) Semite Area 10 refers to ADOL Subarea 321.
(2) Figures for 1986 and 1987 reflect adjustment in SA-10 mining employment to incorporate corrections in published StatQ estimates made by ADOL research staff.

Source Alaska Department of Labor (ADOL), Statistical Quarterly, 1980-87. ADOL Special Tabulations, 1987 (for SA-10 figures).

Table 27-NSB

NSB Resident vs Total Earnings

| | Wage and Salary Earnings by: | |
|---|---|---|
| Date | Place of Work (x$1000) | Place of Residence (x$1000) |
| 1%9 | 37,948 | 10,433 |
| 1970 | 38,899 | 1,133 |
| 1971 | 32,537 | 2,799 |
| 1972 | 27,457 | 2,758 |
| 1973 | 24,185 | 2,037 |
| 1974 | 37,166 | 16,721 |
| 1975 | 254,475 | 7,629 |
| 1976 | 356,960 | 9,427 |
| 1977 | 264,992 | 6,614 |
| 1978 | 292,604 | 56,305 |
| 1979 | 242,937 | 54,594 |
| 1980 | 315,093 | 64,782 |
| 1981 | 517,485 | 97,387 |
| 1982 | 636,328 | 94,430 |
| 1983 | 705,681 | 103?384 |
| 1984 | 658,511 | 110,388 |
| 1985 | 571,540 | 103,433 |
| 1986 | 428,463 | 87,178 |

Notes: (1) Figures in nominal dollars (x1OOO).
(2) Figures do not include intereat, dividends, rent, or corporate profits.
(3) Place of Work refers to local earnings; Place of Residence refers to resident earnings.
Source: U.S. Bureau of Economic Analysis, Personal Income 1%9-1986.

4. Property Taxes, Revenues, and Regional Disbursement

At first glance, there would appear to be few economic ties between the PKIC and the NSB traditional village economies. The PKIC is road-connected to Alaska's "Railbelt" region and ultimately to the rest of the world. Except for occasional of winter ice-roads, the eight NSB traditional communities do not have any road links to their neighboring communities or to other regions of the state. The PKIC functions as a enclave, fully self-contained and independent of the regional economy in which it is located. While geographically isolated, the eight NSB villages support numerous political and economic ties. Among the most important is Barrow's role and the primary hub for regional transportation activity and government affairs; a role that parallels that of Anchorage, as the hub for the state as a whole. Much of the village travel into and out of the region passes through Barrow. Barrow supports two jet-aircraft passenger flights per day and serves as the headquarters for ASRC, the NSB Municipal Government, the NSB School District, the Public Health Service Hospital, and most state and federal branch offices on the North Slope.

However, the seemingly limited relationship between the PKIC and the economies of the eight NSB traditional communities masks a fundamental institutional relationship that indirectly links the economic fate of these distinct gee-economic units. The economies of the eight NSB traditional communities are largely driven by "economic rents" captured from the vast, yet declining, wealth of the PKIC petroleum resource. As with all local government jurisdictions in Alaska, the NSB Municipal Government is vested with the authority to tax property. Most of the NSB tax base is embodied in PKIC industrial property, including the first 177 miles (and 4 pump stations) of the Trans Alaska Pipeline System (TAPS). According to the NSB Department of Administration and Finance, in addition to TAPS, this property includes 1,900 miles of other pipelines (transit + feeder lines), 2,400 wells (approximately one-half for production), 78 drilling pads, 400 miles of gravel road (220 miles of miscellaneous roads + 180 miles of haul road), and dozens of industrial facilities and worker compounds. According to official NSB government estimates, the total assessed value of oil and gas property stands at about $12 billion. As shown in Table 28-NSB, this tax base is not expected to decline until after 1993.

During the ten-year period from fiscal years 1980 through 1989, the NSB government collected a total of $1.7 billion in property tax receipts (Table 28-NSB). Over the most recent five-year period, average annual property tax receipts were $235 million. Over the same five-year period, NSB General Fund expenditures were $349 million. Property tax revenues represent the single, largest revenue source, accounting for two-thirds of NSB General Fund expenditures over the past five years.

As a tax-base, the value of PKIC oil-and-gas property represents the foundation of NSB government operations and capital improvement program (CIP) project spending. One might view the NSB government as a mechanism for redistributing economic rent obtained from oil and gas property lying with NSB municipal boundaries. Indeed, according to NSB Census results, the NSB government directly accounted for 60% of total employment among all eight NSB traditional communities in 1988. The private sector accounted for the bulk of remaining employment. However, a significant portion of private sector economic activity in the NSB region is based on direct NSB government transfers to for-profit village corporations and to ASRC, mainly for CIP project construction and other local-government-funded projects. Only a small proportion of total private-sector economic activity may be viewed as endogenous, secondary support activity, driven

largely by business activity geared to serving the resident population base (e.g., grocers and restaurants) and the NSB government (e.g., hotel, and commuter air taxis). The relationships between the PKIC, the NSB Municipal Government, and the economies of the eight NS13 traditional communities is depicted in Figure 9-NSB.

The economies of the NSB traditional communities comprise a mix of subsistence production for use and wage-and-salary employment.. Excluding Barrow, which enjoys the economic benefits of a regional service center, the wage-and-salary economies of the remaining seven NSB villages exhibit little or no induced, support-sector activity. They virtually depend on jobs created by the NSB government and to some extent on NSB government subsidies for heating fuel, electricity, housing, health care and water. The magnitude and extent of regional economic ties between the NSB government and traditional village economies may be viewed in connection with the village distribution of NSB capital spending shown in Figure 1O-NSB.

Figure 1O-NSB shows cumulative capital spending for selected CIP projects outlined above by village from 1978 through fiscal year 1988. These CIP projects include:

Education Facilities,
Roads,
Housing,
Airport Facilities, and
Electric & Fuel Distribution.

The spending patterns exhibited in Figure 1O-NSB do not include CIP expenditures for fire stations, public safety facilities, health clinics, water & sewage facilities. Nevertheless, Figure 1O-NSB indicates that the NSB government spent between $99,800 and $2S8,900 per capita on a basic set of CIP projects across the seven NSB villages. This represents a level of average per-capita spending of $138,300 over a ten-year period, or about $14,000 annually, per village resident. Total cumulative CIP spending, taking into account all CIP projects, including those not accounted for in Figure 1O-NSB, probably would be two or three times the annual, per-capita spending level noted above.

In spite of the tendency for a major portion of CIP disbursements to be allocated for materials outside of the regional economy, CIP spending continues to represent an important element for NSB government direct and indirect employment; it creates jobs that a consistent and compatible with basic skills of the resident labor force. While present levels of capital spending are significantly below those exhibited in the early-to-mid 1980s, they continue to account for a major portion of total General Fund expenditures (see Table 28-NSB). Capital spending is complemented by an operating budget that increased fairly steadily from $39.4 million in fiscal year 1980 to $102.4 million in 1989. Over the past decade, the NSB government allocated an average of $78 million per year to general government operations. This represents average operating expenditures of over $18,100 per-capita or $70,200 per NSB employee. By comparison, the Municipality of Anchorage operating budget was about $1,000 per capita in 1989.

Table **28-NSB**

Summary of NSB General Fund Revenues and Expenditures
1980-1990

*(Page 1 of 2)*

| | FY80 | FY81 | FY82 | FY83 | FY84 |
|---|---|---|---|---|---|
| STATEWIDE VALUE OF PROPERTY PER CAPITA ($) | 47,342 | 53,354 | 57,997 | 70,538 | 75,844 |
| NSB TAX CAP POPULATION | 8,187 | 8,055 | 9,234 | 7,098 | 7,552 |
| PER CAPITA LIMIT ON NSB OPERATING REVENUES ($) | 3,196 | 3,601 | 3,915 | 4,761 | 5,119 |
| MAXIMUM NSB OPERATING REVENUES ($) | 26,162,254 | 29,009,237 | 36,149,240 | 33,795,814 | 38,662,237 |
| GENERAL FUND REVENUES: | | | | | |
| PROPERTY TAX ($) | 52,444,956 | 59,062,456 | 109,741,339 | 113,680,243 | 152,412,956 |
| OTHER ($) | 27,246,231 | 54,823,379 | 87,381,944 | 110,743,480 | 113,271,982 |
| TOTAL GF REV ($) | 79,691,187 | 113,885,835 | 197,123,283 | 224,423,723 | 265,684,938 |
| GENERAL FUND EXPENDITURES: | | | | | |
| DEBT SERVICE ($) | 29,151,500 | 32,774,000 | 74,150,000 | 95,311,400 | 129,950,470 |
| CAPITAL ($) | 6,554,495 | 8,202,400 | 16,741,400 | 15,902,000 | 29,475,270 |
| OPERATIONS ($) | 39,361,292 | 49,760,751 | 64,110,459 | 68,806,024 | 73,832,071 |
| FROM PROPERTY TAX REVENUE ($) | 23,293,456 | 26,288,456 | 35,591,339 | 18,368,843 | 22,462,486 |
| FROM OTHER SOURCES ($) | 16,067,836 | 23,472,295 | 28,519,120 | 50,437,181 | 51,369,585 |
| TOTAL GF EXPEND ($) | 75,067,287 | 90,737,151 | 155,001,859 | 180,019,424 | 233,257,811 |
| NSB TOTAL ASSESSED VALUE ($-Thousands) | 5,021,848 | 5,725,920 | 6,607,384 | 8,172,381 | 9,932,509 |
| MILL RATE: | | | | | |
| COMBINED | 10.44 | 10.31 | 16.61 | 13.91 | 15.34 |
| Debt Service | 5.80 | 5.72 | 11.22 | 11.66 | 13.08 |
| Operations | 4.64 | 4.59 | 5.39 | 2.25 | 2.26 |
| MAX Operations | 5.21 | 5.07 | 5.47 | 4.14 | 3.89 |

Note: **Actual** data for FY80 - FY87. Budgeted figures for **FY88** and FY89.
Source: NSB Budget Documents for FY81 to **FY89.**

Table **28-NSB** (continued)

Summary of NSB General Fund Revenues and Expenditures
1980-1990
*(Page* 2 *of 2)*

| | FY85 | FY86 | FY87 | FY88 | FY89 |
|---|---|---|---|---|---|
| STATEWIDE VALUE OF PROPERTY PER CAPITA ($) | **75,553** | **82,213** | **86,322** | **96,195** | **83,430** |
| NSB TAX CAP POPULATION | **10,171** | **12,359** | **12,342** | **12,581** | **12,581** |
| PER CAPITA LIMIT ON NSB OPERATING REVENUES ($) | **5,100** | **5,549** | **5,827** | **6,493** | **5,632** |
| MAXIMUM NSB OPERATING REVENUES ($) | **51,870,346** | **68,584,757** | **71,913,563** | **81,690,477** | **70,850,216** |
| GENERAL FUND REVENUES: | | | | | |
| PROPERTY TAX ($) | **227,610,426** | **235,814,800** | **249,115,037** | **236,403,307** | **227,533,292** |
| OTHER ($) | **117,530,805** | **92,508,528** | **90,723,812** | **96,590,693** | **104,010,160** |
| TOTAL GF REV ($) | 345,141,231 | **328,323,328** | **339,838,849** | **332,994,000** | 331,543,452 |
| GENERAL FUND EXPENDITURES: | | | | | |
| DEBT SERVICE ($) | 184,710,000 | 212,914,800 | 218,913,741 | **202,725,000** | 196,565,000 |
| CAPITAL ($) | **32,947,000** | 32,947,000 | 27,900,000 | 78,087,000 | 72,661,000 |
| OPERATIONS **($)** | **99,649,200** | 87,697,000 | **93,025,108** | 101,131,776 | 102,401,000 |
| FROM PROPERTY TAX REVENUE ($) | **40,532,579** | 22,900,000 | **30,201,296** | 28,201,110 | 29,220,615 |
| FROM OTHER SOURCES ($) | **59,116,621** | 64,797,000 | **62,823,812** | 72,930,666 | 73,180,385 |
| TOTAL GF EXPEND ($) | 317,306,200 | **333,558,800** | **339,838,849** | 381,943,776 | 371,627,000 |
| NSB TOTAL ASSESSED VALUE ($-Thousands) | 12,261,436 | 12,834,230 | **13,560,972** | 12,570,828 | 12,290,997 |
| MILL RATE: | | | | | |
| **COMBINED** | 18.37 | 18.37 | 18.37 | 18.37 | 18.37 |
| Debt Service | 15.06 | **16.59** | 16.14 | 16.13 | 15.99 |
| Operations | 3.31 | 1.78 | 2.23 | 2.24 | 2.38 |
| MAX Operations | **4.23** | 5.34 | 5.30 | 6.50 | **5.76** |

Note: Actual data for FY80 - **FY87.** Budgeted figures for FY88 and **FY89.**
Source: NSB Budget Documents forFY81 to FY89.

**Figure 9-NSB**

The North **Slope** Regional Economy

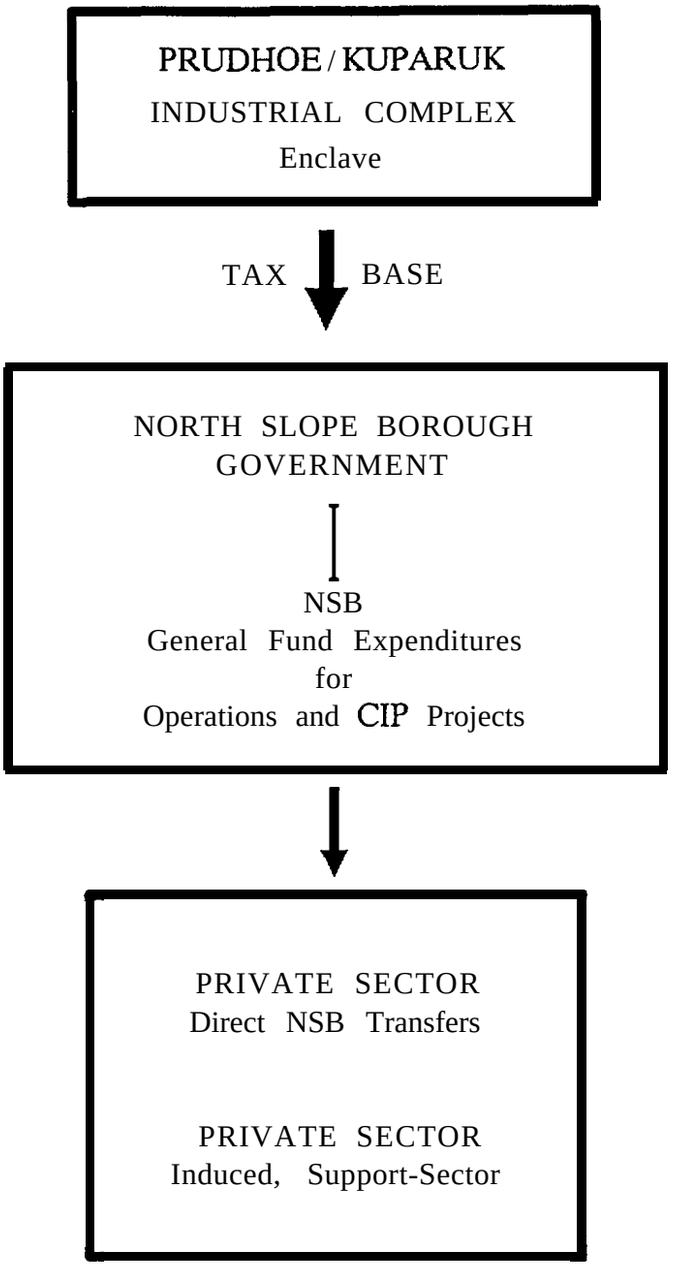
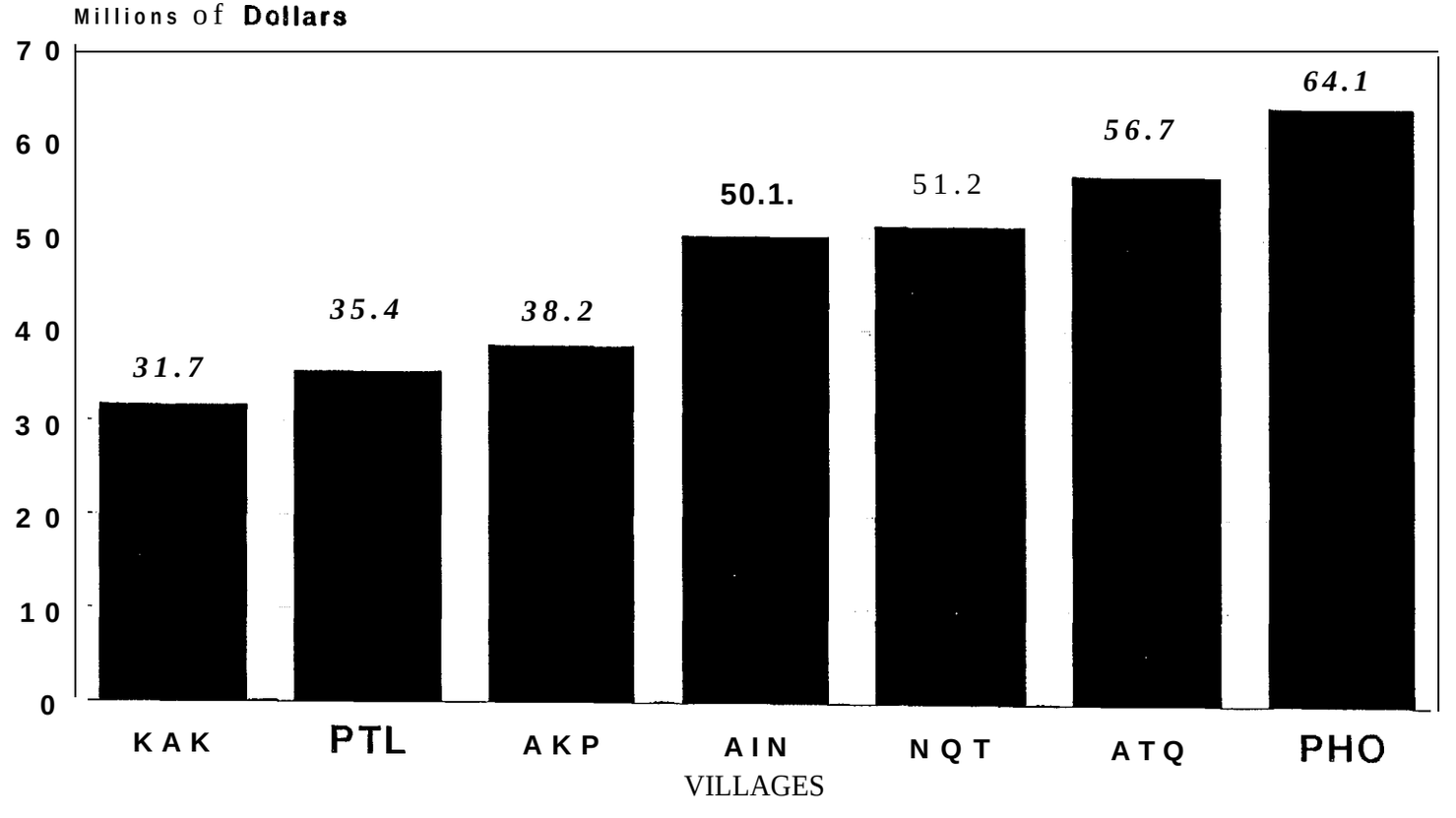


Figure 1O-NSB

CIP Spending for Selected Projects
By Village Through Fiscal Year 1988




Note: CIP spending in Barrow was equal to $433.2 million over same time period,

**Source: NSB Tax Cap** Task **Force**

## 5. *The* Tax Cap

The NSB property tax revenues are limited by a mechanism commonly referred to as the "Taxcap". The "taxcap" is a set of legal guidelines that restrict the maximum amount of property tax revenues the North Slope Borough (NSB) may collect for purposes of the operating budget. It is based on Alaska Statutes 29.53.045 (a-c). The name "Taxcap" originates because Alaska Statute 29.53.045 "caps" the amount of property tax revenues that the NSB collects for the purposes of general government operations. The same statute does not provide any limit or cap to NSB property tax revenues used for the purpose of servicing debt on CIP bonds.

Two important factors enter into the "taxcap" formula:

(1) Per capita value of property over the entire state of Alaska and

(2) NSB Taxcap population.

The basic taxcap formula multiplies NSB population by per-capita assessed value of statewide property. The important point is that the tax cap depends not on the assessed value of NSB property, but on the assessed value of statewide property, subject to several adjustments. The per capita assessed value of statewide property is equal to the total assessed value of real property over the entire state, divided by statewide population. This per capita figure is currently about $73,000, down from over $%,000 in fiscal 1988. By way of comparison, this figure is seven times smaller than current estimates of per capita assessed value of NSB property.

The total assessed value of property in the NSB does not factor into taxcap formula that limits NSB property tax revenues for general government operations. As shown in Table 28-NSB, NSB total assessed value peaked at about $13.5 billion in fiscal year 1987. Note also, that in spite of a stable millage rate of 18.37, total annual property tax revenue peaked at $249 million in the same year. The significance of the taxcap formula is depicted in the fourth row entitled, "Maximum NSB Operating Revenues." In 1987, the maximum amount of property tax revenue that could be applied to general fund operating expenditures, as determined by the taxcap formula, was $71.9 million. The figures in Table 28-NSB indicate that far less property tax revenue - only $30.2 million - was actually allocated to the operating budget. The operating budget has traditionally been funded largely from alternative revenue sources, including intergovernmental revenues, charges for services, sales and use taxes, and, most importantly, interest earnings on cash reserves.

The taxcap limit has been in place for over ten years. To date, the NSB has never taxed property to the limit established by the taxcap formula. The NSB presently carries about $1 billion in bonded debt, however, it is servicing its debt with an expeditious repayment schedule. Once NSB bonded indebtedness is retired in 1998, the limits imposed be the taxcap formula will seriously restrict the total amount of property tax revenue that may be collected. More bonds could not be issued unless substantial oil reserves are discovered on the North Slope in the very near future because the ability to issue bonds is related to the perceived ability to redeem them (they are issued based on anticipated revenue), and the NSB is dependent on oil-based revenue tied to oil production fields which are in decline. Such bond revenue can only be used for capital projects

anyway (if they are not to count against the tax cap), and it is the operating budget that will be problematic. As facilities are built with bond money not only must the bond be repaid with interest, but additional operating budget money is tied up for the operation and maintenance of that facility. While inflation may increase the value of the infrastructure which the NSB taxes, and thus "increase" its tax revenues, inflation also increases the cost of operation and maintenance of facilities.

Suppose, for example, that total bonded indebtedness was fully abrogated and the debt service payment in fiscal 1990 was zero, instead of $177.4 million. In this case, the total amount of property tax revenue that the NSB government count collect would be $56.3 million (Table 28-NSB) -- the maximum allowed for the NSB operating budget, as set forth by the taxcap formula. This would impose severe limitations on present operations and maintenance budgets. Also, elimination of property tax revenues for debt service would substantially reduce cash reserves and seriously decrease associated interest earnings, the second largest revenue source to the NSB general fund.

The NSB does not actually levy property taxes directly. By law, the State of Alaska levies a 20-mill tax on all oil and gas property regardless of NSB tax policy. The NSB is credited by the state for the amount of tax it levies up to that 20-mill level. Thus, even if the NSB were to reduce its mill rate or entirely stop levying property taxes, the oil and gas industry would still pay the state a 20-mill tax on its property.

During 1989, the Alaska State Assessor publicly announced that the NSB government has been overtaxing the oil and gas industry over the past decade and officially presented an interpretation of taxcap formula that was considerably more restrictive than the NSB interpretation outlined above. The State Assessor argued that:

> (1) The "Taxcap" on NSB property tax revenues should apply for the purposes of servicing debt, as well as for general government operations.
>
> *(2) The* burden of property taxes, which is currently applied evenly across all NSB property owners, should be substantially shifted to NSB homes and business, away from oil and gas property.

The correct interpretation of the taxcap formula is currently under review by a citizen task force appointed by the State of Alaska Legislature. During public hearings held throughout the spring and summer of 1989, the NSB municipal government as well as the City of Valdez strongly debated the state assessor's interpretation. The state assessor's interpretation would imply devastating consequences to the nature and extent of local government operations and to the regional economy as a whole. It is likely that the underwriters for the NSB's bonds also continue to keep a eye on this issue. Pressure from bond markets and from the state government are among the chief factors that underlie the Borough's continued reluctance to increase its millage rate from the current level of 18.37 mills.

6. Regional Economic Outlook

It is likely that, pending unforeseen economic windfalls or disasters, the NSB government at best faces a non-increasing revenue base. The probable revenue outlook for the NSB government is analogous to that of the state as a whole: gradual but steady decline. Unlike the major component of state government revenues, which depend on oil price and production, the NSB government faces revenue decreases arising from steadily diminishing, yet comparatively less volatile, oil-and-gas property value. Ironically, once the debt is paid off and the taxcap kicks in, the NSB revenue picture will rapidly deteriorate. The NSB could introduce more debt-financed CIP projects to forestall the revenue restrictions implied by the taxcap. However, this strategy would exacerbate an already overburdened O&M budget tied to an extensive inventory of existing CIP projects and facilities. Furthermore, the bond markets may not look favorably on such a strategy.

When combined with a rapidly-growing labor force, these fiscal circumstances suggest that, as the major economic force in the regional economy, the NSB may not readily succeed in supporting economic activity sufficient to maintain acceptable levels of unemployment. How can the NSB government reconcile growing labor force participation with a non-increasing revenue base? The first step is to discourage real (inflation adjusted) increases in the wage and salary levels. The NSB government discontinued automatic wage and salary increases in 1987. Furthermore, the NSB dropped its effective minimum wage from $15.72 to $12.00 per hour in fiscal year 1989. These measures help to distribute a fixed payroll over a larger number of employees.

The NSB could also introduce programs that reduce labor force participation in NSB traditional communities. In recent years, the NSB has expanded and improved its higher education and vocational training programs. Better alternatives for training and education may help to reduce the incidence of labor force participation among NSB residents. The NSB could take this policy a step further and encourage residents to seek employment outside of the North Slope region. Programs that increase the incidence of resident employment in the PKIC would also reduce labor force participation in traditional communities. Policies that lead to more efficient management of NSB resources would help. The NSB has recently experienced a series of large extraordinary expenditures (e.g., school fires and housing program mismanagement) needlessly absorbing resources that would otherwise have been available for programs that encourage resident employment expansion. On the other hand, the NSB window-manufacturing plants and the Residential Energy and Living Improvements (RELI) programs represent recent examples of more effective applications of the Borough's increasingly limited fiscal resources.

D. The Public Sector of the Economy

1. The North Slope Borough, Jobs, and the Villages

As reviewed above, 1988 NSB census economic information on the NSB level is not yet available. The 1980 information was reviewed above. Detailed information for each of the villages for both 1980 and 1988 was presented in the village chapters. This will enable us to make some statements in this section about similarities and differences among communities, as well as generalizations about the region as a whole.

The public sector dominates the North Slope economy. In large part this is because the oil industry is "invisible" in terms of economic statistics. Most oil employees are not NSB residents and thus do not appear in employment statistics. Everyone knows that the oil industry is the ultimate source of nearly all NSB funds (Figure 11-NSB). Since they are derived from the NSB'S taxing authority and used for the provision of public services, they are converted into public sector funds. Only a small percentage of the resident NSB population is thus employed in the "primary productive" or industrial sector of the economy. Most of the labor in this sector is provided by a non-resident, non-Inupiat labor force. The resident labor force is for the most part employed in service jobs of one sort or another. Even most construction projects are part of the CIP and are funded with NSB government funds and managed as public projects. Nearly all NSB residents who are employed draw a paycheck from the NSB in one way or another.

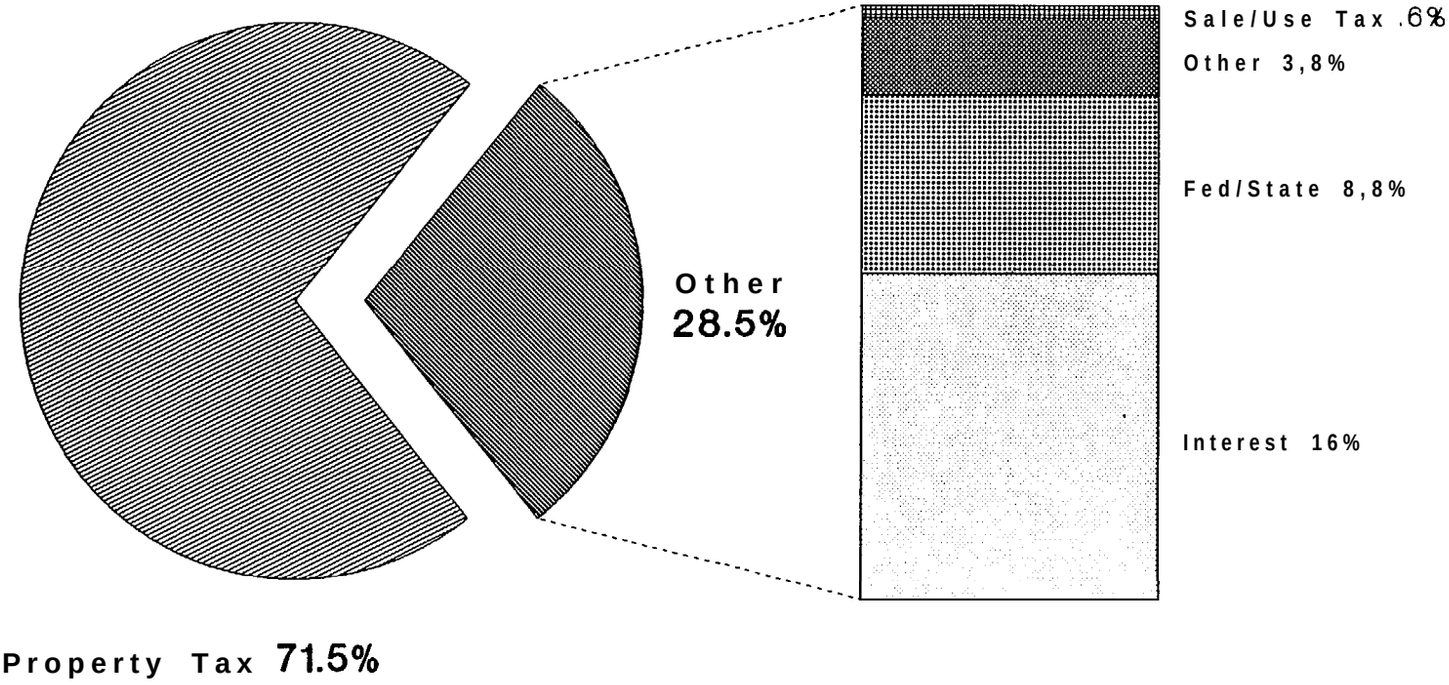
This was not always the case, but since the inception of the NSB CIP program the expectation of the NSB creation of jobs has become so great that it would be difficult to change. One of the initial reasons for the formation of the NSB was so that it could provide the infrastructure and services which up to that time had not been available on the North Slope. It took several years for this program to be organized, and for the NSB to win a lawsuit ensuring its right to tax oil production facilities at a rate high enough to fund the projected program. Figure 12-NSB graphs the funds expended by the NSB CIP each year. As can be seen, the NSB opted for a "rapid buildout" which resulted in a few years of very high expenditures. The reasons for this are many and various, but most informed observers believe that it was perhaps not the best way to go. Debt service is currently nearly 70% of the total NSB budget (Figure 13-NSB) and the high level of expenditures made efficient management of the projects difficult. There was also a certain level of graft and corruption (lawsuits now in progress) and a lower rate of expenditure would have provided more local people with employment for a longer period of time. As it is, many non-locals had to be "imported" to complete the slated projects. As can be seen from Figure 1O-NSB, the level of CIP funding has had to decline dramatically because of the debt load acquired with the high expenditure years of the program. The CIP was funded with bonds sold on the basis of the future tax revenues of the NSB. When oil was at a high price these bonds sold well. With the current price of oil they do not sell so well and the projected revenue of the NSB against which they are issued is not quite as guaranteed.

Because the NSB CIP program primarily built village infrastructure, as facilities were built jobs were also created. Thus, full-time service employment has increased steadily as CIP projects were completed. These jobs now partially balance those "lost" because CIP activity has declined. The NSB is also actively creating other jobs in the villages through other programs. Learning from the mistakes made in the CIP program, these jobs more directly address locally defined needs and are not capital-intensive. This is very nearly the direct opposite of the CIP program during the 1981-1985 period.

Barrow is the only NSB village which has a significant private sector to its economy. This will be discussed below in a separate section after the nature of the private economy on the NSB has been examined a bit more in general.

Figure **11-NSB**

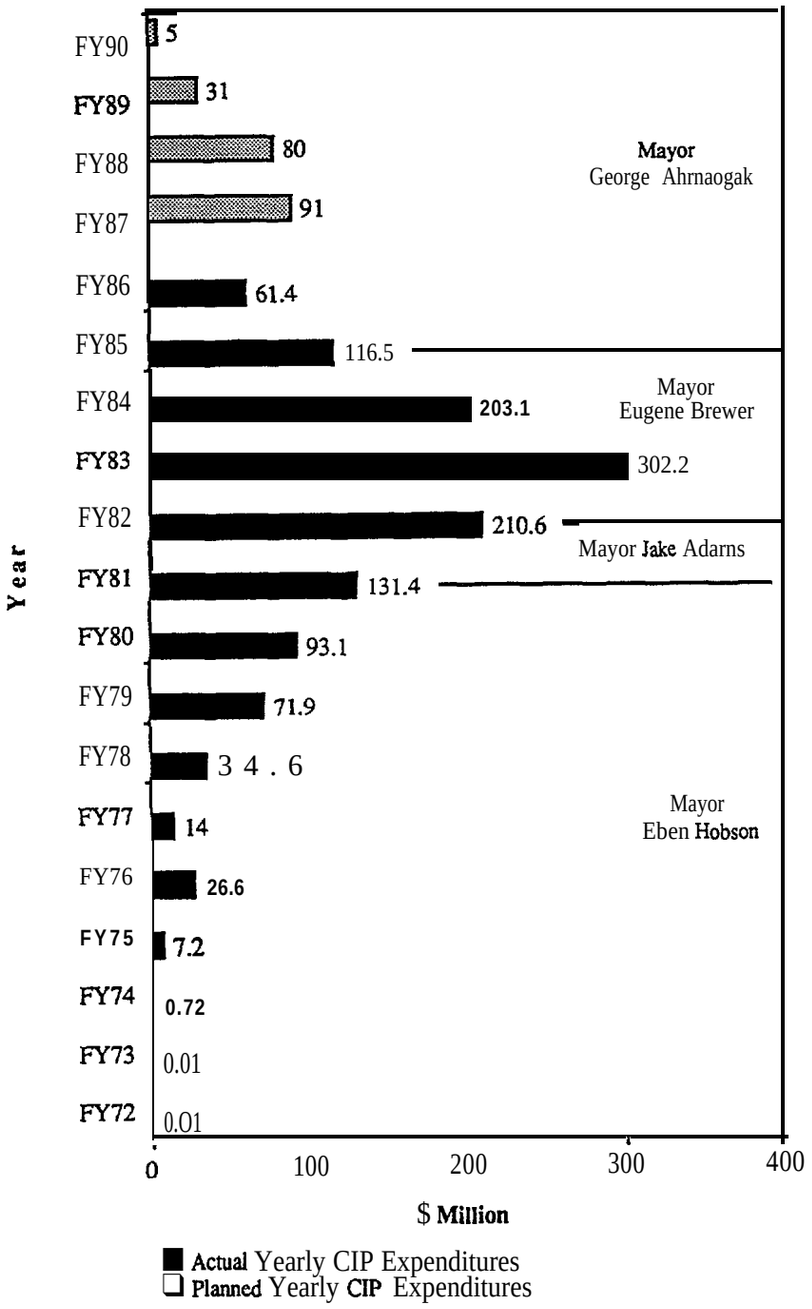
Revenue Sources
**FY 89:** $316,034,650




Source: North Slope Planning Department

**Figure 12-NSB**

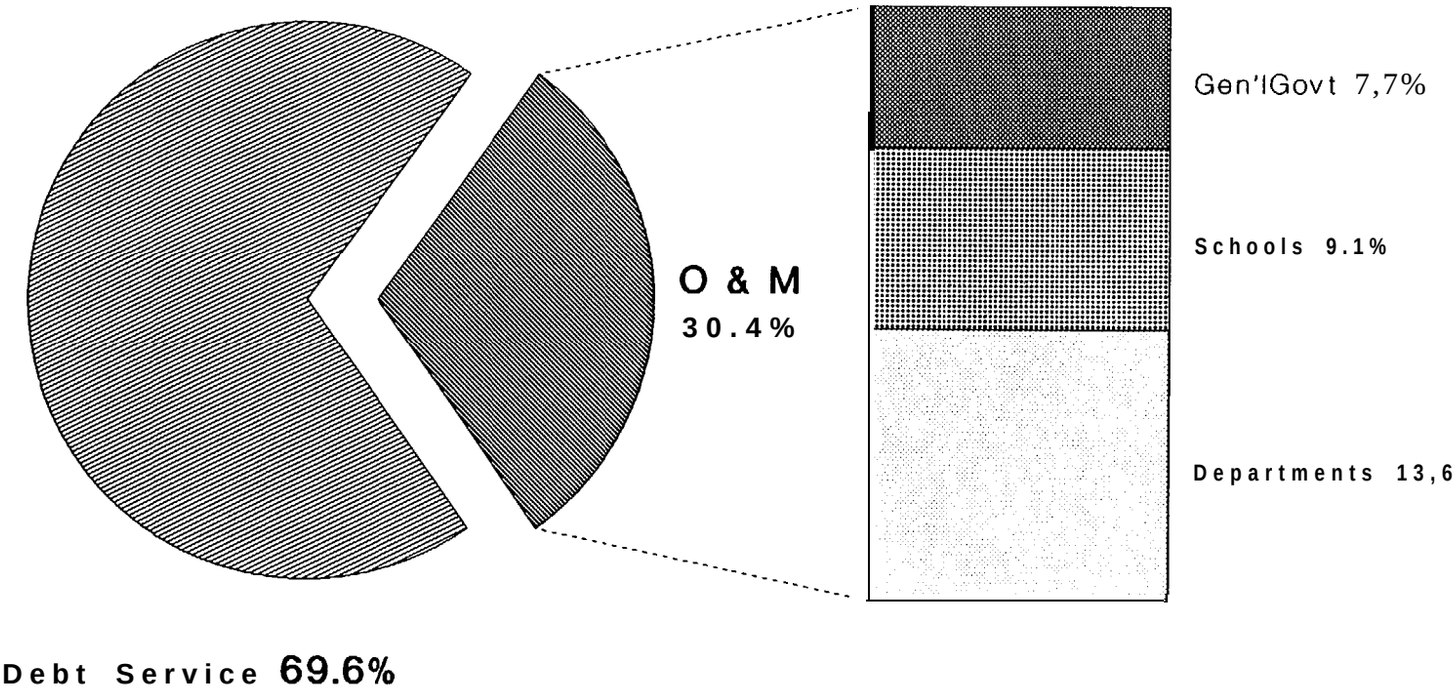
North Slope Borough **CIP Expenditures**
1972-1986 **Actual;** 1987-1990 Planned




Source: North Slope Borough

Figure **13-NSB**

Proportional Expenditures
**FY 89:** $316,034,650




Source: North Slope Planning Department

### 2. The North Slope Borough and ANCSA Colorations

Normally, local government and private corporations are conceived of as separate entities. On the North Slope, however, where the NS13 and the ANCSA corporations were essentially born together, there is a close cooperation. As part of the NSB policy of local job creation, most village corporations are given preferred bidder status on any NSB project planned for that village. The regional corporation, Arctic Slope Regional Corporation (ASRC), was the principal financial support for the refounded villages until the NSB won its full taxing authority rights in the courts. Many of the same people active in the NSB government were also officers and board members of ASRC. The NSB and ASRC cooperate on regional planning and the NSB will contract preferentially with ASRC when they can supply the expertise required by the NSB.

## E. The Private Sector of the Economy

### 1. Village Level

At the Native village level, there is a very small or no private sector (Figure 14-NSB). Barrow, because of its size, population diversity, and position as the regional hub, is the exception to this generalization and will be dealt with below. Most of the jobs reported to be in the public sector by the NSB 19S8 census are actually village corporation jobs. In most cases these are created with NSB "pass through" money in the form of contracts with the NSB. The fuel business, which is one mainstay of all the village corporations, is subsidized by the NSB by receiving its supply of heating oil for free. The salaries of those who deliver it is paid from the money the village corporation charges for it. Many village corporations run a "camp" where transient laborers are encouraged to stay. Whenever possible, the NSB arranges for its personnel to use such facilities. If at all possible, the NSB will contract through the local village corporation for any NSB project in that village. Most often the village corporation will manage the project as a joint venture with a non-local non-Native corporation. This non-local corporation will then in most cases manage the project and the village corporation will endeavor to supply as much of the labor for the project as is locally available. This enables the village corporation to share in the overhead charges and profit even if it lacks personnel who could manage such projects. Unfortunately, most of the village corporations outside of Barrow still do lack such management personnel, although several are training such people. Most village corporations will stress job creation as their primary goal in any event, with profit generation as a secondary goal. The real object seems to be to stay in business so that local people can be employed. The final result, however, is that the village corporations on the North Slope for the most part operate as quasi-governmental agencies.

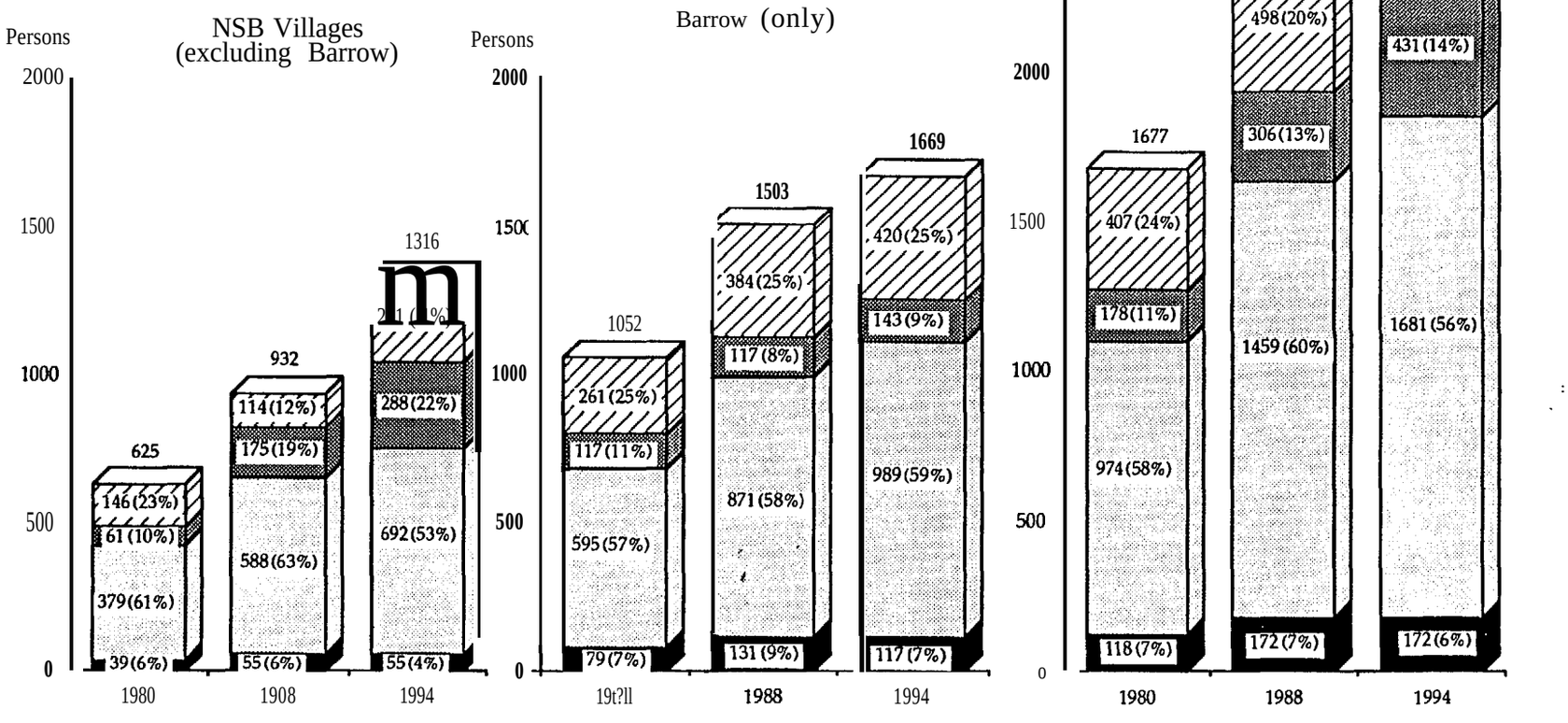
The only real private sector in most of the villages are the retail stores, taxi services in some immunities, and airline agents. The main store in most of the outer villages is run by the village corporation. For the most part they stay in business but are plagued by uncollected credit owed. Most attempt to limit the credit which they extend, but find it difficult to deny a fellow villager in need. Wainwright has a second major store which is operated as a cooperative. That is, various residents of Wainwright own shares in the store. Because this store has a conscientious and capable manager, it now makes a regular profit. This has not always been the case. All other

**Figure 14-NSB**

Public vs Private Sector **Employment:**
NSB Villages, Barrow, and NSB Region

- ❑ Fed, State, & Local Gov't
- ❑ **Native** Corp & Affiliate
- ❑ NSB Direct
- ■ Other Private Sector

NSB Planning Department
Census of Population and Economy, 1989.



stores in the outer villages are small, family-owned affairs. All are specialty stores in one sense or another and are generally higher-priced than the main store in the village. They will provide longer hours, different inventory, or a steadier supply of desired items.

Taxi services are limited to a few villages and most taxi operators do not make this their exclusive occupation. Almost all will work for wages at seasonal jobs, which are invariably in the public sector. Airline agents work under different arrangements with their employers, but usually do not earn enough to make that their only source of income (some work only in exchange for travel and free freight). In any event, most airlines on the North Slope are subsidized by sharing in the mail contracts to the outer villages and would not fly to them as often, or employ a local agent, in the absence of such mail contract subsidies.

It is not difficult to understand why the private sector is so little developed in the outer villages. There are few resources, in an economic sense. While there would seem to be opportunities in the retail sector to compete with the main village corporation store, the experience in each of the villages has been that it is very difficult for a small store to make a long-term profit. Interestingly enough, those stores which have lasted the longest are those run by non-Inupiat. It thus appears that the local explanation that such stores have problems because the owner is related to most people in the community and can either make a profit or fulfill the expectations of sharing, but not both, is correct. Most such entrepreneurs eventually bow to public pressure and will eventually close the store or be forced to extend enough "bad" credit so as to make a minimal profit. Some people (especially non-Inupiat) will leave the village after a while. Some of these stores operate intermittently. None have the capital or inventory to operate within the social context of a NSB village for the long term.

2. Regional Level

At the regional level, it is obvious that the real private sector (if there is one) is the oil industry and their subcontractors. The complexities of the tax laws as they apply to oil companies are beyond this report, so the extent to which oil companies can be said to be subsidized will not be developed. It is fundamentally true that the "primary producer," the source of the resource which is exchanged for the money which currently drives the system, is the oil industry. It is interesting in this regard to note that the Inupiat stereotype of the oil industry is of a group of carpetbagging, non-local non-Inupiat who know little or nothing about the area, who essentially take local resources for next-to-nothing and do little in the way of productive work. The oil industry of course sees itself as the mainstay of the NSB economy and stresses the extreme hardships imposed upon its workers, and has its own stereotype of the typical North Slope resident. The split nature of the NSB economy -- public and private, visible and invisible -- is one of the fundamental aspects of North Slope life.

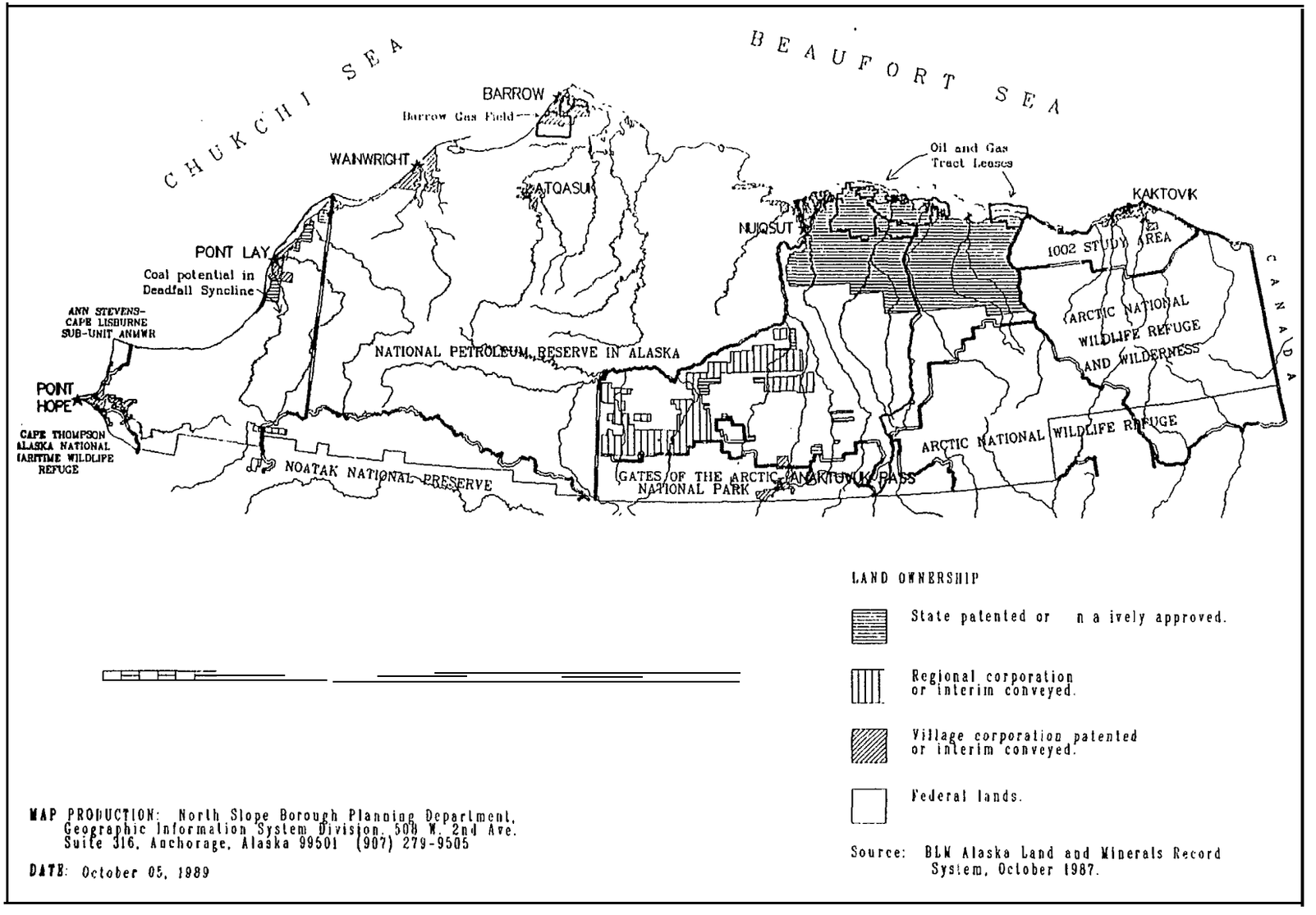
The reason that most oil workers come from off-Slope is obvious. Inupiat do not possess many of the skills needed in the oil industry. Training programs have been implemented and a good number of individuals have participated in them. Relatively few graduate, however, and of those who do not all accept work in the oil industry. Good information on why this is so does not exist, although some of the reasons have been touched on in the previous discussion of labor force participation.

ASRC, as the regional corporation, plays a primary role in the regional economy. They also have a clear ideological and political role. Their part in the refounding of Point Lay and Nuiqsut has been discussed in those village chapters. They cooperate with the AEWC and other regional non-profit organizations. Their business extends to different parts of the state and they have a formal relationship to each of the village corporations as the holder of the rights to the subsurface of all village corporation land. This has resulted in several joint ventures, so that both ASRC and the relevant village corporation could benefit from a resource located on or in the land involved. Most of these ventures have the appearance of private enterprise, but again are often behaviorally operated almost as a public trust.

The following map (Figure 15-NSB) displays land use patterns in the region. Areas of federal control are displayed, along with industrial development and Native Corporation lands.

## Figure 15-NSB

## NSB Region Land Ownership Patterns



SECTION III: FORMAL INSTITUTIONS

A. Government

1. North Slope Borough

Much of the following discussion is based on Morehouse and Leask 1978, McBeath and Morehouse 1980, McBeath 1981, and Morehouse et al. 1984.

The North Slope Borough (NSB) is more than a regional government. It was formed explicitly as a legal structure to be used to capture some portion of the value of the resources being extracted from the North Slope by non-residents for the use of local residents. The NSB has a clear social and ideological agenda. Given the inevitability of oil development, which was accepted on the North Slope, the NSB is responsible for seeing that local (NSB) residents benefit to the maximum extent possible. The definition of "benefit" is one sticking point, but is a combination of cash-income considerations and the protection of the integrity of the environment. Both are vitally important to the Inupiat people, and the formation of the NSB was an important step in acquiring a mechanism to influence both. The NSB can tax oil production facilities to provide the basis for a wage economy in the villages. The NSB also has planning and zoning powers, and the resources to hire competent staff, to safeguard environmental concerns. The two concerns are somewhat conflicting, but are by no means mutually exclusive. One way to look at political life (and perhaps life in general) is as a series of compromises. The NSB is simply the form which the Inupiat of the North Slope thought would be most effective in trying to achieve the most favorable compromises possible. An IRA or tribal organization may have been ideologically preferred (evidence one way or the other on motivations or preferences is, of course, impossible to discover at this late date) but ran into the problem of funding. Only a borough would have the civil authority to levy taxes and support the ambitious program envisioned by the Inupiat activists of the times.

The NSB exercises almost all political and municipal power on the North Slope, since all North Slope communities have ceded nearly all of their powers back to the NSB. This in effect makes all communities of the NSB components of one administrative municipality. The purpose was clearly to achieve an efficiency of scale and to prevent the duplication of administrative structures. Most NSB communities are also so small as to have difficulties staffing the full spectrum of municipal services, both in terms of money and personnel. The NSB could have provided the first to localities, but not the second. A central administration also provides much greater control and oversight of the use of funds and should be more efficient. The potential loss of local control is the major tradeoff, and in some areas is indeed perceived as a vitally important issue.

2. Formal Structure

The North Slope Borough is a civil government which incorporated on July 1, 1972 and later adopted a home rule charter in 1974. This of course means that all North Slope residents are eligible to vote and to be elected to office. Because the residential population of the North Slope is predominately Inupiat, however, the NSB has an essentially Inupiat identity. The impetus behind the formation of the NSB was the idea that such a regional government could be used to provide

services and build infrastructure for the residents of the North Slope on a par with that of the rest of Alaska and the lower-48. The preamble to the home rule charter of the NSB states:

> We, the people of the North Slope Borough area, in order to form an efficient and economical government with just representation, and in order to provide local government responsive to the till of the people, and to continuing needs of the communities, do hereby ratify and establish this home rule charter of the North Slope Borough of Alaska (NSB Charter Commission 19741).

At the time of incorporation only the powers of education, assessment and taxation, and planning and zoning belonged to the NSB. Soon after incorporation, the NSB requested that all NSB communities cede essentially all municipal powers and responsibilities back to the NSB. Over a period of time this was accomplished. These powers include police protection, fire protection, utilities, roads, and nearly everything else. Most cities retained jurisdiction over local recreational programs and a few other minor programs. Barrow for a time retained fire and police powers, but eventually ceded them as well.

All elected officials at the NSB level have so far been Inupiat, although non-Inupiat have served as important staff members. Barrow is the only NSB community with a large percentage of non-Inupiat residents, but it is also the largest NSB community. The non-Inupiat population had been increasing, but apparently more through immigration than natural increase, as the number of non-Inupiat children on the North Slope was insignificant until recently. The number of non-Inupiat and Inupiat adults is fairly even, however, especially for adult males. The future growth of the non-Inupiat population is dependent on how many families decide to stay in Barrow and the future job prospects attracting non-Inupiat adults. The Inupiat birthrate continues to be high so that it appears that Inupiat will continue to be the absolute majority on the North Slope. It is possible that Inupiat would not have a voting majority in Barrow at some point in the near future, but it does not appear likely that this would be possible for the NSB as a whole unless oil workers at Prudhoe-Deadhorse were somehow registered as NSB residents.

All elections for NSB officials are at large, with the entire NSB sewing as one election district. The assembly is composed of seven members. Most of those elected reside in Barrow, with the typical assembly having one or two members from the outer villages. The mayor has very strong executive powers and is the chief administrator of the NSB. There is a common perception that outer village interests are not adequately represented by the present system, but to allow each village to have a representative would either then result in the underrepresentation of the population of Barrow or dramatically increase the size of the assembly.

3. Regional Issues

North Slope communities are to a large extent structured by the NSB. Most share a commonly designed infrastructure. That is, all have a large and modem fire station, most have a standard medical clinic, all have similar power plant and water treatment facilities, all have modern school facilities, all have a similar issue of NSB vehicles, and so on. The people to operate all these facilities are hired by the NSB and are the core of the work force in each of the villages. In addition, the NSB funds seasonal or short-term projects in each of the villages for the explicit purpose of providing employment. These programs are indeed some of the principal reasons for the existence of the NSB.

Often, villagers think that the NSB has too much influence over life in the villages. There are comments that there is too much uniformity in the housing and other infrastructure provided by the NSB and that perhaps the villages would be better off if they had been forced to manage on their own. People in the outer villages are keenly aware of how dependent they are on NSB officials in Barrow for information and expertise. They are also wary of non-Inupiat influence which at times seems to be all too prevalent in Barrow at the NSB level. This creates a very ambivalent attitude. The villagers realize the benefits they are receiving from their relationship with the NSB, but at the same time also realize that they are now so dependent on the NSB that they have little ability for independent action. They are functionally components of a unified municipality with rather limited local options.

The CIP program can perhaps be used to briefly illustrate several of these points. Figure 12-NSB (see above) graphs CIP expenditures borough-wide by year. It can be seen that these peak rapidly in a few years and as rapidly decline. The reason for this decline is simple. The rate of expenditure was so rapid and oil prices were sufficiently unstable that the capacity of the NSB to issue bonds was significantly eroded. The NSB has mortgaged its future income for the present infrastructure built by the CIP program (currently 70% of the NSB budget is used for debt service). While most NSB residents readily agree that the present infrastructure is a vast improvement over the past, they question the cost of the program and the value received. Most, if given the opportunity, would have designed their homes very differently from those built by the NSB. These houses were designed by a firm from the lower-48. Most village residents question whether each village really needs as large a clinic and as large a fire station as has been built (on the other hand, no village wants to be the one left out, either). There were well-known cases of poor workmanship or outright fraud during some of the construction projects and it is generally recognized that one reason for the "rapid buildout" was self-sewing advice from non-Inupiat advisors. While there is little published or collected information on this topic because of the obvious legal implications, it appears that non-Inupiat influence in the NSB may be fairly directly related to the level of CIP expenditures. After the formation of the NSB and the election of Eben Hopson as mayor, the CIP program was begun and remained fairly small. After the death of Hopson the CIP budget ballooned and the NSB administrative staff grew at an amazing rate. After two different administrations, a "reform" mayor was elected who presided over the curtailment of the CIP program in a return to what was termed fiscal responsibility. It would perhaps be claiming too much to say that NSB government has been scaled back, but the emphasis has certainly shifted from one of centralization and growth to a recognition that not all communities on the North Slope are the same and that each should each have a say in matters that concern the services provided to that particular community. A greater recognition of diversity

and more of a willingness to consider a non-standard approach is evident. There is the perception that this change was accompanied by a purging of some non-Inupiat advisors and a more critical appraisal of the use of experts in general. It must also be pointed out that Inupiat are learning to govern themselves with these political institutions "on the job" and that it is to be expected that later executives will have learned from the experience of earlier ones. There are still many problems evident in the present administration, of course, but it is the purpose of any political system to try to explicitly deal with the problems that exist.

4. City Councils

Here we will deal with those formal organizations known as city councils. Exclusively Native forms of city (or village) government will be dealt with in a separate section below. Point Lay is the only NSB Native community not to have a city council, because it is an unincorporated municipality. Barrow, Wainwright, Point Hope, Kaktovik, and Anaktuvuk Pass were all incorporated as cities under Alaska state law before the formation of the NSB. Atqasuk and Nuiqsut incorporated as cities once they were refounded as cities in the early 1970s. Once these communities incorporated, the city council became the effective local government and any pre-existing traditional council lapsed into inactivity.

***Council Structure and the NSB***

The city councils in each community basically consist of seven members. As far as is known, all city council members are elected at large simply as members of the council. At the first meeting of a newly elected council the seven members then elect their own officers. This is most often done by consensus and usually reflects the number of votes each member received in the general election. City council elections are most competitive and potentially divisive in Barrow and Nuiqsut. The other five communities with city councils are apparently much less contentious in this arena.

The city council is the formal organization with which the NSB communicates about NSB-community issues. Formally, this is done through the village coordinator (see description and discussion below). Pragmatically, the village mayor (and sometimes even individual council members) often handles such contacts directly. Most NSB elected officials have personal relationships with each other which come into play in such matters. Travel to Barrow also often provides the chance for face-to-face interaction. The NSB mayor also takes advantage of the opportunities to display his attention to individual outer village concerns as a way to combat the general perception that the NSB is oriented primarily towards the needs of Barrow to the detriment of the outer villages.

Not all communities are treated equally by the NSB, of course, and this is one of the central problems between individual villages and the NSB. Barrow is by far the largest community and thus receives by far the largest share of the funding. The outer villages perceive themselves as a group in opposition to Barrow, and think that as a whole they do not receive either the attention or the funds that they require or deserve. There are further distinctions among this group between those villages who believe other of the outer villages receive more than they do. Almost

all of them seem to believe that they are on the bottom of the pile, however, so that any objective judgement is impossible. It is interesting that the perception from Barrow (and the NSB) is that a disproportionate amount of money and attention is given to the villages because of their needs. On a per capita basis, the outer villages would certainly seem to receive more than Barrow. Much of this is for "overbuilt" facilities, however, which in many ways are not seen in the village as responsive to village needs and desires. Thus, a school may have excess capacity, and a fire station be essentially unused except for seven to ten days a year. Meanwhile, problems which the village perceives as having relatively low-cost solutions (keeping at least one steady PSO in the village, making the school more responsive to local direction) are not acted upon at the NSB level.
The outer villages are also discriminated against in the provision of most social services, and the NSB recognizes this as a serious problem. This is unfortunately a result of the distance between Barrow and the other villages and the small size of these other communities. It is simply not cost effective to maintain professional staffs in any of the communities other than Barrow. Given the fact that for some types of services immediate access is essential if they are to be effective, residents of the outer villages must often do without. There has been some village discussion about attempting to regain some of the local powers ceded to-the NSB, but in the absence of any funding source to provide adequate support this is unlikely to take place. Given the financial dominance of the NSB, probably what can be hoped for at best is some negotiated mechanism for more local control of NSB expenditures in the social service area.

### *Village Politics*

City councils in all the villages function in much the same way (for purposes of this section, the Point Lay IRA Council will be considered as a city council unless explicitly excluded). All have a formally appointed meeting time and date once a month. Frequently this meeting is canceled due to the other time commitments of members and/or lack of business. Perhaps even more frequently, special meetings are scheduled to take care of pressing business or to coordinate with the visit of some individual from outside the village (NSB official, agency bureaucrat, researcher). Decisions are almost invariably made by consensus, with role call votes being in most cases a formality. Different villages do vary in the frequency with which disagreement is expressed in public council meetings in the form of dissenting votes, but reliable information on this is lacking and in all villages the ideal is to reach decisions by consensus. Most often a lack of dissention is taken as consensus.

All council members are elected at large and at their first meeting elect one of themselves as mayor. In this sense the village mayor is merely first among equals. All mayors strive to maintain this image, but some are certainly more directive than others. The mayor of Nuiqsut, for example, adheres strictly to an agenda and monitors discussion so that if it becomes unproductive or repetitive he can suggest that the item be tabled for a later meeting. He seldom will force an issue or a decision. He also will not let a discussion wander in the hopes of establishing a consensus where one is not evident. His goal is to have a productive meeting and to avoid the marathon meetings that are more typical of the North Slope. Most other mayors on the North Slope do not wish to exert this sort of direction, with the result that meetings are very long and relatively few people attend. On the North Slope as elsewhere, there seems to be a correlation between the (anticipated) length of the meeting and the amount of public attendance at that meeting.

Our own attendance at public meetings was rather limited and confined to a few villages which happened to have meetings during our periods of fieldwork. For the outer villages, those meetings conducted primarily in Inupiaq seemed to have better attendance than those conducted primarily in English. This may well have been a result of adjusting the language of the meeting to the people present, however, as the information we have on language use does indicate that it is quite context specific (see the language use section of this report). Meetings in Barrow are almost invariably in English since so many of the NSB functionaries involved are non-Inupiat. In Point Hope, Wainwright, and Nuiqsut almost all substantive public discussions at council meetings are in Inupiat (a complete change from the Nuiqsut of 1982-1983 described in Galginaitis et al. 1984). In Point Lay and Barrow English is the main language, with Inupiaq used when some degree of public privacy is desired. For the other villages no information is available.

### 5. *The* Village Coordinator

The NSB employs a full-time staff person in each of the villages to act as a village coordinator. Strictly speaking, the village coordinator is not a political or a governmental position. However, one of the village coordinator's duties is to be the liaison between the city council and the NSB mayor. The village coordinator is a member of the NSB mayor's staff, and is hired by the NSB mayor with the approval of the NSB assembly. The NSB assembly thus has to rely on the NSB mayor to relay any pertinent information from the village coordinators as the NSB Assembly has no other formal linkage to the individual city councils. The NSB Mayor thus structurally controls the flow of information between the city councils and the NSB Assembly. This is another reflection of the "strong mayoral" form of government of the NSB and of the structural primacy of the NSB Mayor.

All village coordinators are residents of the village they serve, of course, and are almost always hired only after the NSB mayor receives advice and recommendations from the city council as to whom they would like to see hired. The village coordinator thus has to answer to both the NSB mayor and the local city council and is sometimes caught in the middle. Since the village coordinator is privy to a good deal of information that other people are not (both on the NSB and the local level), this person often exercises an important informal role in decision-making in the village and can shape the official NSB perception of the village. The potential power of this position is recognized in most of the outer villages (Barrow has no village coordinator, being the seat of the NSB government), but there has been little explicit competition for the position or any blatant attempts to use the position for partisan or personal purposes. For the most part, informants say that the position entails a great deal of work which tends not to get done. Potentially, the village coordinator is a very influential gatekeeper.

Most NSB mayors have not relied solely upon the village coordinator in their relations with the village councils and other village affairs. This may have been a policy explicitly designed to prevent a village coordinator from using the position to establish a village power base. More likely, however, it reflects the North Slope reality that the village coordinator position is not always filled. When filled, the village coordinator in not always present in the village (and effective substitutes are rarely available). When present in the village, the village coordinator is not always available for work. The village coordinator may also, for various idiosyncratic reasons, be

unsuitable to handle certain matters. There are also times when the NSB mayor (or other NSB functionary) prefers to deal with the village mayor or other village people on a personal level, as mentioned above.

It is difficult to categorize the different villages in regard to the activities of their village coordinators because so much is dependent on the personality of that person. In most cases there has been a reasonable amount of stability in the position, with at most one change since 1987. Most village coordinators have an office and keep hours approximating those of NSB employees in Barrow. A recent policy requires that village coordinators call into Barrow every morning, since there has been some problem of some village coordinators not keeping regular office hours. This problem, combined with rapid turnover or sporadic performance during the -previous years, was more prevalent in the smaller villages than in the larger ones. Again, these problems seem to have been corrected for the most part, although the key factor still appears to be finding a motivated individual to act as village coordinator who understands the potential of the position and is willing to do the legwork involved. There is a smaller pool of potential applicants in a smaller village and more potential for the village coordinator to be viewed as too "bossy" or too directive in such communities than in the larger population centers.

6. Native Governing Institutions

There are two main types of Native governing institutions on the North Slope: IRA institutions and non-IRA institutions. At the regional level there is a IRA type of government, the Inupiat Community of the Arctic Slope. Individual villages have IRA and non-IRA councils whose level of activity varies from community to community.

With the exception of the IRA in Point Lay, these groups do not function as governments to any large degree. The extent to which they once did so is not entirely clear, as most were rather informal in nature, had no written charter, and operated mostly by consensus. There are a number of increasingly active, potentially governing institutions on the North Slope whose authority is based upon the Native ethnic identity of their constituent members. These institutions are found at both the village and regional levels.

There is also more than a little confusion among NSB Inupiat as to what governance is all about and exactly what rights and powers Native entities have or should have. A recent letter to the Tundra Times (November 13, 1989) from a Barrow Inupiat illustrates this point:

> To all my brothers and sisters at Barrow: it is not too late to have our powers back to us Eskimo Natives. We still could have our tribal government powers.
>
> All we have to do is vote and transfer all the powers to tribal government. Once we do that, the city government, the North Slope Borough, the Arctic Slope Regional Corp., the Ukpeagvik Inupiaq Corp., the Inupiaq Community of the Arctic Slope and the

> Native Village of Barrow would have to listen to our tribal government body rules.
>
> We need our tribal rules and our powers back to us Eskimos in order to straighten our major problems we Eskimo Natives are having up at Barrow.
>
> Once we have our tribal government going we would be able to manage our culture, our heritage, our sovereignty manage all subsistence birds, animals and marine mammals; manage our lands, our air and sea; teach our younger people our Native language as our ancestors have been doing for thousands of years; negotiate and trade with the rest of the world, get all the money that the oil companies owe us; get all the lands that we have lost and our land rights; get all the artifacts that they have taken from us and have our own museum going.

The position taken here is extreme, but not atypical. It seems to be characteristic of the North Slope to either defer completely to the situation at hand or to state one's objections to it (especially if "it" is identifiably non-Inupiat in origin) as strongly and extremely as possible. Thus, this letter writer does not consider the ICAS or the Native Village of Barrow to be legitimate representatives of tribal government. At the same time, he is advocating a process to institute his idea of tribal government which uses the modem form of a referendum to establish an institution that would apparently correspond to the current federal definition of tribal government. This legal definition is as much a modem fiction as the present NSB governmental institutions in terms of continuity with the past. In fact, sovereignty as a concept depends upon the Western legal context to make sense and in that sense is a thoroughly modem idea. The concept of "tribe" was developed to try to understand certain aspects of aboriginal American society in the lower-48. Its applicability to northern Alaska is problematical at best in an ethnographic sense. Its major utility is polemical and political.

Unfortunately, the expectations for Native or tribal government are frequently far too high. The goals set by the above letter writer, while laudable, would seem to be impossible to achieve. The people who are operating the NSB, the Native Village of Barrow, ASRC, and UIC would be the same people who would be involved in any new tribal government. The possible sources of funds would be the same. Potentially some constraints would be relaxed and certain powers increased, but the real life problems of language and culture transmission, delivery of community services, maintenance of community facilities, and so on, would remain. ANCSA would remain a legal reality that, unless reinterpreted by the courts, extinguishes many of the aboriginal claims made by a tribal government. Needless to say, the quest for tribal government is beset with many pitfalls, both practical and ideological. Most tribal government advocates must be idealists (or lawyers). Those they strive against are often not opponents of tribal government as such so much as they are pragmatists trying to get on in the world as it exists. Their concern is to make the best deal

for themselves and their constituents as they can from the material at hand. Compromisers and reformers have seldom been able to work together, and this situation is no different.

### *Indian Reorganization Act (IRA) Organizations*

#### Village Indian Reorganization Act (IRA) Organizations

Only Point Lay and Point Hope have formally recognized IRAs on the North Slope, and only Point Lay's is fully active. Point Lay is not incorporated as a city, so the village IRA is the only governing body in the village. The Point Lay village corporation (Cully) defers to the Point Lay IRA in almost all matters, so that there are no competing institutions. Ideologically, Point Lay residents have not accepted the provisions of ANCSA and only formed their village corporation and selected land at the insistence of ASRC It may have been ASRC personnel who did most of the actual work involved in this process. In any event, Point Lay residents perceive a large gap between themselves and the NSB, which as far as they are concerned has accepted all the provisions of ANCSA. Point Lay people believe, as the only formally recognized IRA on the North Slope, that they can eventually win the rights to a large area of land in court. They have not yet filed in court and have no immediate plans to do so, and it is unclear how serious Point Lay residents are about this land claim (which the NSB, the state of Alaska, and the federal government contend was extinguished by ANCSA in any event).

The Point Lay IRA Council operates within Point Lay just as a city council would, for the most part. Only Alaska Natives can vote in elections, but informants say that if long-term non-Inupiat residents (not teachers or transient construction workers) wanted to vote that they would probably be allowed to. The NSB treats the IRA Council exactly as they would a city council, as the NSB does not want to deal with the complexities of an IRA's claims to the land. This does complicate land acquisition in Point Lay for NSB projects, which requires that the NSB obtain deeds from both the IRA Council and the village corporation. As the two boards overlap to a large extent, this can usually take place at the same meeting. More detail is presented about the workings of the Point Lay IRA Council in the Point Lav Case Study (in draft).

The Point Hope IRA was deactivated at some indefinite time in the past. There is no definite date in peoples' minds, as the IRA Council's functions more or less withered away or were assumed by other bodies. The city council took over most community governance matters. The two main economic activities of the IRA organization were reindeer herding and the village store. Reindeer herding ended in the Point Hope area in the early 1940s and the store was transferred to the village corporation (Tigara) in the early 1970s. There has recently been an attempt to revive the Point Hope IRA, for a variety of reasons. One is to protect village lands and resources from alienation, either through the provisions of ANCSA or the current financial problems of the Tigara Corporation. The village also wishes to exert more control over a geographically wider territory around the community (reflecting more accurately the area they use on a regular basis for subsistence) than they do at present. Villagers also would prefer to have a direct one-to-one relationship with the federal government and to exercise the sovereignty that such a relationship would imply.

Regional Native "Government" (IRA): Inupiat Community of the Arctic Slope

The Inupiat Community of the Arctic Slope (ICAS) was formed in 1971, and contracted with the federal government for the provision of various services and programs through the early 1980s. It also filed various lawsuits contesting oil exploration and development, and asserting Inupiat land rights to offshore regions of the North Slope. It is no longer active in the provision of services on the North Slope and has no active lawsuits, although it still exists as an organization. It is an unusual institution regarding the dealings of the federal government, in the sense that it is a regional IRA that was not a confederation. Local IRA governments did not merge to give a regional institution their authority because there were no local IRA governments other than in Point Lay (and an inactive one in Point Hope). The ICAS has solicited a resolution of recognition from all village councils and has attempted to have individuals sign certificates of affiliation with the ICAS. In general, they have been successful in this effort, but the lack of local IRA authority or legitimacy to transfer makes much of this effort mute. The Point Lay IRA has steadfastly refused to sign any sort of statement of affiliation with or recognition of the ICAS, believing that this would lessen their legitimacy as the only true IRA on the North Slope. Thus, the ICAS is an additional entity with no real governmental functions or authority. It is an attempt to represent the Inupiat of the North Slope directly as a regional group because of the lack of village level IRAs and traditional councils in most of the villages. According to BIA personnel, there is no provision for such a body to exercise any powers of governance. The ICAS has no federal charter, nor has any organization with such a charter ceded any of its powers to the ICAS. The ICAS exists as a nonprofit organization parallel to the NSB. It has provided services in the past and is attempting to regain these sorts of contracts. The ICAS is intended as a strictly Inupiat counterpart to the partially non-Native regional government entity. According to BIA personnel, from time to time there is talk of reactivating the essentially moribund ICAS, but there does not appear to be strong interest in it anymore outside of a few committed activists. Because there are at least a few individuals who are vocal about their strong commitment to it, their voices are heard in Washington, D. C., but there is little in the way of popular support on the North Slope. According to several field sources, as well as BIA administrators, a portion of the popular support ICAS enjoyed in its early years was eroded by a perceived radicalism on the part of some of the more active individuals in the ICAS. This has had the effect of "turning people off" to the institution.

Every village does have a representative to the ICAS, however, and the organization does maintain an office in Barrow. The current interest in reviving traditional councils and other forms of Native empowerment in the villages also owe a substantial debt to the ICAS. Overall, however, the influence of the ICAS is low in the outer villages. Its role in Barrow is less clear, but the reputation of some of its younger members as radicals limits its widespread appeal. The NSB and ASRC have both adopted a stance of reasonable negotiation and compromise on many of the issues on which the ICAS takes its most extreme positions. The NSB and the ASRC also have economic and other interests that the ICAS does not. In this respect the ICAS is similar to the Point Lay IRA. The ICAS does not recognize the legitimacy of ANCSA, whereas the NSB and ASRC do and are trying to work within the system established by ANCSA.

*Local Level Native Governments: Traditional Councils*

Each of the communities of the North Slope, with the exception of Kaktovik, has a more-or-less active Native governmental body. All of these are traditional councils, with the exception of the Point Lay IRA discussed above, and operate in tandem with the city government as the communities are incorporated under state law. This section will concentrate on the traditional councils (TC) as Point Lay's IRA has been discussed above.

In practice, there is little if any difference between IRA councils and traditional councils. What differentiates the two is that IRA councils have a constitution that is approved by the Secretary of the Interior who must also approve any amendments to the IRA constitutions. Traditional councils may, but are not required to, have governing documents. None of the traditional councils on the North Slope have governing documents. This makes traditional councils more flexible in theory. According to BIA personnel, however, the two forms of council are in practice the same. North Slope BIA affairs are handled through a Fairbanks office of the larger "Juneau Area Office" (which handles the area of the entire state of Alaska) and according to senior officials in the Fairbanks office, the powers of IRA and traditional councils are identical and there are no advantages to having one form or the other. The view from the village level, however, is that having a formal IRA government implies more formal recognition in Washington D.C. This view is translated into action by the push to form IRA councils in those NSB communities which now have "only" traditional councils. Clearly, whatever the present situation, in the past there were advantages to be gained by having a formal IRA council and the federal recognition and government-to-government relationship that implied, and individuals on the North Slope perceive that as still important. Some individuals contacted in the Fairbanks BIA office were given the understanding that there is a dispute right now if a traditional (tribal) council has the same status as an IRA organization, and that while it is looking more and more like they do, it is still a point of legal contention. It seems apparent that given the range of understandings within the BIA, villages are receiving mixed messages as to the differences between IRAs and traditional councils. Kaktovik is the only NSB community without an active IRA Council or Traditional Council, according to a senior BIA official in Fairbanks, and is not interested in working with the BIA in the formation of one. The same official states that 'they don't want to have anything to do with us."

While it is the ease that all villages except Kaktovik have Native councils of one form or the other, their level of activity varies from one village to the next, and would seem to go in cycles for each village. These cycles seem to correspond with changes in the legal climate at the state and federal levels. In Anaktuvuk Pass, for example, there is a move to reactivate the traditional council for two primary reasons. The first is related to potential changes in federal recognition of Native rights and program eligibility. In particular, there is support in reactivating the traditional council to assure that residents will continue to receive IHS health care. According to BIA officials in Fairbanks (in March 1989), Congress wants to cut down the number of individuals who receive this care, and have passed but not yet implemented eligibility changes. It is now the case that a person qualifies for care based on "blood quantum," but eligibility requirements may change to membership in a "tribe," which in this case would be a recognized community. This would be established with membership roles that would be decided upon by the individual local governmental entities based on "culture, custom, and tradition." The BIA would not be involved with this process. If local entities do not have formal roles, the BIA could be involved to the extent of providing a list of

clients, and then the local entity could confirm that these people should be members. There has been a renewed interest in tribal (traditional) and IRA organizations because of the anticipated eligibility changes. Second, tribal entities are needed to effectively take advantage of the provisions of the Indian Child Welfare Act. This act provides that if a Native mother is going to give a child up for adoption, and this child is going to non-Native parents, then the tribal entity will be notified, and can block the adoption 'if they so choose.

In Point Hope the motivation for a revival of a traditional or IRA council seems to be primarily to ensure the protection of land and resources held in common for the use of village residents. This reflects the perception that the village corporation is in economic distress and that the city council can only deal with matters within the Point Hope city limits. The traditional council is also seen as a way to involve the Elders in community government and as a method to facilitate the retention of the Inupiat culture and identity. These are also the basic reasons why Point Lay never incorporated as a city and retained its IRA as the governing body. In Nuiqsut, the movement for a traditional council started in the early 1980s and while it has not made a great deal of progress is still symptomatic of certain perceived problems. Protection of land and resources from alienation by the corporation, either through failure or a business deal, is one goal. Another is to involve Elders in the day-to-day operation of the government of the community. A third is the hope that a traditional council would alleviate some of the intracommunity conflict evident in some of the dealings between the city and the village council. To some extent the two organizations have formally defined different interests and certain conflicts are inevitable. A traditional council would incorporate both groups within its constituency and be a forum for the resolution of conflicts. No such mechanism or institution currently exists, other than the situationally dependent and often inconsistent effect of kinship ties. Little information specific to the other villages exists, but all are concerned with the potential effects of changes in eligibility requirements for various government programs.

Traditional councils also have two other effects which are seldom mentioned in the outer villages in this context but which are readily understood when brought up by researchers. Traditional councils are a way to ensure continued Native control of the political process. Since non-Inupiat are not yet perceived as any sort of a problem in the outer villages (and indeed are often considered valuable resources) it is not surprising that this consideration is largely unarticulated. If resident non-Inupiat populations were to increase in the outer villages, it is likely that this would become a voiced concern. Not all Inupiat want a strictly Native-controlled local government, of course, so that city councils would still have a role to play. Nonetheless, traditional councils are one means to assure local Inupiat hegemony. A second effect is not unrelated to this. One common complaint of all the outer villages is that Barrow controls far too much of local affairs. Traditional councils would be one way to exclude the NSB (and Barrow power brokers) from the local political process. Locals would then be able to make their own direct decisions about programs and facilities to be supported, and could perhaps develop sources of funding other than the NSB. The Native Village of Barrow expresses these same concerns, but because of Barrow's status as the headquarters for the NSB cannot realistically expect to escape the NSB influence in the same way that the outer villages conceivably could.

The definition of "tribe" in Alaska has been a bit more problematic than in the lower-48. In the lower-48, eligibility for services administered by the BIA is generally limited to historical tribes and communities of Indians living on reservations, and their members. Unique circumstances in Alaska,

however, have resulted in multiple, overlapping eligibility of Native entities. The 1936 amendments to the Indian Reorganization Act, applicable only to Alaska, authorized groups to organize as tribes which are not historical tribes and are not residing on reservations. They include groups having a "common bond of occupation or association, or residence within a well-defined neighborhood, community, or rural district." More recent Indian statutes specifically include Alaska Native villages, and village and regional corporations defined or established under ANCSA. In the Indian Self-Determination Act, for example, an Indian tribe is defined as including "any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians . . ." ANCSA defines a Native village as "any tribe, band, clan, group, village, community or association in Alaska listed in [43 U.S.C. 1610 or 1615], or which meets the requirements of this chapter, and which the Secretary determines was composed of twenty-five or more Natives." The list of Native entities appearing in the Federal Register eligible for BIA programs includes all of the Alaska entities meeting any of the following criteria which are used in one or more federal statutes for the benefit of Alaska - . Natives:

1. "Tribes" as defined or established under the Indian Reorganization Act as supplemented by the Alaska Native Act.

2. Alaska Native villages defined in or established pursuant to ANCSA.

3. Village corporations defined in or established pursuant to ANCSA.

4. Regional corporations defined in or established pursuant to ANCSA.

5. Urban corporations defined in or established pursuant to ANCSA.

6. Alaska Native groups defined in or established pursuant to ANCSA.

7. Alaska Native group corporations defined in or established pursuant to ANCSA.

8. Alaska Native entities that receive assistance from the BIA in matters relating to the settlement of claims against the United States government, such as in the Act of June 19, 1935, Pub. L 74-152, as amended by the Act of August 19, 1%5, Pub. L.. 89-130.

9. Tribes which have petitioned to be acknowledged and have been determined to exist as tribes pursuant to 25 CFR Part 83.

All of these entities are not considered equal in the prioritization of receipt of services provided by the BIA. According to BIA staff members in Fairbanks, the priority list is as follows: (1) IRA councils; (2) traditional councils; (3) city councils [in Native communities]; and, (4) ANCSA corporations.

*Native Government Funding*

Funding for Native governmental entities on the North Slope come from the BIA via the Juneau Area Office (which is responsible for the entire state of Alaska) and then through the Fairbanks Agency (office). Funding for the Fairbanks Agency is divided between communities in the Interior of Alaska and those on the North Slope in a ratio of approximately 75:25. Among the villages of the North Slope, funding is allocated on the basis of population.

Funding for the North Slope as a whole was approximately $850,000 for FY 1988, and nearly that same level is projected for FY 1989 (see Table 29-NSB). During FY 1988, approximately half of the funding went to Barrow, and this portion is expected to remain constant for FY 1989. The North Slope Borough itself is not eligible for funding because it is not a Native entity. In addition to direct funding, there is also a revolving loan fund available to Native entities, and BIA staff help with budgets is available for the local entities.

*Governance, Jurisdiction, and Native Governments*

At present, it is not exactly clear what governance the Native governments on the North Slope, whether they be IRA or traditional councils, have. On the one hand, ANCSA clearly extinguished claims to ownership of land by these entities. Jurisdiction over particular areas, on the other hand, is another matter, as ownership and jurisdiction do not necessarily coincide. For example, the State of Alaska does not own all of the land in the state, but the state still retains legal jurisdiction, and has a geographically bounded span of control. Native hunting and fishing rights on lands no longer owned or claimed as a result of ANCSA were partially restored with ANILCA. Whether or not IRAs do still have jurisdiction to regulate the use of formerly controlled lands (traditional land use area), even in areas where development has taken place such as in and around onshore oil production areas for example, is unknown according to BIA officials in Fairbanks. This uncertainty is due to the fact that such issues have not yet been legally tested.

B. Native Corporations

Under ANCSA, there were two levels of corporations formed. Each village formed a village corporation, which gained the surface rights to the land which it selected. The regional corporation (ASRC) gained the subsurface rights to all village corporation land in the regions, plus all rights to ASRC selected land. These corporations each have relations with the two levels of civil government on the North Slope, the NSB and village city councils, as well as with each other. The situation is at least as complex as that simple summary implies. The civil governments are discussed above. What will follow is a brief general description of each of the types of corporations, followed by a discussion of relations between institutions.

Table 29-NSB

Bureau of Indian Affairs
Juneau Area
Fairbanks Agency
(North Slope Region)

| PROGRAM | FY 1988 ALLOTMENT | DIFFERENCE | FY 1989 TENTATIVE ALLOTMENT |
|---|---|---|---|
| Scholarships | 137.9 | 0.0 | 137.9 |
| Adult Education | 0.0 | 0.0 | 0.0 |
| Adult Vocational Training | 115.6 | 0.0 | 115.6 |
| Other Employment Assistance | 11.3 | 0.0 | 11.3 |
| Other Aid to Tribal Government | 191.2 | -2.0 | 189.2 |
| Social Services | 62.3 | -0.6 | 61.7 |
| Self-Determination Grants | 0.0 | 0.0 | 0.0 |
| Training/Technical Assistance | 0.0 | 0.0 | 0.0 |
| Credit and Financing | 0.0 | 0.0 | 0.0 |
| Road Maintenance | 0.0 | 0.0 | 0.0 |
| Natural Resources, General | 0.0 | 0.0 | 0.0 |
| Agriculture | 0.0 | 0.0 | 0.0 |
| Agriculture Extension Services | 0.0 | 0.0 | 0.0 |
| Forestry | 0.0 | 0.0 | 0.0 |
| Water Resources | 0.0 | 0.0 | 0.0 |
| Wildlife and Parks | 142.5 | -0.4 | 142.1 |
| Minerals and Mining | 60.0 | 0.0 | 60.0 |
| Trust Semites, General | 0.0 | 0.0 | 0.0 |
| Environmental Quality Services | 0.0 | 0.0 | 0.0 |
| Other Rights Protection | 0.0 | 0.0 | 0.0 |
| Real Estate Appraisals | 0.0 | 0.0 | 0.0 |
| Other Rights Protection | 131.4 | 0.0 | 131.4 |
| Executive Direction | 0.0 | 0.0 | 0.0 |
| Administrative Services | 0.0 | 0.0 | 0.0 |
| TOTAL | ***852.2*** | -3.0 | ***849.2*** |

Note: Figures are in thousands of dollars.
Source: Branch of Budget Management, August 15, 1988, as amended by BIA staff, March 1989.

1. Arctic Slope Regional Corporation (ASRC)

ASRC, as the regional corporation, was endowed with enough resources under the provisions of ANCSA so that it could immediately compete as a corporate entity. There were few Inupiat trained in the management skills required, so that non-Inupiat expertise had to be hired while Inupiat acquired these skills. For the most part the transition to Inupiat management has taken place. ASRC has taken its responsibilities to invest in the region seriously and has entered joint ventures with many of the village corporations. This was one role envisioned for the regional corporations under ANCSA. ASRC has also invested in other regions of Alaska and has developed certain skills that enable it to bid on projects throughout the state. ASRC has an active program to place Inupiat in industrial jobs, some as the result of a prior industry training program. ASRC played a key role in the refounding of the "new" communities and was instrumental in the organization and first several years of almost all the NSB village corporations. ASRC is organized as a for-profit corporation and has a shareholder-elected board of directors.

2. Village Corporations

Although each NSB village corporation had the option to incorporate as a not-for-profit corporation, all are organized as for-profit institutions. Most are active primarily within its single village. Point Hope had conducted some construction projects in other villages (mostly Point Lay) but is currently in bankruptcy and thus its activities are confined to Point Hope. Tigara, the Point Hope corporation, does still maintain its office in Anchorage, but Tigara Corporation will be discussed with the other five relatively inactive, village-bound village corporations. Kuukpik Corporation (Nuiqsut) and Ukpeagvik Inupiat Corporation (UIC, Barrow) both also have offices in Anchorage and actively pursue contracts outside of their native villages. These two corporations will be discussed separately because of their different characteristics.

The typical NSB village corporation operates the village fuel business (subsidized by the NSB), may run a camp for transient workers, usually manages the main store in the village, and contracts with the NSB (usually with the help of a non-Native joint venture corporate partner) for any construction projects planned for the village. Most of these village corporations are essentially managed by one or two key people. There are certainly more individuals who work in the offices and contribute to decisions, but a very limited number of people are considered the "business" people in these villages. Very few ventures are initiated by these corporations. Rather, they wait to be approached by the NSB, ASRC, or a non-Native contracting firm about an upcoming project or business opportunity. Most are on a relatively good financial basis at present, but have little in the way of cash reserves. Most have experienced extremely difficult times in the past, coming close to bankruptcy. It is the lack of qualified village financial personnel, combined with a lack of resources, a distrust of hired "experts," and the experience of losing money on investments and contracts in the past that apparently account for the relative inactivity of these corporations and their concentration on "sure things." They know that the NSB will not allow them to lose money on a NSB contract. That has been their experience to the present time at least. The fuel business is guaranteed as a money-maker, since they receive the oil, delivered to the village storage tanks, for free from the NSB. These corporations concentrate on projects and investments that will create paying jobs for residents rather than make a profit on money invested. Such returns are

appreciated but are seen as too small to adequately support the families of the village. A lower-48 analogy would be that of a New York state dairy farmer who lives off of his cash flow rather than his profit. This also describes the sort of problems most of these corporations have experienced with the management of the village store, with Point Lay and Wainwright being perhaps the most extreme examples. These problems seems to be cyclical in nature. Gradually, uncollectible credit accounts accumulate until the store has difficulty with cash flow and maintaining inventory, at which time the village corporation provides some more capital (and may try to collect some of the money owed). Stores in general are doing better now than in the past.

The Kuukpik Corporation, in Nuiqsut, has not had a history vastly different from those corporations in the group just discussed. It started with no greater resources and, in fact, experienced the same sort of management shortage, bad investments, and store problems as they did. The Kuukpik Corporation even had a non-Inupiat accountant abscond with a substantial amount of their funds. In spite of this fact, they are healthy as a corporation at the present time. This can probably be attributed at least in part to the management style established by the first president of the corporation, now mayor of Nuiqsut and no longer involved with the corporation (for various reasons, but his concern for making a profit rather than treating the corporation as a village 'cash cow" was among them). There can be little doubt that his management style enabled the current administrators of the Kuukpik Corporation to acquire their current skills. This man's orientation to the necessity for the corporation to earn a profit has also been maintained. This has caused some comment in the village that the Kuukpik Corporation is not interested enough in creating local jobs (also a reason the first president is not longer involved with the corporation). This is also the criticism in the other villages where the Kuukpik Corporation has projects in joint venture with a non-Native firm. Be that as it may, it would seem that this man has stamped his personality and business orientation on the Kuukpik Corporation. It was this man who energized the consortium of outer village corporations, Pingo Corporation, and established it as a conduit for Inupiat workers in the oil fields. This corporation went bankrupt (for reasons that are unclear), and ASRC and UIC have assumed many of its programs through a joint venture, Piquniq Management Corporation (PMC). The focus of PMC has changed somewhat and residents of Barrow (and especially shareholders of UIC) clearly have some advantages, but people from the outer villages are still placed through its services. A major change is that large contracts are pursued even off-Slope. There is some interest in reviving the outer village consortium, but mainly from those in Nuiqsut who were prominent in the first such effort. It is interesting that the corporation is continuing many of the policies of the first president even though they were clearly one of the factors which led to the general dissatisfaction with him and his failure to be reelected as a corporation official. His personal corporate leadership has been rejected, but his general policies still seem to be in effect (the political aspects of the personal reputations of leaders who must handle valued resources in the public or shareholder' interest is not of central concern here and is not germane to the point in hand).

UIC, in Barrow, started with the big advantage of being many times larger than any of the other village corporations. UIC thus had many times the capital of the other village corporations. UIC also had the advantage of being able to draw upon a much larger talent pool, possessing a much wider variety of skills, than did the other village corporations. In many ways UIC has succeeded even more than ASRC has. ASRC has been more consistently profitable, at a higher level, but has an advantage in resource endowment (especially in terms of subsurface rights). ASRC also has responsibilities to the other village corporations that UIC does not, that at times reduce the pure

profitability of the corporation. ASRC and UIC do not compete directly for the same sort of contracts, but do on occasion make joint ventures since ASRC has made a conscious effort to develop the professional skills that complement the construction components of the village corporations. ASRC clearly has targeted the professional consulting needs of the NSB as well, although the NSB continues to use a variety of consultants. UIC has been able to effectively compete for projects in all of the other villages in the past and continues to do so. For the most part, the NSB now awards these contracts to the resident village corporation if it is at all able to submit a reasonable bid. UIC bids successfully on many of the Barrow projects, however, and has work in several different parts of the state. UIC does not receive the fuel oil business subsidy that the other village corporations do because most homes in Barrow are heated by natural gas. The fields are right outside Barrow and the gas is supplied by BUECI at a very low rate.

### *3.* Corporate-Government Relationship

ASRC and the NSB share a common history. Both were born in the same period and the people involved in the institutions overlapped to a great degree. This is still true, but whereas in the 1970s individuals served in both institutions at the same time, the pattern now is for an individual to serve serially in one and then the other (perhaps alternating several times). The NSB and ASRC share some common interests, and cooperate when they can, such as on the ASRC demonstration coal project. The funds for this are supplied by the NSB and merely "passed through" ASRC. The coal mine is on ASRC land (although disputed by the Point Lay IRA). When interests do not coincide, as on certain proposed offshore oil lease sales, the two entities disagree. The management of each organization is sophisticated enough to separate business from personal relationships, and to recognize when business interests must be sacrificed for the public good (although there is quite a bit of public debate concerning how to define this particular point).

ASRC and the city councils do not have much formal interaction. Most residents of the outer villages think of ASRC only in relation to their village corporations. The "new" villages remember the help that ASRC gave to them in their early yearn, but this has few concrete behavioral manifestations.

The relationship between village corporations and the NSB has been described above. For the most part the NSB has a vested interest in supporting the village corporations. Those able to support themselves (mainly UIC in Barrow) are encouraged to do so, but the special circumstances that make this difficult for the outer village corporations are explicitly recognized. The NSB directly subsidizes heating costs in the villages by providing each village with enough fuel oil to heat all private residences free of charge. The village corporation is then in charge of distribution and is allowed to charge enough to cover the costs of delivery and administration. Most village corporations make a profit on this, and for at least some it is the largest source of corporate revenue. The NSB also encourages its employees to stay at village corporation-operated camps or hotels when they are in the villages, as well as making it a standard part of most outside contractor' contracts. This supports the relatively high rate schedule for such camps as well as generating most of their business. When village corporations are in a cash flow crisis or face some other emergency, the NSB is usually the first-organization that they will approach.

The relationship of ASRC and the village corporations has been implicit in the above discussion. ASRC, the NSB, and UIC are essentially equal players and where their interests coincide, or they can combine resources to pursue a common goal, they do so. The village corporations other than UIC are perceived as dependent players, and ASRC is the entity that was formally charged with their oversight for the first ten years after the passage of ANCSA. Since that period expired both ASRC and the NSB look out for the village corporations but encourage independence to the extent possible. Both try to avoid direct subsidies and try to develop expertise within the village corporations when they work together. ASRC has entered into joint ventures with most of the village corporations at one time or another, if only for the gravel used in various NSB projects. Again, these are mainly confined to the village in which the village corporation is resident.

## C. Health and Social Services

### 1. Overview

The health care system of the North Slope represents a particular form of institutional adaptation to the geographical and sociocultural features of the region. This adaptation maybe examined from both the types of care offered as well as the different levels of care available. The types of care offered reflect the interaction of three sociocultural systems: traditional Native Alaskan, contemporary rural Alaskan, and contemporary Euro-American. This interaction is most visible in the North Slope Borough's (NSB) Department of Health and Social Services. The department is responsible for providing health care in the form of traditional Native healers, community health aides (CHAs) who provide primary care in the villages, and Native and Euro-American professionals with organizational and clinical expertise who both manage the overall programs and provide specialized services for North Slope residents in need.

A range of medical services also is evident with respect to the levels of care available and the geographical distribution of these levels throughout the region. The primary level of care is found in the villages. Each of the small villages in the region possesses a clinic staffed by CHAS or physician's assistants. The secondary level of care exists in the form of Public Health Semite (PHS)/Indian Health Service (IHS) hospitals which provide both inpatient and outpatient services. Clinical conditions of village residents too serious to be treated at the level of the village clinic are usually transported to these facilities. The regional hospitals also provide more specialized forms of care not found in the villages. The third level of care exists in the form of urban medical centers located in Anchorage and Fairbanks with the Alaska Native Medical Center in Anchorage providing inpatient care for Alaskan Natives throughout the state.

Early studies of the health care system of the NSB emphasized the limited capacity of existing agencies and facilities to respond to the adverse consequences of rapid social, economic, and cultural change. For instance, based on the level of emotional attachment to traditional subsistence activities, Kruse and his colleagues (1983:283-284) concluded that Inupiat social well-being would decline with additional anticipated offshore development, combined with the completion of major Capital Improvement Program (CIP) projects by the late 1980s, particularly if North Slope institutions were ineffective in influencing development activities. This assessment was supported in a study by Worl and her associates (1981:127), which claimed that "the health department has not found it possible to offset the social health impacts of rapid development." This study also

pointed to the ambiguous situation faced by the health services agencies who were called upon by the community to assume social responsibilities traditionally held by individuals, families, and the community as a whole, yet criticized for their efforts to do so by elements of the community who felt that the socially and culturally patterned response should be supported rather than replaced by such formal service institutions.

Whether these predictions have actually come to pass may be determined from an examination of the level of community satisfaction with health services and rates of morbidity and mortality. With respect to community satisfaction, a survey conducted for the NSB Department of Health and Social Services by Dann and Associates in March 1987 found that 43.3% of the NSB residents surveyed thought the Barrow IHS hospital was doing a poor to fair job of providing health care services versus 34.5% of respondents who believed the hospital was doing a good to excellent job. Similarly, 47.0% of the respondents felt the NSB was doing a poor to fair job of providing services while only 30.2% believed the NSB services were good to excellent. The level of satisfaction with NSB CHAs appears to be somewhat higher with 44.7% of the respondents expressing satisfaction and 35.4% feeling the services provided by the aides were poor to fair.

2. Administration

Primary health care services on the North Slope are provided through the combined efforts of the Alaska Area Native Health Service (AANHS -- the U.S. Public Health Semite) and the NSB Department of Health and Social Services. The Maniilaq Association Health Division also provides services to Point Hope residents through its contract with the IHS's Kotzebue Service Unit and the Tanana Chiefs Conference, Inc. provides services to residents of Anaktuvuk Pass through its contract with the Interior Alaska Service Unit in Fairbanks.

The NSB is responsible for health care services in the villages and in Barrow. Although the NSB assumed the area-wide authority for health services and hospital facilities in 1974, its provision of health services has actually been a gradual development. It began in 1975 with management of the village clinics and community health aide and emergency medical services programs. In 1978, the mental health, eye care, community health representative, and dental services programs were added and the health education program was implemented in 1979. In 1980, the NSB assumed responsibility for maintenance of the Barrow hospital, while the public health nursing program (state contracts) and environmental health services were added to the NSB'S functions in 1981 (Alaska Consultants et al. 1984:581-582). The department currently supports between 30 and 32 different programs.

The department is divided into three major divisions: social health services, physical health services, and behavioral health services (Figure 16-NSB). Social health services include senior home health services, public assistance (an energy assistance program), day-care center and infant learning programs, health education, and health board support. Physical health services include village health services such as the CHA Program and Traditional Medicine Program, hospital support services, public health nursing, emergency medical services, eye care, and dental services. As part of the Traditional Medicine Program, the department employs a traditional Inupiat healer, based in Barrow. Most of her healing techniques involve massage and manipulation of bones and muscles and an Inupiat form of acupuncture. Behavioral health services include substance abuse treatment

services, the community mental health center, Arctic Women-in-Crisis (AWIC), and children and youth services. These programs also provide aftercare for residents who have gone through alcohol or mental health treatment programs elsewhere.

The Department of Health and Social Semites has been the largest borough department since 1980. Its annual budget grew from $1.9 million in 1980 to $8.7 million in 1985. Similarly, its employment increased from 72 in 1980, to 121 in 1985, and to 175 in 1988. In 1985, non-Inupiat staff outnumbered Inupiat 64 to 57. Inupiat are concentrated in the maintenance and paraprofessional levels, whereas non-Inupiat are primarily in professional and administrative slots. However, the turnover rate is high among non-Inupiat.

Department policies and priorities are established in conjunction with the NSB Regional Health Board, comprised of nine members representing all eight villages of the NSB. Members are appointed by their city councils and then confirmed by the mayor and assembly of the NSB. Meetings are held quarterly and representatives bring village concerns and needs to the attention of the department. However, according to Worl, Worl, and Lonner (1981:127), the health board:

> unlike the school board, has an advisory role only. It is a sounding board for residents' concerns and complaints and acts as an advocate to the health department in pursuing an appropriate institutional response. The health board tends to support program goals identified by the health department and the public. Due to turnover in membership, lack of training of board members, and lacking responsibility for policy formation, the health board has not pursued an increase in power nor shifted from advocacy to program direction.

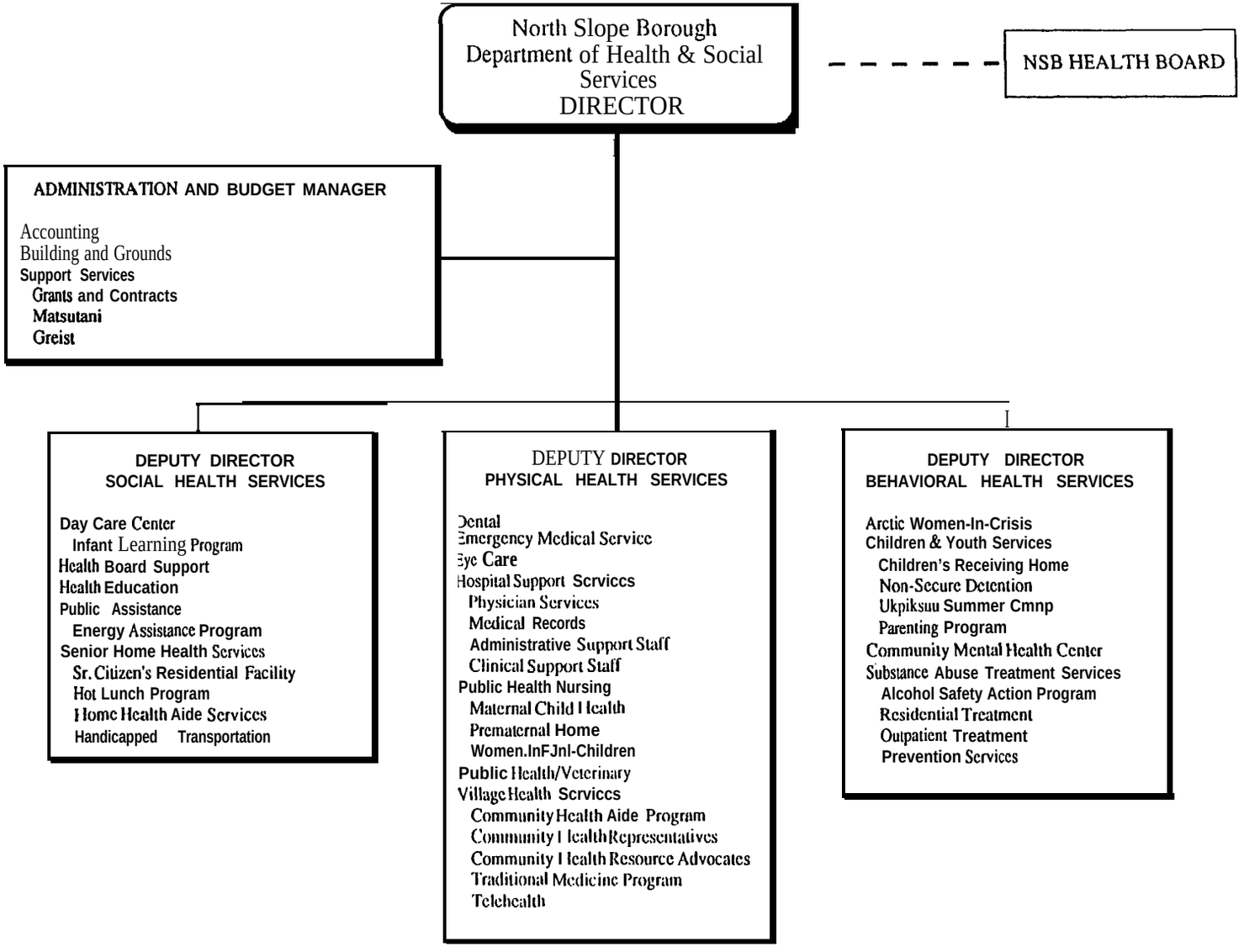
In 1989, the health board was still operating as described in 1981.

North Slope residents requiring inpatient treatment or specialized outpatient services are usually first evacuated to one of the three IHS hospitals serving the region. Acute care cases from Point Hope are sent to Kotzebue while cases from Anaktuvuk Pass are sent to Fairbanks. Cases from the remaining villages are transported to Barrow. If the case is a serious one, and the patient is a Native, the patient is stabilized in Barrow and then flown to Anchorage. If the case is an emergency, the patient is flown to Fairbanks whether or not the person is Native. Non-Natives are also treated at the hospital but on a fee-for-service basis. For non-Natives, medivacs are a matter of choice, but most choose to go to Anchorage. The remoteness of the communities and the uncertainty of flying weather also can dictate the routing of patients, particularly in emergency situations.

Although each IHS facility provides limited inpatient services, the primary emphasis of health care at this level is on outpatient services, with the outpatient clinic providing the only access to physician services in the community (Alaska Consultants et al. 1984:582).

Figure **16-NSB**

North Slope Borough Department of Social **Services**
Organizational Chart



Health care administration over the past five years has been distinguished by the increasing integration of programs and staff at the federal and local levels. The NSB Department of Health and Social Services has worked to integrate and interact more with the IHS. In some instances, the department has assumed responsibilities formerly held by the IHS. For example, the PHS has traditionally handled planned parenthood programs on the North Slope. However, the department of Health and Social Services recently instituted a Parenting Program to train young mothers to raise and care for their infants and small children. The most visible form of integration of the two health care agencies, however, exists at the Barrow hospital. The department contracts with the IHS for services at the hospital, including medical and personnel records. The department and IHS jointly set priorities and the NSB assists in the purchase of equipment for the hospital.

The NSB also hires and pays the salaries of the staff physicians at the hospital. This program was established in 1988 and was designed to attract clinical staff who would remain in the community for longer periods of time. Prior to this time, staff physicians were PHS physicians on 6- to 8-month rotations between facilities. As part of this new program, physicians are provided both higher salaries than previously earned by IHS employees and more opportunities for continuing education programs. In addition, the number of physicians has increased under this program from three to five. Recently, the IHS and NSB also entered into an agreement to hire a dietitian.

In turn, the CHA program receives its funding from IHS but the program is administered by the NSB Department of Health and Social Services. IHS also gives the NSB money to lease the village clinic facilities. However, the Department of Health and Social Services is not a PL 93-638 health contractor as are Native health corporations. Consequently, they are not entitled to some of the funds available to other regional health agencies which provide services to the Alaska Native population.

The pattern of division of labor between the two agencies which has emerged during the past five years is likely to continue, especially since both agencies can expect smaller amounts of revenue to operate their programs. A feasibility study was undertaken in 1982-1983 to assess the possible direct operation of the Barrow hospital by the NSB. However, upon receiving the study, the NSB displayed little enthusiasm for assuming the responsibility, fearing the increased financial burden such a move would place on them (Alaska Consultants et al. 1984584).

### 3. Services

***Hospital***

The Barrow hospital provides acute care services including emergency care, internal medicine, pediatrics, minor surgery, orthopedics, gynecology, and normal obstetrics, plus x-ray, laboratory, pharmacy, social services, and mental health services. Hospital physicians also serve as consultants for CHAs located in the village clinics. They handle phone" calls and make visits to certain villages. The hospital does not provide emergency or elective surgery, diagnostic or therapeutic procedures. Alaska Native patients needing such services are flown to the Alaska Native Medical Center in Anchorage. Because the facility lacks the proper anesthesia equipment, surgical procedures such

as Cesarian sections are not performed here. Consequently, the hospital has made an effort to expand its prenatal care program.

The 21,405 square foot hospital is a one-story wood frame structure constructed in 1%5. It has 14 beds, 10 of which are resewed for acute medical/surgical/pediatric cases, 2 for labor, and another 2 for post-delivery cases. All beds are in semi-private rooms. There is a single operating/delivery and emergency room. The outpatient department includes 4 examination rooms, an x-ray room and laboratory, a pharmacy, and an administrative area.

Over the past five years, efforts have been made by the IHS service unit in Barrow to provide certain services in the region which would otherwise require that individuals travel to Anchorage or Fairbanks. For instance, beginning in 1989 the II-IS will send a psychiatrist to Barrow on a quarterly basis to conduct psychiatric evaluations of NSB residents. Prior to this, referrals for psychiatric evaluations were sent to Anchorage or Fairbanks. The objective of these efforts is to minimize the prolonged family separation and social isolation that occurs when a NSB resident is forced to go "off-slope" for treatment.

The Greist Family Semites Center, which is attached to the Barrow hospital, was built in 1981. Owned and operated by the NSB, the center houses a number of health and social service programs administered by the NSB Department of Health and Social Services. Included in the facility are the public health nurses' office, 3 offices for social workers, 2 mental health offices, a public assistance office, a corrections office, optometry offices, a dental suite with 4 operatives, a laboratory, x-ray facilities, and reception areas. Staffing of this facility includes 3 NSB public health nurses (including a maternal/child care nurse), 2 NSB health aides, and 2 NSB social service aides. The mental health program is staffed by a psychologist and a mental health clinician. The eye care unit is staffed on an itinerant basis by a PHS optometrist sponsored by the Lion's Club, plus a NSB eye coordinator who is trained to repair and fit eyeglasses. The dental care unit is staffed by two dentists. Refer to Table 30-NSB for an occupational overview of the Barrow Service Unit Public Health Service.

According to a report prepared by Alaska Consultants and their associates (1984584), the hospital lacks adequate space for both inpatient and clinic outpatient functions. The existing facility is about twenty-five years old and the design is outdated. For instance, emergency patients are wheeled up a long corridor before getting into the emergency room. In the past, the shortage of housing in the community made it difficult to fill positions. All the staff physicians currently live out in the community. Congressional approval was recently obtained for a 29-unit Housing and Urban Development (HUD) complex which will serve as housing quarters for the hospital staff. The nursing quarters also were recently remodeled.

In fiscal year 1982, the Barrow hospital had 61 employees, 15 of which were NSB employees. In FY 1988, the hospital had 63 authorized positions, 45 of which were PHS employees, and 18 which were NSB employees. Of these positions, five were vacant. As of March 1989, there were 58 employees, both part-time and full-time. This included five physicians. A list of staff positions is provided in Table 30-NSB. Efforts are also underway to recruit another pharmacist.

According to the hospital director, there is also a need for a physical therapist. The hospital has hired an audiologist who has begun a massive education program directed at otitis media.

Table 30-NSB

Barrow Service Unit Public Health Service and
North Slope NSB Authorized Positions, FY 1988

| Section/Title | PHS | NSB | Total |
|---|---|---|---|
| Administration | 6 | 2 | 8 |
| Medical | 0 | 5 | 5 |
| Radiology and Lab | 2 | 1 | 3 |
| Pharmacy | 1 | 0 | 1 |
| Nursing Services | 16 | 2 | 18 |
| Medical Records | 0 | 6 | 6 |
| Dietary | 4 | 0 | 4 |
| Social Services | 1 | 2 | 3 |
| Maintenance | 9 | 0 | 9 |
| Laundry & Housekeeping | 6 | 0 | 6 |
| Total | 45 | 18 | 63 |

Source Public Health Service.

Data on the number of inpatient and outpatient encounters at the Barrow IHS Hospital is provided in Table 31-NSB. The hospital has seen a 12.5% decline in inpatient admissions from FY 87. The number of inpatient days declined by 13.3%; the number of newborn admissions declined by 11.6%. The number of newborn patient days declined by 14.4% during this period. Outpatient visits declined from 19,506 in FY 87 to 19,240 in FY 88 (-1.4'%). The decline in both inpatient and outpatient admissions has been attributed by senior staff members to the fewer number of transient workers on the North Slope.

### *Village Clinics*

Over the past ten years the village-level health care system has experienced two major changes which have resulted in a marked improvement in the quality and quantity of services available. The first major change has been the construction of new clinics in 1983. The village clinics have all been modernized and offer almost identical services. Each village has a $3.5 million facility, except for Point Hope, which had just built a clinic prior to this CIP construction program. That clinic is scheduled to have some remodeling done. The new clinics are approximately 4,400 square

Table 31-NSB

Inpatient and Outpatient Encounters and Services Provided,
Barrow IHS Hospital, FY 1984 to FY 1988

| | FY84 | FY85 | FY86 | FY 8'7 | FY88 |
|---|---|---|---|---|---|
| Inpatient Admissions: | | | | | |
| Adult and Pediatrics | 802 | 849 | 722 | 520 | *594* |
| Newborns | 103 | 103 | 96 | 86 | *76* |
| Patient Days of Care | 2,398 | 2,600 | 2,007 | 1,950 | *1,690* |
| Average Daily Census | 6.6 | 7.1 | 5.5 | 5.3 | *4.6* |
| Outpatient Visits | 18,374 | 17,793 | 20,526 | 19,494 | *19,223* |

Source: Alaska Area Native Health Service.

feet in size with four examination rooms, a laboratory, a film processing room, a secured medicine storage room, a waiting/training area, a consulting/telehealth room, office space, toilet facilities, and storage areas. Also included are itinerant quarters with two double bedrooms, a kitchen/living/dining area, and a bathroom. There is also a mechanical/electrical room, a janitor's closet, and a garage/storage area. The garage area is designed to provide direct access from the ambulance to an examination room equipped to handle entry/trauma demands. These facilities represent substantial improvements over the older clinics. The previous clinic in Point Lay, for instance, was located in a very small building (280 square feet) and was considered to be poorly equipped and totally inadequate for its assigned use (Alaska Consultants et al. 1984303).

Each clinic has x-ray equipment, used primarily for dental x-rays. Each clinic also has a telehealth system which allows for a health aide to slowly scan over a portion of the patient. The scan is then transmitted by phone lines either to the IHS hospital or CHA program office in Barrow, or to the Alaska Area Native Hospital in Anchorage. The equipment is also used by personnel located at the IHS hospitals in Barrow and Kotzebue and transmitted to Anchorage. This equipment is used for consultations between local CHAs and doctors, consultations within the medical professions, for the continuing education of the aides, and for other uses such as follow-up of clients/patients (Alaska Consultants et al. 1984:304). However, the resolution is not well-suited for some conditions, such as rashes. Furthermore, the equipment appears to be underutilized for clinical purposes and serves more of a social function, as village residents use it to display newborn infants to relatives in other villages and Barrow.

Village clinics offer primary care and emergency services to village residents. Clinic staff are also involved in preventive medicine efforts (such as fluoride dental washes) and health promotion activities. Further, most of the programs offered in Barrow have a village equivalent, usually in the form of an outreach program.

CHAs comprise the primary health providers in the villages. Time individuals provide primary care in accordance with a set of Guidelines for Primary Health Care in Rural Alaska. Every afternoon, each village health aide reviews the cases seen that day by phone with one of the physicians at the IHS hospital in Barrow. Some communities also have Community Health Representatives (CHR) which serve primarily in an outreach, interpreter, or helper capacity. Most of the clinics have two CHAs; Wainwright has three health aides, one of whom is a Community Health Practitioner (CHP). They have recently applied for status as a mid-level clinic. A person goes through a 10-week training course to become a community health aide. After two years, they can be certified as a CHP. The NSB currently employs 19 community health personnel, 70% of whom are CHPS. Three years ago, only 20% of their staff were CHPs.

Primary care at the level of the village clinic has been characterized in recent years by increasing professionalization of the role of the health care provider. This is evident from the efforts of the Department of Health and Social Services to provide better training for its CHAS. Such training is viewed as important, not only for improving the quality of care available for village residents, but for the recruitment and retention of personnel. The North Slope has the highest paid CHAs in the state, but relative to the cost of living in the region, the pay is less attractive than it is elsewhere. CHAS with a high school education earn a starting salary of $15.72 an hour, which is comparable to the salaries earned by teenagers employed under the Mayor's Job Program (MJP). Consequently, positions occasionally go unfilled for periods as long as six months because of the lack of interest. However, CHAS receive a raise with each training session they attend and again once they become certified as community health practitioners. Efforts to improve the level of training of CHAS is also seen as a way of reducing traditionally high rates of turnover. Last year, the turnover rate of CHAS was 30%, but only two of these individuals were lost because of work-related stress. This year, CHA program officials are hoping to reduce this rate to 15%, a total of three individuals.

Another trend which reflects the increasing formalization and professionalization of primary care positions in the village has been the increasing involvement of the department itself in the recruitment and selection of personnel. The village health boards traditionally hired the person who became the community's health aide. This has changed so that now the position is advertised and hiring is competitive. The decision to hire a candidate is made by the NSB in consultation with the village health board. Despite the potential for conflict between the NSB and the community, responses to this change in hiring practices have generally been favorable. In one instance, the board was grateful that the NSB did not select the candidate they had recommended. The recommendation was out of social obligations and involved an individual the board did not really want. Placing the decision in the hands of the NSB resolved the board's social dilemma.

The village clinics recently (1988-1989) expanded their hours from 6 to 7.5 hours per day, resulting in an increase in the number of visits, many of which occur for social reasons rather than strictly medical ones. The number of clinic visits in the villages and the average number of visits per resident from FY 1987 and FY 1988 are found in Table 32-NSB. Anaktuvuk Pass exhibited the

highest number of visits per resident in both years; nevertheless, the number dropped significantly during this period. In Point Hope and Wainwright, on the other hand, the number of visits per resident increased over the two-year period.

The number of patient encounters and the way they are counted have important consequences for health agencies. In FY 1986 there were about 10,000 clinic visits in the NSB communities. In FY 1988, there were 14,151 visits. Funding is based on the number of visits. The NSB traditionally has not included village clinic visits for fluoride washes in their statistics, but these were included by other health agencies. Now all clinics throughout the state report fluoride washes as accounting for one-tenth of a visit.

### *Community Mental Health*

*The* department's Community Mental Health (CMH) Program provides outpatient treatment and counseling for residents in need of short-term treatment, referrals, and aftercare for local residents who return to the North Slope from the Alaska Psychiatric Institute needing some sort of transition between inpatient treatment and return to home and community. The Community Mental Health Center (CMHC) provides residential apartments for clients for up to a year, but clients have been known to stay for longer periods of time. The center is normally staffed by three clinicians and a program coordinator but is currently short-staffed. Efforts are underway to hire a program coordinator and a clinician.

Until recently, the caseload of the CMH program in Barrow was derived primarily from referrals; there were very few voluntary clients from the community. An average case load of 35 per month was reported during FY 1982. In the following year, the average annual number of open cases was 61, and 454 therapy and evaluation sessions were reported. In 1984, the center reported 82 clients, saw an average of 97 people per month, and provided therapy and evaluations for 849 people (Worl and Smythe 1986:359).

Recently there has been a marked increase in the number of non-Inupiat treated in the program. In prior years Inupiat were the principal focus of the program, but in 1984 one-third of the clients were non-Inupiat. This group also largely accounted for a significant proportion of the reported rise in number of cases, many of them being self-referrals, while the Inupiat clients were almost exclusively referrals by social service agencies seining Inupiat (AWIC, Children's Receiving Home, IHS hospital, and DFYS) (Worl and Smythe 1986:360).

Voluntary participation of Inupiat residents in the mental health programs offered by the NSB and the IHS has traditionally been low due to the stigma attached to mental illness in the community. Worl and Smythe (1986:366), for instance, note that "when questioned if they ever sought out counseling services for a situation in their life, the usual response of an Inupiaq is 'That is for crazy people.'" This attitude is based on the belief that "psychological treatment is predicated on the assumption that the individual is willing to admit he has a problem. However, admitting to another that one may have a personal deficiency or weakness is dangerous to an Inupiaq" (Worl

**Table** 32-NSB

Village Clinic **Visits** and Rate of Visits per 100 Residents,
North Slope NSB, **FY** 1987-1988

| Community | **FY** 1987 N | **FY** 1987 visits per resident | **FY** 1988 N | **FY** 1988 visits per resident |
|---|---|---|---|---|
| **Anaktuvuk** Pass | 2,829 | 11.4 | 1,977 | 7.5 |
| **Atqasuk** | 1,406 | 6.4 | 1,239 | 5.7 |
| **Kaktovik** | 1,427 | 7.1 | 1,309 | 5.8 |
| **Nuiqsut** | 2,385 | 7.6 | 2,207 | 7.0 |
| Point Hope | 3,351 | 5.8 | 3,846 | 6.5 |
| Point Lay | 1,105 | 7.2 | 829 | 5.2 |
| Wainwright | 2,657 | 4.9 | 2,744 | 5.5 |
| Total | 15,160 | 6.7 | 14,151 | 6.2 |

and Smythe 1986:367). **Inupiaq** are brought up to conceal their weaknesses, according **to** Worl and Smythe, lest others take advantage of them. In an effort to overcome the stigma attached to using mental health **services** on the North Slope, the Department of Health and Social Services has expressed its intention to rename the CMHC and call it the **Community** Counseling Center.

***Substance Abuse .***

In 1981, the Department of Health and Social **Services** initiated the Barrow Alcohol Program **(BAP),** which focused on community education, counseling, and the development of support groups for treatment and prevention of **alcohol** abuse. Friendship House was opened under this program. Although it was a non-residential facility, Friendship House offered an alcohol-free environment on a drop-in basis that was open to adults and teens into the early morning hours. As with many of the other health department programs, the staff was headed by **non-Inupiat** professionals. A director and resident alcohol counselor ran the program with three other staff.

In the first year of the program, according to **Worl** and Smythe **(1986:363-64),** "ambitious plans were developed for spouse and teen support groups, **community-aired** educational programs, and a residential alcohol treatment center. But after a mixed response to the program by the community, most of these objectives were not met." Moreover, program participation seems to have declined after the first year of operation. The BAP began in mid-1981, but its first full year of operation was **FY** 1982. A caseload of 194 first admissions and 55 readmission was reported. In the following year, the caseload decreased to 129 new admissions and 15 readmission. Ninety percent of its clients were **Inupiat (Worl** and Smythe **1986:370).**

In 1985, the program's named was changed to reflect the growing problem of drug abuse as well as alcoholism. Known as the Substance Abuse Treatment Service (SATS), the program provides outpatient counseling for substance abuse (primarily alcohol, but also cocaine and marijuana) at a facility located in Browerville. The numbers of clients and services provided are found in Table 33-NSB. Clients are referred to SATS for counseling treatment by the courts, probation officers, IHS, AWIC, and DFYS. An estimated 60 to 65% of SATS clients are court referrals; 4 to 6 people each month are self-referrals. About 5 clients every 2 to 3 months come from the villages. Payment for the use of SATS programs is based on a sliding scale.

The SATS program offers outpatient treatment in a residential facility for a 6-week period and an aftercare program which lasts 3 months. Estimated costs of the program at present are $1.5 million annually. The program currently operates a 10-bed facility for 5 men and 5 women. There are 35 people on the waiting list.. A new 22-bed SATS facility is being constructed in Barrow. It is scheduled to open July 5, 1989. In the new facility, 16 out of 22 beds will be residential; the remaining 6 beds will be for emergency cases (i.e., former clients experiencing a crisis).

Between September 1988 and March 1989, the SATS handled 18 referrals for substance abuse treatment to facilities off-slope. SATS handles the aftercare program from these people when they return to the North Slope. Aftercare is a 3-month program which includes weekly sessions and one-on-one counseling. Participants also attend Alcoholics Anonymous (AA) meetings, held five days a week. Most of those going through the program are in their 30s and 40s.

The facility has two resident counselors and a treatment director. The aftercare program handles between 16 and 20 clients per month. The department also employs a prevention specialist who goes into the schools for substance abuse prevention programs, an itinerant worker, and two aftercare counselors. Involvement of family members and significant others in the treatment process is left to the discretion of the client.

SATS also has a follow-up system. Clients are contacted once at 30 days and again at 90 days after discharge from the facility. There are a total of three contacts with clients after leaving the program. In addition, there are two halfway houses in the community for SATS participants who have graduated from the program but still need a place to stay. Residents can stay between 3 and 6 months with a 30-day extension.

In general, the community appears to be quite supportive of alcohol treatment and rehabilitation services. This support can be seen in the number of programs designed to combat the problem of alcohol consumption in the community. These include the Lions Club Quest program; Natural Helpers, who provide peer counseling and support; AA groups, one of which meets at the Presbyterian church although there is no formal affiliation; and alcohol awareness programs in the schools. As part of their efforts toward alcohol treatment, the NSB Department of Health and Social Services has instituted Sober April in Barrow, which is designed to encourage a full month of sobriety among local residents.

Table 33-NSB

Substance Abuse Treatment Services
July 1 to December 31, 1988

| | |
|---|---|
| Crisis/PHS Referrals | 14 |
| Individuals Assessed | 148 |
| Clients Pending | 216 |
| Total Active Clients | 19'0 |
| Total Client Discharges | |
| Residential | 35 |
| Aftercare | 34 |
| Outpatient | 7 |
| Total Juveniles Treated | 12 |
| Total Clients Sent Off-Slope for Treatment | 16 |

Source: NSB Department of Health and Social Services, 1989.

Support for alcohol treatment services is also reflected in the numbers of community residents who participate in such programs. About 20 to 30 people can be found at AA meetings. During whaling season, however, AA attendance and SATS participation declines dramatically as people postpone getting treatment during this time. Nevertheless, SATS program officials assert that there are now more people doing something about their alcohol and substance abuse problems. The increase in demand for services and client populations is not an indication that the problem is becoming more severe on the North Slope, but rather that more services are being offered and that attitudes towards getting treatment have changed.

There is not a good deal of information on the AA program in Barrow. While it may appear that attendance is quite high for a community the size of Barrow, it is also true that attendance at AA is one of the requirements of the SATS program, and that the SATS program itself is not always voluntary. A good many of the clients attending SATS have been given the option of incarceration or SATS. There is also no information on the effectiveness of the AA meeting format in an Inupiat setting. Participant research would have been quite intrusive and probably unethical, and attendees are understandably reluctant to talk about AA meetings. It would seem that such confessional type meetings would not appeal to a good many Inupiat, and that is the general reason that informants in the smaller villages give for the nonviability of AA in the villages. Those outer villages which were said to have active AA groups in fact had few meetings.

This level of community support appears to be a change over the past ten years. An earlier study of Barrow cited a lack of community support for such programs. A supposed example of this lack of support was the failure of an attempt to develop a counseling and alcohol treatment center by

the pastor of the Presbyterian church. The congregation was divided on the issue of constructing a facility on church property.

Some members thought it was inappropriate for the church to sponsor such specialized social services, and others believed that the pastor had exceeded his authority in committing the church to such a program. The pastor continued to assert his views in this and other areas, and in 1985 the local membership voted to have him replaced amid questions about misuse of church funds. This action produced a split in the congregation (Worl and Smythe 1986:365). Local residents interviewed in March 1989, however, maintained that the real issue behind the split was dissatisfaction with the minister and not the planned construction of an alcohol rehabilitation facility.

Although there is still a stigma attached to mental health services on the North Slope, this appears to be less the case with regard to drug and alcohol treatment. Once a local resident has made the choice to seek treatment for substance abuse, they want the entire community to know about it as a public expression of their commitment and resolve. In fact, the SATS program currently has a six-month waiting list, despite the great amount of resources the NSB has devoted to building new facilities and hiring staff. Nevertheless, members of prominent families in the community still prefer to go off-Slope for treatment.

### *Arctic Women in Crisis*

The AWIC Program provides services to the victims of domestic violence, sexual assault, and child abuse. The program operates an 8-bed shelter in Barrow and 12 village safe homes. The program also provides crisis intervention, counseling, legal advocacy, education, and village outreach. The program is run by 8 staff and 12 safe home volunteers. In FY 1989, the operating budget for the program was $591,604.

An indication of the extent to which the program is utilized "by North Slope residents is provided in Table 34-NSB. Program staff also report an increasing number of men who have sought shelter from abusive spouses in the past few years.

### *Children and Youth Services*

The NSB Department of Health and Social Services provides four programs geared specifically for social services to children and youth. They include: (1) Children's Receiving Home, (2) Ukpiksuu Summer Camp, (3) Parenting Program, and (4) non-secure detention. The Children's Receiving Home provides housing and care for children in the custody of the State of Alaska. Between July 1 and December 31, 1989, the receiving home admitted 58 new individuals and 13 individuals who had been admitted previously. The average daily census during this six-month period was 5.9 residents with an average length of stay of 8 days. Total child care days during this period was 1,084.

Table 34-NSB

Semi-annual Summary of Program Services,
Arctic Women in Crisis, July 1 to December 31, 1988

| Service Program | Number |
|---|---|
| Women sheltered | 73 |
| Children sheltered | 75 |
| Sexual assault victims | 29 |
| Child abuse cases | 12 |
| Male anger control cases | 19 |
| Walk-in clients . | 80 |
| Bed nights (Barrow) | 650 |
| Barrow crisis calls | 166 |
| Village crisis calls | 44 |
| Emergency call-outs | 52 |
| Unduplicated clients | 309 |
| Safe Home nights | 39 |

Source: NSB Department of Health and Social Services, 1989.

The summer camp focuses on arctic survival and subsistence skills and provides a summer opportunity for youths to develop socially, physically, and culturally. The parenting program offers counseling and crisis intervention for families at high risk for domestic violence and child abuse. The non-secured attendant care shelter provides temporary placement for intoxicated youths who cannot be returned, for whatever reason, to their homes. Otherwise, these individuals would be placed in adult detoxification detention ("detox") at the Public Safety Building. The total cost of these programs in FY 1989 was $902,000.

### *Senior Home Health Services*

*The* Senior Citizen's Program provides hot lunch programs, meals-on-wheels, transportation, language interpretation assistance, escorting, outreach recreation, and information to adults 55 years of age and older. The program operates Utuqqanaaqagvik, a 38-unit residential facility located in Barrow and available for senior citizens. Between July 1 and December 31, 1988, the occupancy rate of the facility was 47%. In February 1989, however, the age requirement was lowered to 55 to increase utilization of the facility. Within a few months, the occupancy rate increased to 51% (NSB Department "of Health and Social Services 1989).

The low occupancy rate for Utuqqanaaqagvik seems to be related to several factors. It is in a relatively isolated location, on north edge of Barrow near the high school. It is not directly on a bus route, so that riders have to walk a block or so to visit (Seniors have a bus of their own). The units are not very spacious and it is certainly difficult to engage in subsistence activities from such accommodations. Most Seniors in Barrow prefer to live in their own home and are assisted by kinsmen (or the NSB Seniors' Home Health services aides) when it is necessary. On the other hand, some village informants who are old enough to use these units report that they are very convenient and nice to use while they are visiting in Barrow. They are more spacious and less expensive than hotels, especially since they have full-size kitchens and refrigerators. Staying in these units means that they do not have to stay with a kinsman unless they want to, and in many cases they prefer not to overcrowd what is often already a very full house. These units provide a highly valued degree of privacy, as they are really too small for people to come visit, but allow for a good deal of socializing by being close enough to public transportation so that the visitors to Barrow can go to see whomever they wish to. Thus, the most successful use of Utuqqanaaqagvik may be as a "Senior hostel," as a space of one's own away from home.

The Senior Citizen's Program also sponsors a Village Homemaker Program which provides housecleaning and shopping assistance to interested elders in the villages. In the last six months of 1988, this program served 6,754 meals throughout the region (not including meals served in Kaktovik for which figures were unavailable), provided 200 hours of homemaker services per month, and provided 1,830 rides for seniors per month. Overall cost of the program in FY 1989 was $1.7 million.

### *Traditional Native Healers*

In addition to the modem health care system, a traditional Native health care system remains intact throughout the region. At times, the two systems interact. For instance, the Department of Health and Social Services employs a traditional Native healer who provides services in Barrow and in the villages. This individual is often solicited by elderly residents who are more familiar with traditional Inupiat medical practices or by residents who are unsatisfied with the care they received by the modem health care system. In addition, there are a few Native healers in the villages who continue to practice skills and techniques handed down through the generations.

Traditional healing is based principally on techniques of massage and manipulation of diseased or injured parts of the body. Occasionally, herbal remedies are employed as well. Healers also use an Inupiat form of acupuncture known as "poking" which involves minor bloodletting with a knife. These techniques are used primarily for musculoskeletal complaints such as arthritis and backaches, digestive disorders, and strains and sprains.

One of the features of traditional healing practices that distinguish them from the practices of clinicians representing the modem health care system is the extent of social contact and interaction involved in the therapeutic system. Local residents, especially those in the villages, view physicians as "outsiders" in both a geographic and cultural sense. These outsiders usually travel from Barrow to the villages no more than four times a year and the same patient is often seen by different physicians. In addition, the interaction is often impersonal and occurs through an intermediary in the form of a nurse if at Barrow or a community health aide if at a village. Traditional healers,

on the other hand, are more accessible, are generally known to the patient beforehand, and come in close physical and spiritual contact with the patient during the treatment process. Healers rely on their hands as their primary clinical tool and attempt to transfer the source of the pain from the body of the patient to the body (specifically, the hands) of the healer.

## 4. Morbidity and Mortality

### *Rates of Morbidity and Mortality*

Rates of morbidity and mortality, particularly as they have changed over time or in comparison to similar rates for all of Alaska and the United States, provide a vivid representation of the effects of sociocultural change on the health and well-being of Native and non-Native NSB residents. However, the published data on morbidity and mortality among Alaska residents over the past ten years is quite limited. Attempts to describe the health status of NSB residents using such data are constrained by several factors. First, no data on individual North Slope communities are available, limiting comparisons between communities experiencing varying rates of sociocultural change. Previous studies of the health status of Alaska residents in general and Alaska Natives in particular (cf. Alaska House Finance Committee 1982; Blackwood 1982; Nathan et al. 1975) have either included information on North Slope residents or may be generalized to describe existing health conditions on the North Slope. These studies have noted a decline in morbidity and mortality due to infectious diseases such as tuberculosis and influenza, but a corresponding increase in accidental and self-inflicted injuries, homicides, and chronic diseases such as heart disease, malignant neoplasms, and diabetes. Accidental injuries, suicides, and domestic violence, much of which are alcohol-related, remain the major health problems throughout Alaska.

Second, data obtained from the State of Alaska on deaths are incomplete due to weaknesses in the death record reporting system (Hlady and Middaugh 1986). Given the reluctance of many individuals to admit to the suicide of a friend or family member, and the lack of specificity in the reporting process and death certificate, many suicides are classified as accidental deaths (Blackwood 1979; Kost-Grant 1983).

Third, information on illness, particularly accidental injuries, is dependent upon the level at which the illness or injury comes to the attention of the formal health care system. Blackwood (1979) notes there are three major levels of health care delivery in Alaska. The first level includes illnesses and injuries which are treated by the afflicted individual or by family members and do not come to the attention of the formal health care system. The second level includes outpatient visits which are treated in village clinics but which may be reported as multiple events if the patient visits the clinic on more than one occasion for the same condition. The third level includes conditions which are treated on an inpatient or outpatient basis by the Alaska Area Native Health Service (AANHS). However, data on these visits are not collected or presented in a format that is useful for epidemiologic studies.

Finally, reliance upon inpatient or outpatient data alone doe-s not enable us to determine" whether changes in rates over time are due to improved services and/or differences in reporting procedures, or are directly caused by larger forces of sociocultural change. The influence of the latter on health status among Alaska Natives has been examined in a number of studies. Previous research

has pointed to a link between sociocultural stress and increased rates of alcohol abuse (Klausner, Foulks, and Moore 1980; Palinkas 1983; Shinkwin and Peete 1982), suicide and homicide (Kraus and Buffler 1979; Parkin 1974) and accidental injury (Palinkas 1987). Among the sources of this stress is the disruption of family dynamics due to changes in male-female roles (Bloom 1973), changes in patterns of subsistence production and distribution (Palinkas 1987), and increased generational conflict as older family members struggle to retain a traditional identity and set of values while younger members become increasingly exposed to and accepting of values and behavior associated with the larger Euro-American society. Class differences, based on differential access to income and employment opportunities, is another source of stress (Klausner, Foulks, and Moore 1980; Palinkas 1987). Suicide and alcohol abuse are related to the" lack of culturally sanctioned techniques for acting out hostile affect due to the rejection of traditional values and patterns of behavior in favor of new values and behavioral patterns (Foulks 1980; Kost-Grant 1983).

Sociocultural change is also reflected in the greater use of services provided by the modem health care and social service systems. As noted above, this may be due to the greater availability of inpatient and outpatient facilities and services. However, there is also some evidence to suggest a greater willingness to utilize formal institutions instead of traditional mechanisms throughout Alaska (Impact Assessment 1987).

Other health risks associated with sociocultural change include the adoption of a more Westernized diet which is linked to increased rates of cardiovascular disease (Marmot and Syme 1976), changes in lifestyle and occupations which may predispose certain individuals and groups to accidents and chronic diseases (Polednak 1989, Schooneveldt, et al. 1988), and exposure to new antigens such as hepatitis B (Barrett et al. 1977; Schreeder et al. 1983).

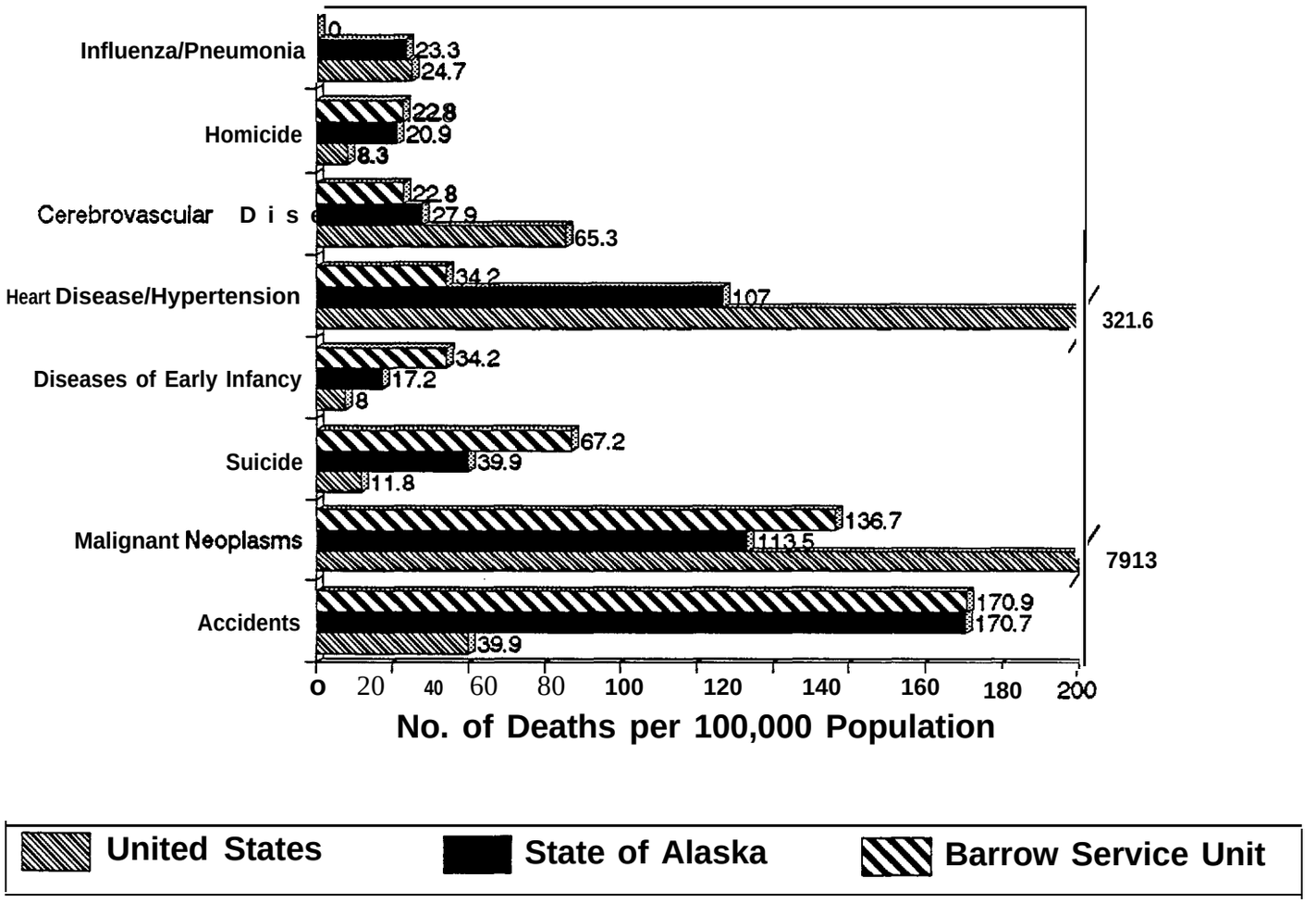
A study of the effect of energy development on the Inupiat population of the NSB found no relationship between energy development itself and accelerated social disorganization (Kruse, Kleinfeld, and Travis 1982). However, their data extended only up to 1977 and examined the effect of growth on rates of traumatic deaths. The most recent period (1985-1988), on the other hand, has been characterized by decline in revenues and employment opportunities which, based on evidence from other parts of the state (Impact Assessment 1987), places individuals at greater risk than occurs during periods of economic growth. Moreover, comparison of the traumatic death rates of NSB Inupiat residents with the rates of other northern Inupiat did not take into consideration what was happening with the latter group at this time. In other words, the study failed to hold constant the sociocultural changes experienced by other northern Inupiat in communities such as Fairbanks which, in some respects, may have been greater than those experienced in the NSB itself (Dixon 1976).

### *Indian Health Service Statistics*

A comparison of the leading causes of Native mortality in the Barrow Service Unit and statewide is provided in Figure 17-NSB. Standardized mortality ratios (SMRs) were estimated to determine the cause-specific risk for mortality among Alaska Natives living on the North Slope relative to all Alaska Natives. Statistical significance of these estimates was assessed by calculating 95%

Figure 17-NSB

Comparison of Leading Causes of Native Mortality
for the Barrow Service Unit and the State of Alaska
3-Year Average Crude Rates: 1983-1985
U.S. National Population Comparison: 1984




Source: Barrow Service Unit and State of Alaska data: Alaska Native Area Health Service, Patient Care Standards Branch, 1988; U.S. data: National Center for Health Statistics, U.S. Department of Health and Human Services.

confidence intervals (95% C.I.). Accidental injury was the leading cause of mortality on the North Slope between 1983 and 1985, followed by malignant neoplasms, suicide, diseases of early infancy, cardiovascular diseases, cerebrovascular diseases, and homicide. Natives living on the North Slope had significantly higher than expected rates of suicide-related deaths (SMR = 1.68, 95% C.I. = 1.01- 3.35) during this period. However, North Slope Natives also had a significantly reduced risk of mortality due to cardiovascular disease (e.g., ischemic coronary heart disease, myocardial infarction) (SMR = 0.32, 95% C.I. = O - 0.68), perhaps because these are crude rates and reflect the fact that the high risk of dying during early infancy (SMR = 1.99, 95% C.I. = O - 4.33) reduces the risk of dying from a degenerative chronic disease in later life.

As is the case in other regions of the state, accidental injury is the leading cause of morbidity (Table 35-NSB). In FY 1986, however, deliveries replaced accidental injuries as the primary cause of hospitalization. During this period, there were significant declines in the number of cases of pneumonia, symptoms and ill-defined conditions. On the other hand, there were marked increases in the numbers of hospitalized cases of malignant neoplasms, psychoses and neuroses, diseases of the circulatory, digestive, and respiratory systems, and diseases of the nervous system. The leading causes of first visits of outpatients to the Barrow facility are displayed in Table 36-NSB.

## clinic visits

A potential source of information on morbidity and risk factors are the records of clinic visits in each community. A limited amount of information exists on the number of clinic visits per year. According to Alaska Consultants et al. (1984:220), daily patient loads averaged about 10 persons at the Wainwright clinic, 9 persons at the Point Hope clinic, 2 to 3 persons at the Atqasuk clinic, and 2 persons at the Point Lay clinic. In FY 1988, daily patient loads averaged between 2.3 persons in Point Lay to 10.5 persons in Point Hope.

Perhaps the most detailed examination of morbidity and health care utilization at the village level is contained in the Nuiqsut case study (Galginaitis et al. 1984). In 1982, there were approximately 3.3 persons seen each day at the Nuiqsut clinic. Respiratory complaints accounted for approximately 19% of the total clinic visits during 1982, followed by infectious diseases (13.4%), ear problems (13.0%), and accidental injuries (13.0%). This corresponds with the distribution of health problems in rural communities in other parts of the state (Alaska Area Native Health Service, Area Planning Section, 1988). The report also examines the distribution of clinic visits by age and sex. Males, for instance, appear to account for significantly larger percentages of accidental injuries while women account for a slightly larger percentage of visits for infectious diseases than men. Although the data collected revealed that the monthly rate of clinic visits by Nuiqsut residents was 20%, the authors also note that this figure does not take into account the number of repeat visits for the same clinical condition. Similarly, age and sex-specific rates of first clinic visit by diagnosis was not provided, making it difficult to identify risk factors for particular diseases and injuries.

Table **35-NSB**

Barrow Service Unit Leading Causes of **Hospitalization, FY** 19S3-1987

| Diagnoses | FY 1983 N | Rank | FY 1984 N | Rank | FY 1985 N | Rank | FY 1986 N | Rank | FY 1987 N | Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| **Accidents** and Injuries | **153** | 1 | **.164** | 1 | 127 | 1 | 95 | 2 | 80 | 2 |
| **Deliveries** | **101** | 2 | 98 | 2 | 106 | 2 | 97 | 1 | 89 | 1 |
| Pneumonia | **79** | 3 | 64 | 3 | 72 | 4 | 37 | 5 | 33 | 5 |
| Symptoms and Ill-Defined Conditions | **65** | 4 | 57 | 4 | **28** | 6 | 25 | 6 | 32 | 6 |
| Complications of **Pregnancy** | **39** | 5 | 40 | 6 | 62 | 5 | 42 | 4 | 3s | 3 |
| Alcohol Abuse | **37** | 6 | 51 | 5 | 73 | 3 | 53 | 3 | 33 | 4 |
| Upper **Respiratory** Diseases | 25 | 7 | 13 | **11** | 17 | **10** | 11 | 14 | **20** | 9 |
| Infected Skin Abrasions | **22** | 8 | 11 | 15 | 11 | | 19 | **10** | 13 | 12 |
| Bronchitis | 15 | 9 | 12 | 12 | 26 | 8 | | | | |
| **Urinary** Tract Disease | 15 | **10** | 15 | 8 | 16 | 12 | 19 | 9 | | |
| **Perinatal** Conditions | 10 | 11 | | | | | | | | |
| Heart Disease | 9 | 12 | 12 | 13 | | | | | 16 | 10 |
| **Diseases** of the Female Genitalia | 9 | 13 | 15 | 9 | | | | | | |
| **Diseases** of the Stomach | 8 | 14 | 15 | 10 | 20 | 9 | 24 | 7 | 21 | 8 |
| Endocrine Disorders | **7** | 15 | | | | | | | | |
| Convulsions | **6** | | 6 | | 14 | 15 | 17 | 12 | 12 | 13 |
| Diseases of Nervous System | 5 | | 3 | | 14 | 14 | 11 | 15 | 12 | 14 |
| Psychoses | 5 | | 12 | 14 | 16 | 13 | 13 | 13 | 29 | 7 |
| **Malignant Neoplasms** | 2 | | 23 | 7 | 27 | 7 | 21 | 8 | 15 | 11 |
| **Respiratory Allergy** | 1 | | 1 | | 17 | 11 | 17 | 11 | | |
| Neurosis/Non Psychotic **Disorders** | | | | | 11 | | 5 | | 12 | 13 |

**Source Alaska Area Native** Health Service, Health Statistics Section, 1983-1987

Table 36-NSB

Leading Causes of Outpatient First Visita
FY 1981-1987 Barrow Service Unit

| Outpatient Diagnoses | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|---|
| Accidents and Injuries | 2,432 | 2,283 | 2,348 | 2,251 | 1,937 | 1,731 | 1,791 |
| Upper Respiratory Problems | 1,877 | 2,033 | 2,090 | 1,656 | 1,887 | 1,966 | 1,981 |
| Otitis Media | 1,275 | 1,120 | 1,243 | 1,468 | 1,521 | 1,362 | 1,572 |

Source: Alaska Area Native Health Service, Health Statistics Section, 1983-1987.

*5.* Maior Health Concerns

Although inpatient admissions and mortality data provide some indication of the major health problems affecting the region, these data are limited by the fact that the region offers limited inpatient services 'and the-cause of death is not always accurately reported on death certificates. A more useful measure of disease risk is that of outpatient first admissions. These data reflect medical conditions which do not necessarily result in evacuation to medical facilities in Anchorage or Fairbanks and include many of those cases who are inevitably hospitalized or sent for more specialized treatment outside the region.

An examination of the rates of first admission by diagnostic category, contained in Table 37-NSB, provides some understanding of how health concerns have changed over a recent five-year period. Some of the disease categories which have traditionally been major health concerns in the past exhibit clear declines in rates per 1,000 persons between 1983 and 1987. These include infectious and parasitic diseases, diseases of the skin and subcutaneous tissue, diseases of the respiratory system, and diseases of the digestive system. The incidence of tuberculosis appears to have increased over a two-year period (1985-1986) and then declined, reflecting a possible outbreak. Nevertheless, diseases of the respiratory system, diseases of the nervous system (especially otitis media), diseases of skin and subcutaneous tissue, and infective and parasitic diseases, along with accidental injuries, continue to represent the most significant health problems in the region.

One of the most interesting trends evident from this. table has been the clear decline in rates of first admission for accidental injuries between 1983 and 1987. Nevertheless, in 1983 the rate of accidental injury on the North Slope was approximately twice as high as the rate for the U.S. general population that year (NCHS 1988).

Although separate figures are unavailable, many of the accidental injuries reflected in these statistics were self-inflicted. However, according to Department of Health and Social Service administrators, suicide appears to have declined on the North Slope, which may be a reflection of the fact that more people are getting mental health and alcohol treatment services. Nevertheless, village health boards have requested assistance from the department in dealing with suicide.

If we are to assume that the rate of accidental injury provides a reliable indicator of the stress experienced by North Slope residents in response to the rapid pace of socioeconomic development and change, as asserted by Kruse and his associates (1983), then we might conclude that the decline in rates of accident injury during this recent five-year period reflects a pattern of adaptation to this stress or an enhanced ability of the modem health care system to deal with the problem. On the other hand, another index of modernization stress, mental disorders, appears to suggest that the stress associated with modernization and sociocultural change is increasing rather than decreasing. In 1983, the rate of first outpatient admissions for all mental disorders was 60.8 per 1,000 persons. By 1986, this figure had increased to %.3 per 1,000. Apart from non-psychotic disorders and neuroses, alcohol represents the most noticeable category of mental disorders resulting in outpatient treatment. The incidence of outpatient treatment of alcohol abuse increased from 15.5 per 1,000 in 1983 to 30.2 per 1,000 in 1986.

One of the best known studies of alcohol abuse in the region, conducted by Klausner, Foulks, and Moore (1980), was criticized for the extremely negative portrayal of Barrow residents. Their chief finding was that between 70 and 80% of the adult population of Barrow were in need of some form of alcoholism intervention and treatment. However, the findings were based on a 5% sample of the adult population which does not appear to have been randomly selected. Data on the impacts of alcohol use were obtained from records of the NSB Department of Public Safety and provided a comprehensive description of drinking patterns or the consequences of these patterns which was not comprehensive and perhaps also not representative of the drinking population of the community. Data on alcohol consumption were obtained only from records of the community liquor store and did not take into consideration the alcohol purchased and/or consumed elsewhere. Finally, because of Barrow's status as a regional center and largest community in the NSB, the study did not adequately reflect the drinking patterns or consequences throughout the NSB.

Although rates of outpatient treatment for alcohol abuse have increased in recent years, this increase may be attributed in part to the increased availability of services in the region and the increased willingness of local residents to utilize these services as noted earlier. Moreover, the numbers of alcohol-related criminal offenses appear to have declined in the past few years (Table 38-NSB). On the other hand, the number of cases involving detox detention increased from approximately 450 in 1985 to over 700 in 1988 (NSB Department of Public Safety 1988). Residents acknowledge that alcohol continues to be a problem even though the NSB communities have enacted ordinances making it illegal sell liquor or import it with the intent of selling it (Dann and Associates 1987). Those desirous of purchasing alcohol do so in Anchorage or Fairbanks. Some residents also distill their own alcohol.

Table 37-NSB

Rates (per 1,000 persons) of First Admissions for Outpatient Care
by Selected Diagnostic Categories and Diagnoses by Year
"North Slope": 1983-1987

| Diagnostic Category | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Infectious and Parasitic Diseases | 210.6 | 170.8 | 184.9 | 195.3 | 173.8 |
| Tuberculosis | 2.6 | 2.8 | 7.6 | 7.4 | 4.2 |
| Venereal Diseases | 14.5 | 19.3 | 10.1 | 8.1 | 8.3 |
| Neoplasms | 73 | 13.5 | 11.4 | 6.5 | 13.2 |
| Endocrine, Nutritional, and Metabolic Diseases | 15.5 | 26.5 | 26.4 | 30.9 | 30.5 |
| Diabetes | 3.5 | 6.7 | 7.6 | 5.2 | 5.7 |
| obesity | 23 | 3.0 | 4.7 | 6.7 | 8.3 |
| Diseases of Blood and Blood-Forming Organa | 11.5 | 15.6 | 15.0 | 9.2 | 10.1 |
| Mental Disorders | 60.8 | 62.0 | 95.2 | %.3 | 81.8 |
| Neuroses and Non-Psychotic Disorders | 41.1 | 57.6 | 58.9 | 60.8 | |
| Alcohol Abuse | 16.4 | 14.6 | 31.6 | 30.2 | 15.4 |
| Diseases of Nervous System and Sense Organa | 473.9 | 488.7 | 509.8 | 450.8 | 532.6 |
| Epilepsy and Convulsions | 5.4 | 4.6 | 6.9 | 4.5 | 6.1 |
| Eye Diseases | 92.7 | 87.2 | 106.0 | 81.3 | 106.6 |
| Ear Diseases | 360.3 | 381.8 | 376.9 | 350.0 | 402.1 |
| Diseases of Circulatory System | 46.2 | 41.1 | 39.0 | 41.2 | 41.0 |
| Diseases of Respiratory System | 649.3 | 549.7 | 586.8 | 568.4 | 554.4 |
| Diseases of Digestive System | 103.5 | 122.3 | 114.3 | 90.0 | 25.9 |

Table 37-NSB (continued)

Rates (per 1,000 persons) of First Admissions for Outpatient Care
by Selected Diagnostic Categories and Diagnoses by Year
North Slope[1]: 1983-19S7

| Diagnostic Category | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Diseases of Genito-urinary System | 133.3 | 134.6 | 138.2 | 148.3 | 148.1 |
| Diseases of Skin and Subcutaneous Tissue | 212.2 | 21.5.6 | 181.7 | 154.8 | 158.0 |
| Diseases of Musculo-skeletal System | 121.2 | 1428 | 125.0 | 134.4 | 156.0 |
| Congenital Anomalies | 3.1 | 6.0 | 7.2. | 5.2 | 5.3 |
| Accidents, Poisonings and Violence | 551.1 | 522.5 | **434.0** | **387.7** | **392.9** |

[1]These do not include figures for the communities of Anaktuvuk Pass and Point Hope which are treated in Fairbanks and Kotzebue, respectively.

Table 38-NSB

Alcohol-Related Arrests,
North Slope NSB Department of Public Safety, 1985-1988

| Year | DWI | Liquor Laws* | Drug-Related |
|---|---|---|---|
| 1985 | 98 | 210 | 10 |
| 1986 | 46 | 188 | 9 |
| 1987 | 50 | 160 | 14 |
| 1988 | 48 | 134 | 11 |

* Minors consuming alcohol, importation, etc.

Source: NSB Department of Public Safety.

Alcohol is also implicated in many of the other health problems affecting North Slope residents, including accidental injury, suicide, homicide, and chronic conditions such as liver cirrhosis. Fetal Alcohol Syndrome (FAS) is considered to be a serious problem on the North Slope. Three years ago, the rate of FAS on the slope was higher than in most third world countries. In response to this problem, the NSB Department of Health and Social Services established a prematernal home in Barrow. Expectant mothers can use the facilities during the last month of pregnancy and be monitored for health and emotional status. In this way, health status and alcohol consumption can be regulated.

In addition to alcohol abuse, the primary substance abuse problem on the North Slope today appears to be polydrug (alcohol, marijuana, cocaine) abuse. Between July 1988 and February 1989, 104 clients treated by the SATS program in Barrow were polydrug abusers; 27 clients were treated for alcohol abuse alone and many of these may also have abused other substances. Other abused drugs include glue-sniffing, by children, and barbiturates.

Chronic diseases known to be associated with modernization and sociocultural change, such as neoplasms and endocrine, nutritional, and metabolic diseases, also increased during this five-year period. Rates of outpatient treatment for neoplasms increased from 7.3 per 1,000 in 1983 to 13.2 per 1,000 in 1987. Much of this is attributed to lung cancer resulting from increased cigarette smoking among residents throughout the region. Diabetes also increased significantly from 3.5 per 1,000 in 1983 to 5.7 per 1,000 in 1987. Although these figures are much smaller than those for the general U.S. population, estimated to be 26.1 per 1,000 (NCHS 1988), it reflects the fact that diabetes is becoming a growing problem among Native American and Alaska Native populations in general. Moreover, the incidence of outpatient treatment for obesity, a risk factor for diabetes, increased significantly from 2.3 per 1,000 persons in 1983 to 8.3 per 1,000 in 1987.

## 6. Health Care Issues

### *Perceptions of Health Care*

A review of ten years of Inupiat testimony by Kruse and his colleagues at the Institute of Social and Economic Research (1983) contained a few comments on the potential health impacts of economic development and social change on the North Slope. They point out that although less than 1% of all testimony addresses areas such as alcoholism, stress, family breakup, drug addiction, and generational conflict, "the Inupiat connect drugs and alcohol with the outsiders as a source and a cause, and they are considered to be the suppliers impinging externally upon the local community. In contrast, they do not appear to view alcoholism and stress as an internal Inupiat reaction to rapid change, a potential outcome of changing social conditions resulting from a decline in or threats to traditional and subsistence social patterns" (Kruse et al. 1983:241).

In March 1987, NSB residents were surveyed as to their perception of the adequacy of the existing health care system and needs for program development (Dann and Associates 1987). The most important health problems borough-wide were as follows:

1. Activities for our youth.
2. Boarding of patients or patients' families staying in Anchorage during treatment.
3. Improved outpatient clinic service at Barrow Hospital.
4. Alcohol abuse programs in villages.
5. More medical doctor services in villages.

Underlying these perceived health care needs are three major issues. The first is the dissatisfaction with the existing level of contact with physicians in the villages. Generally, each village is visited by a physician four times a year. Often, fewer visits are made because of difficulties in transportation, weather, or scheduling. Even when a village is visited by a physician, it is not always the same individual. Village residents, therefore, have little opportunity to establish a consistent, ongoing relationship with the same physician.

A second major issue relates to the fact that most of the services offered in the region are located in Barrow. As with the other spheres of community life, the health care system is subjected to the perceived conflict of interest between Barrow and the NSB on the one hand and the villages on the other. The desire for increased services in the villages reflects a desire for greater autonomy from the centralized NSB administration and the reluctance to travel great distances to obtain necessary services.

This reluctance to travel outside the community also touches on the third major issue, the desire to avoid having to go "outside" the region for treatment. Despite the improvement in level of care offered within the region during the past ten years, residents must still travel to Fairbanks or Anchorage for emergency care and certain forms of long-term care. The prolonged separation from family and friends deprives the sick and injured from the comfort and support normally provided by family and friends. Illness serves to disrupt family dynamics in a very real sense when family members are unable to accompany the sick or injured member off-slope.
Perceptions of the most important problems also differ by community. The number one health problem identified by respondents in each community was as follows:

| | |
|---|---|
| Barrow | Alcohol abuse programs in the villages. |
| Kaktovik: | More medical doctor services in villages. |
| Nuiqsut: | Boarding of patients or patients' families staying in Anchorage during treatment. |
| . Point Hope: | Patient travel to Anchorage, Fairbanks, or Barrow for care. |
| Point Lay: | Activities for our youth. |
| Wainwright: | More medical doctor services in villages. |

One of the major village health priorities has been for young teens, particularly suicide, alcohol, and teen pregnancy. The NSB schools in the past have been reluctant to seek assistance in dealing with these problems, but this appears to be changing.

### *Agency Priorities*

Priorities established by the NSB Department of Health and Social Services for FY 1989-1990 are as follows:

1. Increase cancer awareness and educational programs.
2. Develop and implement formal cancer screening programs and provide for appropriate follow-up.
3. Support the construction and programmatic development of the Juvenile Detention/Group Home Complex.
4. Increase the number of SATS counselors in the villages.
5. Establish support groups in each village for those individuals returning from alcohol and drug treatment programs.
6. Establish an outreach program for family members of those who are involved in alcohol and drug treatment, especially at the village level.
7. Increase lobbying efforts on the local level (city councils, village councils, assembly, and tribal organizations) to better address the enforcement of alcohol and drug laws.
8. Establish a "halfway" or transitional living program for the mentally disabled.
9. Improve relationship and communications between the Regional Board of Health, village health boards, city councils, and the service providers.
10. Increase program development and community interest in developing alternatives for youth.
11. Continue to improve outpatient services at the Barrow, PHS Hospital.

Health promotion and disease prevention has been targeted as a priority by the IHS, incorporating Inupiat cultural and traditional values, to accomplish changes in individual health behaviors and community environments. The areas which have been targeted are as follows:

- Diabetes
- Cancer Prevention
- Immunization
- Communicable Disease Control
- Abuse
  - substance
  - child
  - elder
  - spouse
- Community Injury Control
- Acquired Immune Deficiency Syndrome

Both IHS and NSB health care administrators believe that the Sobriety Month for April 1989 planned by the NSB should be followed by other programs, such as a month for cancer screening and another for diabetes awareness and prevention. Meningitis is a serious problem on the North Slope. Efforts are also underway to develop an accident prevention program.

One of the community's major health care needs is for skilled nursing care and long-term care of the elderly. An independent elderly residential center was recently built by the NSB in Barrow. However, the center cannot provide care for elders requiring skilled nursing services or who are unable to live independently. According to the Director of the Department of Health and Social Semites, there are 15 Native Elders currently in nursing care facilities in Fairbanks or Anchorage. These individuals are separated from their families, depriving them of a social support network which would improve their health status. At the same time, it further weakens the integrity of the traditional family structure and pattern of intrafamily relationships. In addition to the 15 elders who would benefit from a skilled nursing care facility 'in Barrow, there are another 7 elders in town who could benefit from either a facility or having skilled nursing care personnel in the home.

### *Funding*

In FY 1989, the NSB Department of Health and Social Services operated with a $13 million budget, 75% of which comes from the NSB, 15% from the State of Alaska, and 5% from the PHS. The Barrow hospital operates on a $3 million annual budget, all of which comes from the IHS. Medicare and Medicaid payments provide additional revenues which total about $500,000.

The NSB gets $45,000 from a federal program for its village clinics. The physician's assistant in Wainwright, however, is required to charge for his services. In addition, the NSB receives some money from the Community Health Facilities Assistance Program.

7. Summary and Issues

Over the past decade, the institutions responsible for providing health and social services to the region's inhabitants have undergone a number of changes. Two of these changes are particularly noteworthy. The first has been an increased emphasis on care at the local and regional level, especially chronic care. The CIP program provided most of the villages in the region with modem clinic facilities. The CHA program has worked to improve the level of skills of village clinic personnel by providing advanced training for CHAs and hiring physician's assistants to work in two of the villages' clinics. Both the PHS IHS Service Unit and NSB Department of Health and Social Services have also worked to develop programs in Barrow and throughout the region which are designed to reduce the number of residents who must go "off-slope" for treatment. These include prenatal care, mental health services, and substance abuse treatment services. These programs also reduce the degree of separation of the sick and injured from family and friends, a major problem with treatment off-slope. Studies have shown that access to social networks for certain types of emotional and instrumental support reduces the risk of further illness and improves treatment compliance (Wethington and Kessler 1986; Dean and Lin 1977).

The second major change in the modem health care system in the past ten years has been the increasing integration of programs and personnel managed by the PHS and the NSB Department of Health and Social Services. This integration has served to avoid duplication of services and effectively manage what is likely to be a declining budget.

Although a number of problems exist with respect to the quality and quantity of services provided, these changes appear to have been somewhat effective in dealing with health care issues traditionally associated with processes of sociocultural change. Overall, numbers of inpatient and outpatient admissions have declined while village clinic visits appear to have increased. One of the traditional measures of sociocultural change, traumatic injury, has clearly declined. Other measures, including mental illness, alcohol abuse, and chronic diseases have shown an increase in recent years. This increase may be attributed, in part, to the greater availability of services in the region, particularly alcohol and mental health services, rather than to an increase in incidence. Increases in other diagnostic categories, particularly ear diseases and musculoskeletal diseases, may reflect greater willingness of residents throughout the region to utilize the modem health care system for conditions that would otherwise have been treated by family members or Native healers using traditional practices.

The decline in respiratory diseases, diseases of skin and subcutaneous" tissue, and infectious and parasitic diseases may reflect the ability of the modem health care system to address many of the region's traditional health care concerns. Nevertheless, diseases of the respiratory system, accidental injuries, diseases of the nervous system and sense organs, diseases of the skin and subcutaneous tissue, diseases of the genitourinary system, and infectious and parasitic diseases remain the major health problems in the region. In addition, as has been observed in other parts of the state, chronic diseases, especially cancer and endocrine and nutritional disorders, are assuming an increasing proportion of the resources of the modem health care system. These disorders are the result of a complex set of factors, including changes in dietary practices, increased cigarette smoking, and psychosocial stress.

Despite its successes, the modem health care system still faces a number of obstacles. As evidenced by the increased utilization of the clinic and outpatient services by local residents and their current dissatisfaction with the level of care provided at the village level, the expectations of the region's residents have risen at a faster rate than the system's ability to meet those expectations. As federal and NSB funds for health care services begin to decline in the next few years, the gap between expectation and ability may increase.

Similarly, the modem health care system faces a number of obstacles in its efforts to improve the level of care at the local and regional level. The recent departure of three physicians hired by the Department of Health and Social Services to work at the PHS hospital was due in part to the failure of the health care institutions to meet the expectations of clinicians used to specific resources and procedures commonly found in the modem health care system outside of rural Alaska. Circumstances of geography, reduced revenues, and the high cost of living may continue to limit the ability of existing health care institutions to provide the level of resources expected by non-resident clinicians on the one hand and local residents on the other.

D. Religious Institutions

All eight NSB Native villages have established churches, and all also have an established religious identity. Point Hope and Point Lay are Episcopalian, while all the others are Presbyterian. 'This division dates back to the original agreement which divided Alaska among the different churches. It is only recently that this agreement was breached (if that is the proper term) and religious diversity was introduced to NSB villages by the appearance of churches not party to the original agreement. 'here is no general treatment of the appearance of these churches on the North Slope, but interesting (although perhaps somewhat biased) information exists in Bills 1980 and Chambers 1970. Assembly of God churches now exist in Point Hope, Wainwright, Barrow, Nuiqsut, and perhaps Kaktovik. Baptist churches exist in Point Lay, Wainwright, and Barrow. A Catholic church exists in Barrow. Furthermore, in violation of the agreement, Episcopalians are now holding services separate from the Presbyterians in Barrow. All eight villages still retain their primary religious identities, but they do so in the face of greatly increased variety and diversity.

In no village does religion seem to exert the same force that it was reported to in even the recent past. VanStone 1%2 reports that in the 1950s in Point Hope the Episcopalian church was a central focus in the community. When he returned in the late 1980s this was no longer the case (VanStone 1988). Attendance at all churches is observably less than before and informants also report that this is so. Few young people attend church, which many in the villages relate to the many other recreational options open to people in the villages. At the same time, young people in the villages complain that there is not enough to do in the villages. The nature of religion in American life has also changed, and this has not gone unremarked upon by the Inupiat.

Although they are attending church less, Inupiat are not necessarily less religious than previously. Informants almost uniformly believe in one God and the validity, on some level, of all religions that teach the belief in one God. It only stands to reason, they say, that this one God has to be the same for everyone. People may disagree about details, but this fundamental truth remains. The appearance of missionaries who teach the opposite of this, namely that their God is not the same as your God, somewhat mystifies many informants. They are discomforted by a preacher who is

so contentious, and tend to avoid attending services that raise this issue. One young Inupiat who had attended Bible college said that in Fairbanks he attended a different church every week, but eventually stopped and dropped out of school because he became so confused. The belief in one God was not doubted, but the proper way to worship had become unclear. Church services, instead of providing a sense of renewal and a feeling of community with the congregation, had become a source of spiritual doubt. Non-Inupiat in Barrow reported similar feelings as their justification for why they no longer felt comfortable attending the Presbyterian church. They did not understand Inupiaq and felt little sense of community at the services. At the church they subsequently attended, they regained this sense of belonging.

Most significant events in Inupiat life still actively involve the church. Prayers are said before whaling and before all the whaling ceremonies. Many public gatherings start with a prayer. There no longer is only one church in any village, so to speak of the church is no longer possible, but the church as a structural building in which to gather is no longer evident. Public events take place in a secular building or outside. Religious functionaries or Elders lead prayers at these locations, but the church now goes to the people, rather than having the people (and the event) come to the church. Inupiat stress that they are not verbal people. They say they are doers, not talkers. They learn by example, not by verbal instruction. Religion is not something to do in church (although attending services is not bad) but is meant as a way to live. In this sense, religion still pervades most of North Slope Inupiat life. It is a non-doctrinal and in many ways non-expressible ideology. Perhaps the Inupiat love of hymn singing and ,singspirations is another facet of this. The nonverbal communication of enjoyment and community, of cooperation and sharing, is much more important than the actual meaning of the words. One North Slope Baptist missionary unwittingly pointed out this profound difference between the Inupiat nonverbal orientation to learning and religion and his own highly analytical approach when he remarked that singing during services was acceptable, but was not as important as the sermon. The sermon was the word of God, whereas singing was mainly a way to encourage people to attend and to put them in a proper frame of mind to hear and understand the word of God. It would appear that an Inupiat view of religion is much simpler, and at the same time much more profound, than can be contained in any sermon.

At least part of the diversification of religious choices on the North Slope is due to the increased diversification of the population. In Barrow, most Catholics and Episcopalians are non-Inupiat (at least those who attend services). Assembly of God congregations tend to be mixed in most villages, but it is interesting that the Assembly was the earliest "competitive" religion to appear on the slope. Baptist congregations in Point Lay, Wainwright, and Barrow are non-Inupiat, to the extent that they exist. The church structure and hierarchy seems to hold little interest for most Inupiat, and even the Inupiat who are ordained seem to stress community over the church. The influence of the formal church does seem to have diminished in all communities. A belief in God and a sense of community are as important as ever, but the church is no longer the focus of this sense of identity. Instead, a sense of Inupiat identity centered around one's village of residence, whaling, subsistence ideology in general, sharing, and perhaps even the NSB seems to have taken its place. We will discuss some of these in the Section IV on "informal institutions." It is important to keep constantly in mind the role of the NSB in fostering and maintaining these values and informal institutions.

E. Infrastructure

In this section we divide infrastructure into three categories -- utilities, transportation, and recreation. All three have institutional aspects and are in one way or another a responsibility of some formal governmental entity. Utilities and transportation are relatively unproblematic in terms of this categorization, but recreation may seem like a strange topic to discuss as infrastructure. However, the North Slope of Alaska is not a typical environment, and can hardly be termed benign for most of the year. Thus, for much of the year most recreation takes place indoors. These facilities are not inexpensive to build, and for most villages the schools seine double duty as educational and community recreational facilities. Some villages also have city- or NSB-built community centers or recreation buildings. All are public facilities built with public money. Most villages have a recreation program, funded either by the city or the NSB. Only in Barrow is the program very developed, but again, all such programs are oriented around the facilities available. Private recreation is not explicitly addressed in this report, but does not appear to be as salient a category to Inupiat informants as it is to people in the lower-48. When asked about recreation, Inupiat informants almost always talked about the gym, other school facilities, or the community building. A few times informants mentioned playing cards or games at other peoples' house, but clearly 'recreation" as a category is facility oriented and at least for the purposes of this report an infrastructure question. Little literature exists on other aspects of recreation on the North Slope in any event.

The infrastructure of most of the villages is fairly standard. Certainly all of the outer villages have roughly equivalent physical plants. The variations are only minor -- Point Hope has a clinic of a different design since it is an expansion of an older and smaller building, and power and water plants vary depending on the size of the community and the date of construction. All the outer villages have diesel generators to produce electricity, while Barrow has a power plant which can operate on either natural gas (the preferred fuel) or diesel. All NSB communities have water plants which operate the same way. All have the same general inventory of vehicles and other equipment. Schools vary in design from one village to the next, for no real apparent reason, but all are modem facilities that are for the most part adequate for the size of the population they serve.

The Prudhoe/Kuparuk complex and other industrial enclaves which are all self-contained contract with the NSB for most services. These include water, sewer, solid waste disposal, electricity, and police. Since at least some development took place before the NSB assumption of these services, some private oil camps continue to provide their own services under "grandfather" clauses. The tendency has been for the NSB to provide centralized services, however, especially as the state and federal governments have begun to more closely monitor adherence to environmental protection standards. Since these are communities are composed solely of transient, able-bodied, employed adults, the range of facilities is more restricted than in a residential community. For instance, there is no school or housing for the elderly. These are specialized communities designed for the specific purpose of supporting the industrial workforce, and maintaining that workforce in peak working condition, as efficiently as possible.

1. Utilities

No outer village has a water or sewer system. All water is delivered by truck from a central storage tank, and all human waste is disposed of by the honeybucket method. The only exceptions are those few public buildings connected directly with the water storage tanks and a sewage lagoon or waste treatment plant. There is some effort being put into the construction of holding tanks for human waste for private residential houses and perhaps other buildings, which would allow for the use of flush toilets without the need for a piped water distribution system or sewer pipes. A sewage truck with a pump would periodically empty these and transfer the contents to a village sewage lagoon. Few of these have been built, however, as the cost per unit is high, the sewage trucks and pumps have been unreliable in the experience of most village operators, and few of the village sewage lagoons are actually in operation.

Since the gas used to fuel the generators and to heat the homes and buildings in Barrow is cheaper than the diesel used in the outer villages, the cost of providing electricity and heat is higher in the outer villages than in Barrow. Since the cost to users in Barrow and the outer villages is basically the same (a decision made by the NSB), the provision of electricity and heat in the outer villages is heavily subsidized by the NSB. Water charges are actually cheaper in the outer villages, as they are charged only for delivery of the water. Barrow residents connected to the utilidor are also charged for the waste water they put back into the utilidor. The NSB provides diesel for the heating of residential outer village homes for free. The only charge to the user is the amount the village corporation assesses for delivery of the fuel to the homes and the administration of the delivery system. The cost of heating to residents of the outer villages is still about two and a half times the cost for Barrow residents ($250/month compared to $100/month), and when NSB subsidies are figured in the comparison is even greater. This is an average comparison, so that during the winter months the disparity is even greater.

Barrow is unique among NSB communities in terms of infrastructure, primarily because it was a fairly developed community before the establishment of the NSB and is now the hub community for the region. Roughly 60% of the NSB population lives in Barrow, so that services are more developed in Barrow than in the other communities and there is a longer time depth associated with them. The delivery of utilities is perhaps the best example of this sort of difference. This history is described in the Barrow chapter but will be resummarized here.

The federal sites in and around Barrow provided for their own power and water, but were unable to extend these services to the community at large. Barrow Utilities, Incorporated (BUI) was formed by local Inupiat as a cooperative to provide water and other services to the community. Many of the present Inupiat political leaders worked for BUI (and later BUECI). After the discovery of gas, local residents petitioned Congress to allow the Navy to sell some to Barrow residents (the gas fields are in NPR-A and as such are not considered to be a commercial resource, and provided the primary fuel at NARL and other facilities). Installation of the gas distribution system to Barrow residents was carried out by BUI and in operation by 1%5. BUI was later renamed the Barrow Utilities and Electric Cooperative, Inc. (BUECI). During this same period, an electric distribution system was installed in Barrow.

BUI changed its name to reflect its role in providing electricity, and became BUECI. Today, BUECI is responsible for the generation and distribution of electricity throughout Barrow, as well as for distributing gas and treating all the potable water consumed in Barrow. BUECI is only responsible for the delivery of water through the utilidor, however, as all truck delivery service is provided by private firms. This difference from other villages is due to the NSB not having direct responsibility for water and utilities in Barrow. The NSB does provide most of the capital funds for building facilities, but the management of these facilities and the provision of service within Barrow is done by BUECI. All users of BUECI services are automatically members, and the fees they pay for services are used for operating expenses. Any excess payments are redistributed to the members as dividends. The NSB does subsidize the cost of water for customers attached to the utilidor, as the utilidor would not be competitive with truck delivery without such a subsidy and needs a certain user base to be economically feasible at all. It is hoped that eventually these subsidies can be reduced as more people are connected to the utilidor, but this does not appear to be a near-term prospect. Because BUECI uses gas as its main fuel and it is relatively cheap (compared to the oil used to fuel the generators in the outer villages), electricity in Barrow is not significantly subsidized. As BUECI is a cooperative and most capital funds are obtained through the NSB, there is little need to keep a capital replacement fund or a large contingency fund. BUECI is involved in explorations aimed at discovering new gas reserves near Barrow, since the current gas field is nearing the end of its productive live.

The transient, non-residential labor force employed at the military and industrial enclaves in the region are well-supplied in terms of utilities and facilities. The level of service is roughly that of the houses in Barrow connected to the utilidor. All such facilities have a secure power supply, a separate water treatment system, flush toilets, and showers. All such facilities still have an air of impermanence about them, however, as they are essentially self-contained units and the services will be provided only as long as that particular facility exists. Furthermore, since these are all work sites, the range of services provided is limited to those required by an adult, employed population. These are not social communities in the same sense that the eight Native NSB villages are. The villages are, at least in theory, self-replicating, while the military and industrial sites are dependent upon migration for their temporary populations.

2. Transportation

There are very real differences between Barrow and the seven outer villages in terms of the frequency with which planes arrive and depart. Barrow is serviced by several jets a day, and has an airport with full facilities (including terminals where passengers can wait out of the weather). The villages are serviced by small prop planes which are often grounded by cold temperatures or inclement weather. Some villages are serviced every day, while others are not. None of the outer villages have the frequency of service that Barrow does, and to reach Fairbanks, Anchorage, or other points south a resident of one of the outer villages other than Kaktovik or Anaktuvuk Pass must first reach Barrow (or in the case of Point Lay and Point Hope, perhaps Kotzebue). These small prop planes are operated by airlines that are not quite as strict about their schedules as the major airlines, and the agents they employ in the villages are sometimes not as dependable as one would wish. Flights can be several hours early or several hours late, or never fly at all, dependent on the whims of the carrier and the alternate need they have for that aircraft. Air travel to and from the outer villages requires a flexibility and degree of uncertainty that most American air

travelers seldom if ever encounter. Residents of the outer villages must cope with this as a matter of course. .

There are also very real differences among the seven outer villages in regard to air travel. Anaktuvuk Pass is the most extreme case, as it is not connected to any other location on the North Slope. It has regularly scheduled service only to Fairbanks, several times a day. Charter service to points north is available, but is quite expensive. Kaktovik has scheduled flights to Fairbanks and to Barrow via Deadhorse. Thus, individuals from Kaktovik who want to go south go directly to Fairbanks. Only to reach other NSB villages (excluding Anaktuvuk Pass) would they go to Barrow. Nuiqsut has scheduled flights only to Barrow and to Deadhorse. Sometimes the order of stops changes while the plane is in the air, but service is at least daily. Atqasuk has frequent flights to Barrow, as does Wainwright. In addition, Wainwright is part of a less frequent route between Kotzebue and Barrow which also has scheduled stops in Point Lay and Point Hope. In actuality, the earner tries to have the plane turn around in Point Hope by meeting a plane from Kotzebue and Point Lay is often bypassed due to the plane being full, or "weather." Point Hope has more frequently scheduled service to Kotzebue than it does to Barrow, and most people prefer to travel south rather than north if given the option. NSB officials who go to Point Hope for one day of meetings will often either fly by charter, thus controlling their own schedule, or will fly south to Point Hope via Wainwright and Point Lay but return to Barrow via Kotzebue. This is faster than waiting for the return trip "directly" north, and is also less subject to weather delays and cancellations. Point Hope thus has better air links to the south than the north. Point Lay is in an intermediate position between Wainwright and Point Hope. There are few or no flights scheduled with Point Lay as their final destination, as Point Lay is so small. The few flights that are scheduled as Barrow to Point Lay are subject to cancelation if there are not several p~cs~R~~x- Still, there are more scheduled flights into and out of Point Lay from Barrow than from the south. Point Lay as a community is definitely more oriented to Barrow than to Kotzebue as a transportation hub.

The same consideration applies to freight, mail, and other goods shipped to the outer villages. All the villages have airstrips capable of accommodating the largest planes. Only Barrow is of a sufficient size to economically justify regular freight planes, however, so for the most part the outer villages are dependent upon the smaller planes of the small airlines in this regard as well. Mail service is provided three or four times a week in the smaller villages, but only because it is subsidized. In fact, without this mail subsidy, freight and passenger service to the outer villages would be even less frequent, and more irregular, than it presently is. The small size of most of the planes normally flying to the outer villages also imposes additional costs for individuals buying relatively large items. Even snowmachines must most often be flown in on a special charter. In general, villagers try to schedule such purchases together, so that they can share the cost of the charter. Alternatively, there are sometimes "free freight" flights bringing material in for various NSB construction projects which sometimes have extra room for such purchases by individuals. There has been perhaps an average of one of these per village from Fairbanks or Anchorage each year since the CIP program began. Still, people charter for a substantial number of the bulky items they purchase.

The bypass mail system allows outer village residents to purchase a great deal by mail that would otherwise be too expensive, but also has its limitations. The system is best suited for durable goods and groceries that are prepackaged and unaffected by temperature. Fresh items are often spoiled

by delays inherent in the system. Even canned items are not infrequently ruined by the frozen contents rupturing the can (soda pop especially, since it is perhaps the most commonly shipped item). The system is ideal for smaller-sized items. Larger items, as discussed in the previous paragraph, pose extra problems.

Barrow is a much more motorized community than any of the outer villages. The residents of all NSB Native villages own a good number of vehicles associated with subsistence harvest pursuits (snowmachines, ATVs, boats). In the outer villages these vehicles double as transportation within the village as well. Public vehicles (utility trucks and so on) are also used to run errands during the course of the workday and to assist Elders especially, and the few privately-owned trucks are also used in this way. Most outer village residents, however, rely on snowmachines or three- and four-wheelers for regular transportation.

Barrow, by its very nature, discourages such a use of these vehicles. Barrow is physically a much larger community, and its roads are free of ice and snow (partly due to the greater vehicular traffic) a much greater part of the time than in the outer villages. Since all roads on the North Slope are gravel, they are quite hard on snowmachines when not covered by ice or snow. Much of Barrow is thus to all intents and purposes cut off from snowmachine traffic for much of the year. The careful observer can note that the interior parts of Barrow have fewer snowmachines in yards than the fringes, and that often houses on the fringes will have several machines. It appears that people may be keeping their machines on the outskirts of the community even if they live more in the middle of the village. We were unable to investigate this due to lack of time, but the observations are suggestive. Three- and four-wheeler travel within Barrow has been discouraged by the heavy volume of car and truck traffic as well as the recent requirement that all such ATVS be registered and that drivers must be over eighteen years of age. It is presumed that sleds pulled by snowmachines are generally not used within the city limits for similar reasons. They do no mix with vehicular traffic very well. The whaling season may be an important exception to these observations. This past year one of the successful Barrow whaling captains lived near the airport on a well-used street. To enable his crew to transport his whale to his house the city made a snow trail on the side of the street for snowmachines pulling sleds. Most of the snowmachine traffic was during the "night" when vehicular traffic was lowest. During other parts of the year it is unusual to see a sled in the streets of Barrow.

There is also a greater need for trucks to move cargo and gear in Barrow than in the outer villages. In the outer villages most hauling is done over rough terrain and that which is done within the village can be done by borrowing a public truck or using a sled for the short distance involved. In Barrow most hauling is done within the village, or between the village and NARL, over roads. This is most conveniently done with trucks. There is an increased interest in Nuiqsut in owning private trucks, with the annual construction of an ice road to Prudhoe Bay. This allows surface transportation to Fairbanks (and beyond) and substantially lowers the price for certain consumer items. Even in the absence of an ice road some Inupiat keep a vehicle in Prudhoe Bay permanently to use as transportation to and from Fairbanks. Boats have been towed up the haul road to Prudhoe and taken by water to their final destination. Smaller consumer goods are hauled to Prudhoe and either flown to the villages or trucked over an ice road.

Industrial enclaves are for the most part serviced by charter service tailored to the needs of the site. The exception, of course, is the Prudhoe/Kuparuk complex, which is perhaps the major

transportation hub of the North Slope. Barrow is perhaps more of a center in terms of travel to the other villages, but Kaktovik and Nuiqsut are both serviced via Deadhorse, and Anaktuvuk Pass is not reachable from either Deadhorse 'or Barrow except by charter.

3. Recreational Facilities

For NSB villages in general, recreational facilities are limited. Barrow is again the major exception, displaying the most variety and choice of facilities. In the outer villages the major recreational facilities are provided by the schools, which are available in the evenings and on the weekends. The gym is used most, with libraries, shops, and other facilities being open perhaps one or two nights a week. In addition to the school, most NSB communities will have a community center of some sort. This is frequently where bingo is held and in several villages also has a game room which may contain video games as well as board games, pool tables, and other indoor activity equipment. In most villages this is where public meetings are held and sometimes is the site for public festivities (the school also typically hosts a number of these events). Most villages have a small outdoor playground of some sort or other.

Barrow, in addition to the typical village recreational resources, also has its own city-constructed recreational building. The gym here is smaller than that of the high school, but is under direct city control. There are also racquetball courts, a sauna, and showers. The city also maintains a softball field, sponsors a spring festival every year, and employs a recreation director in charge of a wide-ranging recreation program. None of the outer villages have any sort of formally organized recreational program.

All of the villages of course are surrounded by open land which is used for subsistence harvesting activities. These activities have a recreational component, although this aspect has not been stressed in the subsistence literature or in Inupiat informant reports. It is nevertheless evident that the ability to leave the village and its problems behind in a landscape essentially devoid of other people is an important component of subsistence harvesting activities. One informant in Point Lay said that whenever he became too tense because of his job and demands placed upon him by life in the village that he went out and killed something. Given his sense of humor, the interplay between him and the interviewer, and the context of the rest of the interview, his intended meaning was that it was the being out of the village, and not the act of killing, that relieved his tension. Other informants have approached saying this more directly, although none assign it a primary importance in going out. Several families make it a practice to periodically go out on picnics where the principal objective is to enjoy the company of the others while eating in a natural setting. Some subsistence pursuits, and most notably ice fishing, seem to have a very important social component to them. Little differentiation was found among the villages in regard to these activities.

4. Infrastructure Responsibility and Maintenance

In most of the villages the ultimate responsibility for almost all infrastructure and services falls on the NSB. Local people are, of course, hired for the local positions, but all village supervisors report to department heads in Barrow. Reflecting the recent completion of most CIP projects and

the shift from capital-intensive projects to programs oriented more to operation and maintenance, the Utilities Department and the Department of Public Works were recently merged into the Department of Municipal Services. The practical result was that in the outer villages one of the two pre-existing department heads was promoted to be the head of village Municipal Services (in most, but not all, cases the head of Public Works was promoted). This person essentially assumed the responsibilities of both prior department heads and the one not promoted most often perceived this as an insult and/or demotion. In any event, the net result was a greater centralization of village services and a more direct connection to the Barrow central office, with some loss of independence of action.

The central reason given for this consolidation was economic. It was claimed that the merger of the two departments would eliminate the, duplication of certain facilities (maintenance for vehicles, storage) and would reduce the number of village administrators. In fact, the result has been an increase (by one) of village administrators, and in most cases facilities were not overly duplicative. The main problem has been the coordination of the use of facilities that are often in short supply, and the merger has apparently helped in this regard. The historical rivalry between the Utilities Department and the Department of Public Works does continue, however, and there are some rough spots still to be smoothed out in this arrangement.

Another reason suggested for this merger was the problems that the NSB was having in hiring interested, available, competent, and dependable village personnel. All these aspects of the employees are important, as the provision of these services are vital to the community and any interruption in delivery would have immediate and profound effects. The necessary operation and maintenance tasks to ensure this continued service can be scheduled so that a village crew can handle them for the most part. For major tasks, such as a generator overhaul or emergency repairs, a special crew from Barrow is called in. There is also a Barrow-based crew that handles more routine matters that for one reason or another cannot be taken care of within the village. The new Department of Municipal Services, with a communications center in Barrow, makes the coordination of these trouble-shooting crews much easier, and a good deal of expense is saved by no longer trying to maintain people in each village able to handle any situation when, in fact, such people are in very short supply and such expertise is seldom needed in any event.

The school system is another area where a similar development can be seen. The NSB is, of course, responsible for the school system and again the central offices are in Barrow. The NSB builds and maintains all the schools. Until relatively recently, NSB philosophy was to have a plant manager in each village who could fix anything that could go wrong with the school. Since the schools are complex buildings, with several heating systems, complex plumbing, sewer facilities, and other specialty construction features, in practice this resulted in hiring plant managers from outside the village who were typically non-Inupiat. The NSB has now made a decision to hire local plant managers wherever possible (some Inupiat, some non-Inupiat) and has instituted the same sort of rotating maintenance crew as the Department of Municipal Services. The perceived advantages are increased local satisfaction and some economic savings. Whether further economic savings will materialize is not yet clear.

The clinics and fire stations in the villages have been operated under a similar system since their construction, as there were no existing village organizations capable of assuming responsibility for them once they were built. It is possible that the NSB saw the success this management system

was having with the clinics and the fire stations, since all have been maintained in excellent condition, and decided to expand its application. The clinic maintenance personnel division is separate from that of other facilities. The fire stations are maintained by members of the NSB Fire Department, based out of Barrow. Since there are strict state regulations governing clinics and fire protection, the NSB has been very active in the supervision of these village facilities from the start.

The post offices in most of the villages are contract post offices. That is, the Federal government has a contract with some responsible entity to provide space and services to ensure the delivery of the mail. The actual ownership and operating rules of these post offices vary from village to village, but daily mail delivery is now the norm in most communities.

Housing is a complicated subject on the North Slope. All villages contain a large percentage of NSB-constructed housing, and some of the newer villages (Nuiqsut, Point Lay, Atqasuk) contain a very high percentage of NSB-constructed houses. These can range from the small one-room houses built in the early 1970s to more recent multi-bedroom ranch style houses and apartment complexes (the latter mostly in Barrow). There are a substantial number of privately constructed homes in the older communities, especially Point Hope, Wainwright, and Barrow. The older these are, the smaller they tend to be. Newer, privately-constructed, homes tend to be either simple boxes or relatively large, well-designed structures. NSB-constructed housing has slowed for the time being, partly because Federal money for the Arctic Slope Regional Housing Authority (ASRHA) has not been allocated for the last several years. Most regional housing authorities use the money they are allocated to build houses, which they then sell to residents on very attractive terms. In theory, once a grant is made, the system could be self-perpetuating. As one house is paid off, another could be built and sold. In practice, however, the system is never that efficient. The more attractive the terms, the more satisfied the customer, but the lower the return. Potentially, if the terms are made attractive enough, the housing authority does not recover a very large percentage of the money allocated to it and so must ask for another allocation. Such allocations are made on the basis of established criteria upon which the ASRHA has so far not ranked very highly.

The ASRHA is also the only housing authority in Alaska that does not actually build houses. Instead, when money is available to it, the ASRHA will buy houses from the NSB which up to that point have been part of the NSB rental program. Once the ASRHA buys them they are converted to the home-ownership program, whereupon the occupant eventually obtains ownership of the house for a monthly payment based upon his or her income, typically for a period of twenty years. In most cases, the rent the person had previously paid was also based on income and is typically exactly the same amount as the new payments. In the outer villages the most common payment is $100/month, the minimum for the program and an amount that essentially covers the administrative costs of the program. It is thus evident that the ASRHA recovers little or none of the cost of the housing it transfers to the program participants. In Barrow, rent and home-ownership payments tend to more closely reflect the market value of the housing involved, so that some of the housing costs are likely recovered in that community. A substantial subsidy still exists in Barrow, however, especially for Inupiat residents.

The responsibility for air strips varies from one community to another. In most, the state has ultimate responsibility, although local people using local equipment maintain the facilities. Point

Lay is unique in that the DEW-Line air strip also serves as the community's airstrip. All other NSB communities with DEW-Line sites (Kaktovik, Barrow, and Wainwright) have separate air strips for community use. The Point Lay case resulted from a cooperative effort between the NSB and the federal government in an explicit effort to avoid the cost of constructing two modem air strips for the smallest community on the North Slope.

Roads and streets are a NSB responsibility that is taken care of within each of the villages. Money is allocated by the NSB and is part of the budget of the Department of Municipal Services. This is unproblematic for the most part. The only exception is Nuiqsut, which because of its proximity to Prudhoe Bay, Kuparuk, and the Oliktok Point water treatment facilities, is connected to Deadhorse by an ice road each winter. This is discussed in the Nuiqsut chapter.

## F. Fire Protection

Little systematic information exists on fire protection in the villages. All the villages have a large, modem fire station and the latest equipment. Barrow has two fire stations, one in Barrow and one in Browerville. All North Slope fire departments are manned by volunteers. The NSB employs a professional fire fighter as its fire chief and he and his small staff are responsible for the administration of the department and the training of the village volunteer units. In the past, fire was significantly more of a problem in Barrow than in the outer villages due to the older and more substandard housing stock in Barrow. Outer village housing tends to be newer and more widely spaced than housing in Barrow. Current information on the activities of each of the village departments is unavailable, however, so it is not known if this pattern is still the case.

## G. Search and Rescue

Search and rescue follows the fire department model in that the NSB has a small paid professional staff which administers the department. Each of the villages has a search and rescue organization manned by volunteers. Most of these village units have almost the same memberships as the local fire departments. Besides providing these volunteer units with their equipment and operating budgets, the central NSB Search and Rescue office also maintains air and water support equipment that the village units can request when it would be helpful in local searches. The aircraft are operated by NSB personnel assisted by local volunteers.

The VSAR organizations also receive support from the state as well as the NSB. In the past the NSB paid all the bills for Search and Rescue, but with the recent need to economize has begun to make use of whatever alternative funding programs are available. One of these is operated by the state to assist communities with search and rescue operations. These funds are paid directly from the state to the VSAR organization. In fact, the NSB may pay the bills and then actually receive the money on behalf of the VSAR involved, but the effect would be the same. The reimbursement is dependent upon the local PSO making a visual inspection of all machines involved in the search before they go out and processing all the paperwork and receipts. If properly documented, the state will pay for gas, food, machine repairs, and other equipment needed for the search.

The local VSAR is always the lead organization in local searches. Normally, the local VSAR will not ask for assistance until a search has entered its third day, as from experience most searches end within two days. Either the person being sought finds his way back to the village (most often after a mechanical failure) or a member of the local VSAR spots the individual and brings him back. Once it appears that the search may take longer, a request is made to Barrow to mobilize the more extensive resources needed for a more extended search. This not only includes air support to cover a wider area faster, but also the help of the VSAR organizations from other villages to help in the manpower requirements of the search. Few of the outer villages have sufficient numbers to support an extended search effort while maintaining all community services as well. Barrow, the largest community with the largest VSAR and direct connections to the NSB SAR organization, probably could. In most cases even Barrow receives at least nominal support from other VSAR organizations, however.

Not all VSAR organizations are considered to be equally proficient, although NSB Inupiat would not phrase it that way. All are considered competent enough to handle the more common and expected searches arising from a hunter's mechanical failure or misjudgment of time required for travel. Certain VSAR organizations are said to contain individuals with extraordinary expertise in certain skills needed for certain kinds of searches, and these VSAR organizations are more commonly asked for help than are others. Wainwright and Barrow seem to respond to more such requests for assistance than other VSAR organizations. The Atqasuk VSAR unit is also quite active. Point Hope VSAR members are reported to be quite good in general, but cooperate less in searches than the other VSAR units, perhaps because of location and logistical problems. Proximity seems to play a very important part in which VSAR organizations are called upon to take part in a search.

Different villages have somewhat different "typical" search problems. Point Hope people say that the flat lands between the village and the mountains are actually where most people lose their way, because of the lack of landmarks and the often restricted vision. People do not get lost in the mountains, although their equipment does break down there. Trails to the most common destinations are marked, but the markings are not always visible and may sometimes prompt those who do not really know their way to go out when they should not. Recent searches in the Point Lay area have concentrated more on areas near water (the lagoon, ocean, rivers, and lakes) as accidents seem to be more prevalent than people getting lost or stuck out on the tundra. Nuiqsut searches are often for hunters who are found to have had mechanical problems, which is understandable given the great distances that these hunters say they typically travel in one trip. Information from the other villages is available only on an even more impressionistic basis, but the main determining factors of who gets searched for when is the local terrain and the subsistence resource harvesting patterns of the village.

There are several classes of events that cause people to become the object of searches. In all cases all that the local VSAR organization knows is that a person or persons is missing. The cause may be mechanical failure, disorientation, weather conditions, accident, or death. The first is recognized as an unavoidable problem. At some time everyone who goes out experiences mechanical failure, no matter how new his equipment or how rigorous his preventive maintenance program. Although it is stressed that no one should go out alone, people still do so on occasion (and some by choice nearly all the time). One of the reasons not to go out alone is that one's partner's equipment serves as a backup to one's own. Also, two people are considered less likely

to become disorientated than a single person. It is also considered prudent to have a partner along to help in case of accident, as most hunting mishaps occur to individual hunters and not to groups. An incident that may be fatal to a solitary hunter may be merely inconvenient if he is accompanied by another person who can assist him. It is also noted that this simple precaution of not going out alone would have eliminated the need to mobilize search resources in a significant number of recent searches.

Although most of the funding for search and rescue operations comes from the NSB or the state, there are expenses which are either difficult to document or which are so immediate that there is no time to obtain these funds. In these cases local funds are used. In most cases these are contributions from local service organizations (the Mothers' Club, the Lions) or from the proceeds of bingo sessions held specifically for this purpose. This is one respect in which most VSAR organizations are different from local volunteer fire departments (VFD). The VFDs receive a regular budget, which the VSAR organization does not. This had led to some administrative tension between the two departments at the NSB level, where they are administratively and budgetarially separate. In most villages they are almost treated as one organization, since their membership is basically the same and both use the same facilities (the fire hall) in most of the villages. The fire department is commonly viewed as more of a NSB organization, especially since it formally runs the building that both organizations meet in and where they store their equipment. The fire department also has quite a bit more equipment, and as stated before, has an assured annual budget.

There are other contrasts between the two organizations which relate to their social organization. The fire department is equipment-intensive in its operations, requiring expensive and specialized gear while, on the other hand, search and rescue is labor intensive, requiring a substantial number of individuals to conduct a ground search and little in the way of specialized gear. Where capital equipment is required for search support, such as flied-wing aircraft or helicopters, this equipment is provided directly by the NSB and manned by NSB employees. The skills utilized by fire fighters are acquired through specialized training; the skills used by searchers in SAR operations are pretty much the same skills that the individuals have been honing over a period of years in the normal course of subsistence hunting pursuits. Fire fighting requires a knowledge of fire behavior and structural designs; search and rescue requires a knowledge of human behavior and the natural environment. Fire fighting operations are typically intense, but short-lived phenomena that require little in the way of broad-based supportive action by the community searches often extend for considerable periods of time and require the involvement of a large number of individuals to support the operation. Women are highly involved in search operations, primarily in support capacities, but are apparently virtually uninvolved in fire fighting operations.

## H. Public Safety

The history of the Public Safety Department is recounted in the City of Barrow chapter, as Barrow is the administrative center of the department and the base of the organization that developed into the NSB Public Safety Department. While the problems of each of the villages differ somewhat from each other, the seven outer villages are much more similar to each other than they are to Barrow and most PSOS readily distinguish between the two. They speak of "the village" (meaning the Native communities outside of Barrow) as requiring one sort of PSO or enforcement style and

"Barrow" as requiring another. Part of this difference is due to the differing social context in the outer villages as opposed to Barrow, and part is due to Public Safety Department policy. These issues are discussed below.

Barrow is a large community, whereas the other villages are quite small. Barrow is ethnically quite diverse, with a resident non-Inupiat population, whereas the other villages are almost totally Inupiat in composition with most non-Inupiat being very transitory. The department of Public Safety has its administrative headquarter in Barrow. These factors combined with the relatively small size of the department and the. variety of specialized tasks it must perform result in a much larger presence for the department in Barrow than in the outer villages. In 1988 the department consisted of twenty line officers (PSOs) and ten supervisors (five corporals, two sergeants, a captain, a commander, and a director). There are also seven corrections officers staffing the jail and eighteen civilian support staff positions. While the department may appear to be top-heavy, having less than three line and corrections officers for each supervisor, the nature of the department makes this almost inevitable. The smaller a police or public safety department is, the more top-heavy it will be simply because there are a minimal number of hierarchical positions that need to be filled in any organization. Combined with this is the need in Barrow for personnel to fill such specialized functional slots as the liaison with the high school (drug and public relations program), the detective division, and other positions that basically have responsibility for certain programmatic areas but have little or no supervisory responsibilities. The major posts for supervising personnel are the people responsible for village operations, Barrow operations, and the jail.

At least in theory, each of the outer villages is assigned two permanent PSOs. In actuality, most villages make due with one PSO who is assigned primarily to the village but in fact spends a good deal of time outside of the village (on leave, making court appearances, or filling in for another village PSO in a different village). One of the considerations is that current staffing and budgetary levels do not allow for two PSOS in every village. The lack of two PSOS in the outer villages ensures that there will be little or no continuity of service, however, as no single PSO is in any of these villages for longer than two months at a time. The department has generous leave provisions and the normal processing of cases requires that the arresting PSO make court appearances which take him out of his duty village. In order not to leave the village unprotected, a substitute PSO is flown in. This often has a "domino effect" which ripples out over the entire slope. In the outer villages, short-term staffing decisions almost always take priority over the interests of long-term continuity and community relations.

The conduct of an outer village PSO is different from that of a Barrow PSO, in many cases because it has to be. A village PSO is often alone, with no backup closer than Barrow or the nearest other village. This makes most officers a little more cautious. Village PSOs receive no help with their paperwork and know that any case which requires a court appearance is going to take them out of the village and disrupt the schedule of whoever cornea in to substitute for them. While village PSOS look forward to a few trips out of the village for court appearances, most want to limit them and feel that they have to take too many at present. No PSO ever claimed not to pursue a case he viewed as not serious because of the paperwork and travel its pursuit might entail, but the possibility exists that a differential enforcement policy could arise between Barrow and the outer villages because of the staffing differences. If nothing else, a village PSO can become very tired. While a village PSO has no assigned patrol duties and often appears to be

killing time, in fact he is on call twenty-four hours a day and at best has only one partner to share the workload, with. In Barrow, on the other hand, officers work eight-hour shifts and have sixteen hours that they know in advance is their own. The tradeoff for this is that the Barrow officer's performance can be more easily monitored statistically by what he is doing. The village PSO'S job by its very nature is more diffuse. He is the total representation of the department in the village and must be a generalist. He is as much a public relations representative as a law enforcement officer, and can often accomplish more informally (which does not show up in the records or statistic-s) than he can by strictly enforcing the law.

The departmental uniform policy reflects this dichotomy between the villages and Barrow. In Barrow, all PSOS wear their regulation uniform while on duty and civilian cloths when off duty. This clearly distinguishes them from other residents when they are on duty and allows them the privacy of the status of private citizens (for the most part) when they are off duty. For the most part, the people these officers deal with in their official capacities are not the same as those they interact with socially and while they are not unknown to the public in general, they are also not familiar to the public at large. In the villages, on the other hand, PSOS are very well known and the wearing of the uniform is a personal choice. Some PSOS always wear the uniform, some sometimes, and others hardly ever. Some wear parts of it. This causes no confusion in the villages, however, since everyone knows who the PSO is and have no hesitation about calling upon him at any time, day or night. There are relatively few non-Inupiat in the villages compared to Barrow and the small size of these communities means that everyone knows everyone else. Because there is only one PSO in most villages most of the time, he handles all PSO matters. Because the communities are so small, what is considered a PSO matter is much more broadly defined in the villages than in Barrow, since there are so few official authorities in the villages.

This difference between the behavior pattern required of a PSO in Barrow and the villages is recognized by both the public the PSOS serve and the departmental administration, but is still often ignored in the interests of administrative consistency and enforcement protocol. To villagers, this often appears to be a bias against the villages and a preference for Barrow-style PSO behavior. Several villages explicitly have complained about PSOS who make little effort to learn about the community, who seldom interact with the Natives, and who are often difficult to contact when a person wants them. Often added to such complaints are comments that such PSOS do not take appropriate actions upon peoples' complaints and thus do not prevent later, more serious, events and that they do as little as they possibly can while in the village. Most often the basis for these sorts of complaints appears not to be the competency of the PSOS in question, but personality differences between those PSOS and certain community members (and perhaps an inability or unwillingness of the PSOS to adopt a more "village PSO" mode of interaction). Before the relatively recent adoption of the two-year-village-one-year-Barrow rotation by the Public Safety department, there was a remarkably consistent pattern of village relations to resident PSOs. Recent arrivals were not very popular and were compared unfavorably to past PSOs. After a year or so relations became cordial and even friendly. Pleasant relations continued through perhaps the third year, at which time relations began to again deteriorate. Partly in reaction to this, the rotation policy was designed so that no PSO was stationed in any village long enough to wear out his welcome.

Probably the most common complaint against village PSOS is that they are enforcing the law too rigidly or unfairly. What is usually meant by such complaints is the village perception that the PSO

is not abiding by village conventions in terms of noninterventionist behavior, and that the PSO may not be as sensitive to the village's internal power structure as the village (or at least that power structure) would wish. This has been observed in several villages and discussed with Public Safety personnel in all villages where fieldwork was conducted, even where the pattern was not behaviorally present at the time. Their consensus was that the outer villages were very different from Barrow in terms of the actions required from the local PSOS, and that the NSB training does not (and perhaps cannot) fully address this issue. Many NSB PSOS are hired directly from the lower-48, where they have some (and' sometimes extensive) police experience. Some may have even worked among Native American populations, but for most this is a new experience. The training program in Barrow concentrates on making them feel comfortable in the community. This involves an eight or ten week program to orient all new recruits to Barrow, where they will seine their first year in the department. The program involves meeting with groups of Barrow Elders, talking with teenagers, and so on. After the year's service in Barrow is up, however, the new officers are assigned to an outer village for a two-year period of time and simply transported out to that village. In most cases there will be a second PSO in that village who has been there for some period of time, one year on the average. The past experience has been that it is only very rarely when both village PSOS are in an outer village at the same time. At any rate, it is not uncommon for a PSO with only one year's experience in Barrow to find himself alone in one of the outer villages. Unlike his experience in Barrow, there is no formal orientation program in the outer villages. The new PSO is expected to perform these tasks on his own (perhaps applying what was done in the Barrow program). Local villagers rarely go out of their way to welcome a new PSO, having learned from experience that avoidance is often the wisest policy, but few will actively make the life of the PSO any more difficult than it already is either.

There are several main differences between public safety in Barrow and the outer villages, but they all are related to the difference in size and scale between the two. Office hours in the village are necessarily flexible, although a few village PSOS try to keep regular office hours. Most operate under the rule "If the vehicle is in front of the office, I am in the office," and this seems to work reasonably well. All village PSOS carry remote responder phones so that they can answer calls to the PSO line no matter where they are in the village. The only restriction this places on them is that they cannot go outside of the village for any great distance without being sure that another PSO is available for duty. In Barrow there are many PSOS and the entire administrative staff of the department. All personnel work regular shifts, although some special duty assignments may require different hours to be worked. This allows Barrow PSOS to live a much more orderly and regulated life, which is especially important to the officers if they have families. Barrow PSOS are also more closely supervised by their superiors than are village PSOS. All PSOS submit computer report forms every day on their activities, but the system is not always operative from the villages and it is more difficult to ask for clarification from an outer village than from an officer in Barrow. Besides working shifts, many Barrow PSOS are somewhat specialized in the duties that they perform. Village PSOS must be prepared to handle the full spectrum of calls.

This last aspect is what most vividly separates the outer villages from Barrow. Each village PSO must be, in effect, his. own public relations officer. In Barrow there is a special officer to handle this. In the outer villages each officer is on his own. There are fewer formal situations in the outer villages than in Barrow and a larger portion of the village PSO'S time is occupied by "non-police" business than in Barrow. Informally helping people with problems and problem prevention

are often cited by village residents as the real role of a village PSO, while in Barrow most PSOS are involved in routine patrols and enforcement details.

From the observational information available from the villages, it is clear that most village residents do not want "do nothing" PSOs, but neither do they want PSOS who are primarily enforcement oriented. The ideal PSO would appear to be one who treated everyone equally, was more concerned with helping people solve their problems than with issuing citations, and who acted to protect the safety of village residents. It is accepted that with the protection of residents, the issuance of a certain number of citations, and the incarceration of a certain number of residents, is more-or-less inevitable. With very few exceptions, no villager wants to see another go to jail, so that they want to see as many problems dealt with in an informal and non-judicial way as possible. To the extent that the village PSO can fit within such a framework, he will find his work easier. Some PSOS find that it suits their personalities to work in this way and that the more "by the book" routine of Barrow is less appealing. Other PSOS are the reverse, and see the de-emphasis of enforcement activity in the outer villages as an abdication of what they consider their primary police function.

Recent turnover in the department has been high and there have been a large number of new hires in the last 18 months. This is partially due to the fact that the department was understaffed for quite a period of time and has now returned to full strength.

## I. Schools

### 1. History

Schools have had a long influence on the settlement patterns of the North Slope. The temporary demise of certain communities (Point Lay, Nuiqsut, Anaktuvuk Pass, and perhaps Atqasuk) has been at least partially attributed to the lack of a permanent school in those locations. Icy Cape maintained a relatively large population until its school was closed. Only the three North Slope communities that had mission schools established early in the 1900s have displayed a continuity of population up through the present. Point Hope, Wainwright, and Barrow were all also sites of precontact settlement (although the Wainwright area was not apparently a "permanent" settlement site). Kaktovik was not really a major settlement until the establishment of a DEW Line station there in the 1950s, but has existed as a settled village since the founding of a trading post there in the 1920s. The early schools were all associated with the missions and later taken over by the BIA. These schools were limited to the sixth grade, for the most part, and required that students leave the North Slope for high school. It has been often remarked that the loss of Native language proficiency is at least in part due to the insistence that English be used in school. This was certainly a factor on the North Slope, but there is no literature to indicate if mission schools were any better or worse than later BIA schools in this regard. In any event, when the NSB was formed in the early 1970s responsibilities for the schools were transferred to the NSB School District. The NSB School Board is controlled by Inupiat, but as will be discussed below the policies they set and the programs they have developed reflect more of a standard school curriculum than of one especially adapted to North Slope Inupiat needs.

Since the formation of the NSB, the provision of local educational opportunities through high school has been a priority item. At the same time, the provision of post-secondary educational opportunities has also been of interest. For a brief time there was a college functioning in Barrow, with the support of the NSB, but for a number of reasons it floundered. Currently, the higher education center program in Barrow is accredited through the University of Alaska at Fairbanks and offers classes to residents of Barrow and via telephone to residents of the outer villages.

2. Organization and Operations

The NSB School District comprises the entire NSB. Each village has its own school, comprising preschool classes through the twelfth grade. The school district is administered from Barrow, where the school district has its offices. The NSB School Board is also based in Barrow. The members of the school board are elected at large, but are predominately Barrow residents, resembling the NSB Assembly in representational composition. The lack of outer village representation on the NSB School Board is a recognized problem that the NSBSD tries to deal with through local school advisory councils (SAC) in each village. Each SAC is elected by the residents of the village in question and meets on a regular basis, with the principal of the local school, to discuss local issues. The principal then communicates any comments, suggestions, or questions to the NSB School Board and relays responsès to the SAC.

The local SACS are essentially, powerless however, as they are only advisory in nature. Their formal liaison to the NSB School Board is through the local principal, an individual hired by the NSB School Board. Many members of local SACS feel that the SACS are more frequently used for the" local implementation of decisions made in Barrow or as a tool in bargaining sessions between the local principal and Barrow over available resources than as a true conduit for the expression of local preferences and desires in terms of village education. All policy decisions are made in Barrow by the school board. All hiring is done by the administration in Barrow, with the approval of the school board. All teacher and principal assignments are made by the administration in Barrow, with little input from the villages and often not much more from the teachers (principals tend to have somewhat more influence).

The superintendent of the school district has always been non-Inupiat. Until very recently, all principals had been non-Native. Teachers continue to be predominately non-Inupiat, especially the certified staff. The few Inupiat teachers almost all teach either the Inupiaq language as recognized local experts or ECE classes. The support staff in most schools is predominately Inupiat, but the head of the physical plant is in every case non-Inupiat. Secretarial positions are mixed in terms of ethnicity. Custodial and maintenance positions are mostly Inupiat in nature.

The schedule for each school is determined by that school's SAC, with the approval of the NSB School Board. Such approval is not automatic, but is most commonly given. The school year usually begins in August and ends in May. School days are from about 900 to 3:00, with recreation programs operating for various age groups from the close of school to 11:00 PM or so (with a break for dinner). Teachers go in earlier to set up for classes and to hold staff meetings. Some schools have educational programs in the evenings for adults (shop and craft courses mostly) and the school library is usually open one or two evenings a week.

There is also a continuing education program that operates in Barrow for adults, and a higher educational center that is centered in Barrow but that conducts many of its courses via teleconference linkages to allow people in the outer villages to participate. The relationship between these two programs is quite complex and in the process of change. They may very well merge into one program in the near future.

3. Issues

The major issue which underlies all others is the question of local control over the schools. Mixed into this issue is the debate over the proper curriculum for the North Slope, generally phrased as "Western" versus "Inupiat" in terms of cultural orientation and content focus. While it is by no means clear that local control would favor "Inupiat" content, it is certainly the current perception that the present NSB School Board in basically non-local for most of the district's schools and favors a "Western" curriculum. The school board in Barrow clearly sets policy at present. There are those who say that the school board, in turn, relies heavily on the non-Inupiat superintendent and staff that it hires for recommendations in this area. Given the recent turnover in the superintendent position, and the long-term tenure of the present superintendent with the school district in other positions, this may be an unfair perception. The school board apparently hires administrators who it feels can best achieve the board's goals. These goals have been phrased in standard educational measures as improved attendance and increased achievement. While the board has also been supportive of programs to support Inupiaq culture (language programs, crafts, oral traditions), it has been recognized that these programs have not met with much success, at least in terms of the measures that professional educators recognize.

Also confounded with these questions is the issue of Barrow schools versus the outer village schools. The NSB School Board does represent the interests of Barrow more than the outer villages, because their schools do differ. Barrow is large enough, and has enough students, so that it can support a variety of programs tailored to the needs of different groups of students. The student population in Barrow is also diverse enough to require such programs. A significant number of Barrow students can be expected to go on to college or other post-secondary schools, making a college preparatory curriculum a viable choice. The villages, on the other hand, have much smaller student populations with a smaller degree of diversity. On the whole, the village population is not as supportive of education after high school as the Barrow population. Students from the outer villages tend to attempt post-secondary education less frequently than Barrow students, and have a lower success rate. How much this may be due to ethnic differences is unknown since statistics of this nature were unavailable.

Information is not equally good on all village schools, but it appears that the smaller schools share a common set of serious problems. Their size limits the programs that they can offer. At present, their enrollment is heavily skewed towards the younger grades, so that teenagers and especially high school students are doubly disadvantaged by having few peers. In Kaktovik there is essentially no high school, as the few students of appropriate age have opted to attend school off-slope where they will have more social and athletic as well as educational options. In Point Lay, high school students have been very few in number and this year (1989) there are no upperclassmen at all. The one student who would have been a senior is attending a junior college under an oil company-sponsored program.

The **Inupiat** studies program is an especially sensitive issue. There is great local interest in supporting the transmission of **Inupiat** culture, and especially in the survival of the **Inupiaq** language. At the same time it is all too obvious that the present school language program is at best losing ground. There has been little attempt to integrate the program with support in the students' homes even though linguists say that only with such parental support is **Inupiaq** likely to seine as a functional language. Elders are invited into the schools periodically, but are not integrated into the daily teaching curriculum in a way that would demonstrate the school district's commitment to the successful transmission of **Inupiat** knowledge. In most cases Elders are expected to provide their time for free, although certain materials may be provided. **While** many Elders may be willing to help educate their children with little or no pay, perhaps reinforcing another **Inupiaq** value in the process, some cannot afford to do so as it would take time away from employment or subsistence activities with no recompense.

It may seem contradictory that at the same time that the school system is exerting a strong influence over the young people of the villages, in many ways reinforcing the **acculturative** influences of television, popular music, and increased travel, that the school is at the same time a marginal institution to many of the Natives of the outer villages. Most schools do little to encourage the participation of the parents of their students, let alone **Inupiat** adults who do not have children in school. The school's curriculum is seen as irrelevant to most of the employment opportunities in the village, and most village students want to remain within the village. The example they have is of most people obtaining training while on the job. The college-oriented curriculum is in many respects counterproductive in that it discourages more students than it motivates.

There is the fact that basic skills are not being taught by the school with much of a success rate, as measured by standardized tests. Statistics on test scores have not been released, other than to say that scores are improving but are still well below average. This underscores another debate current on the North Slope of college preparatory versus "vocational" education. Some would argue that basic skills can be best taught within an applied program (wood shop, small engine mechanics) rather than within a more academic or general program if the students are inclined more to the practical than the abstract. At times this issue has been combined with the **"Western"-"Inupiat"** distinction and the outsider-local debate. A solution is far from obvious.

## SECTION IV: INFORMAL INSTITUTIONS

The general discussion of informal institutions on the North Slope is somewhat difficult, since by definition informal institutions are rather diffuse and context-dependent. We have attempted to provide reasonably detailed treatments for each of the communities in the separate village chapters. The following discussions are intended to suggest differences and similarities in the operation of informal institutions and values. The subject is not only diffuse, but also to a large degree speculative and potentially overwhelming.

### A. Patterns of Change -- Formalization with the NSB

One common dynamic for at least certain aspects of many informal institutions is the degree to which the NSB (or some other regional entity) has acted to formalize or structure them. Thus, subsistence concerns are now vested in the NSB Department of Wildlife Management. The informal association of whaling captains has developed into the Alaska Eskimo Whaling Commission. This in turn has spawned interregional commissions for walrus, migratory birds, beluga, and perhaps other resources. The NSB has formally revived the annual Messenger Feast and has purposely avoided studying past records so that they would not be tempted to try to carefully reproduce the form but forget to infuse it with the present-day life and values that it is meant to embody. The week-long period of Eskimo games that has long been a part of the Christmas-New Year's celebration has also been formalized and somewhat changed to better fit into contemporary patterns of North Slope life. The NSB has also formally instituted a Commission on Language, Culture, and History which periodically holds Elders' Conferences. Houses, jobs, and other resources in the villages are increasingly being allocated by formalized, written guidelines based on previously unwritten but understood values. The NSB has institutionalized respect for Elders with the Elders' helpers program (paying people to clean house for Elders, cook, and so on), but at the same time this discourages certain family members from spontaneously helping with these tasks. Barrow is where these aspects of formalization are most evident, of course, since Barrow is the largest community and is the seat of the NSB government. Barrow is also where most of the newly revitalized regional gatherings are held and is the center of most of the formally organized institutions. Our discussion will address differences in formalization between communities where it is important, as well as the regional pattern in general.

One regional pattern that is quite obvious is the increasing degree to which activities are confined within and separated by temporal boundaries. Part of this is no doubt due to the importance of employment in the lives of most people and the schedule which such employment imposes. Another aspect is the increased regulation of vitally important resources and activities. The quota on bowhead whales is the most salient example. In some years, with good whaling conditions, the active hunting period on the ice may be over within one or two weeks. Other subsistence resources, such as caribou and musk ox, have also been subject to regulation. Cultural activities, such as the Messenger Feast and Elders' Conferences, tend to concentrate "Inupiat" behavior within a special frame. This encourages some cultural forms, such as Eskimo dancing, by increasing the outlets for the performances of the village dance groups which pass on the tradition. Less formally organized activities, such as story-telling, seem to have become less of a part of everyday life. Whether this is partially due to the increased formal nature of public celebrations is not at all clear, but that is one possible contributing factor. It has been noted that until recently most

NSB villages maintained the tradition of a week of 24-hour Eskimo games from Christmas day until New Year's day. Few, if any, do so any more. Because of employment schedules, vacations, and other obligations, most people no longer have the time or desire to devote this large a block of time to these Eskimo games. Most communities have made the compromise of holding the games in the evenings during this week, with perhaps one day of 24-hour activity at the end. Increasingly North Slope Inupiat are taking vacations in the winter of a month or longer. Warm-weather locations such as Hawaii, Las Vegas, and California seem to be the destinations of choice. Vacations only serve to further the compartmentalization of activities, however, separating North Slope activities from those engaged on in vacations.

## B. Subsistence

### 1. Seasonality and the Nature of the Hunt

Each NSB community is different and occupies a unique environment. The mix of resources available to each community is thus also different. This is true not only spatially, but also temporally. The same community can experience vastly different "subsistence cycles" from one year to the next. One perhaps unintended result of the great amount of subsistence research that has been conducted on the North Slope is the construction of normative "subsistence cycles" for each of the NSB villages (NSB Contract Staff 1979). While these are useful as delimiting probable time limits for when certain resources can be harvested, they do not actually contain all that much information about when resources actually are pursued and harvested. This statement is of course more true for resources hunted alone or in small groups (caribou, seal, furbearers) than for those which require large task groups (bowhead, beluga, to some extent walrus). While information in this regard is not complete, there is evidence to suggest that there is a common pattern to subsistence harvest activities in all North Slope villages. A tendency towards a similar pattern in all villages, even given differing local resources, is fairly evident. Much of this can be attributed to the wage labor economy, school schedules, and holidays, which influence this in several ways. Wage labor imposes a certain schedule on those who work, and the majority of those active in harvesting subsistence resources also work for wages at least part of the year. The effects of this seasonality may be counterintuitive, however, given the historic prevalence of summer construction work. The most recent seasonal round for Barrow was April 1987 through March 1988 (Stephen R. Braund and Associates 1990, personal communication). During that year, nearly all subsistence harvesting was done in the months of May through October, with April being used as a preparatory month. The same pattern evidently is holding true for both Wainwright and Barrow for the following twelve-month period (Loring, personal communication). Most of the seasonal round information available prior to this study (for instance, the charts in North Slope NSB Contract Staff 1979) are normative rather than behavioral and indicate more of a year-round pursuit of subsistence resources. It now appears that this is no longer the case. It should be remembered that this seasonal round information was collected before the NSB had embarked on its CIP program to any great extent and the wage economy as a whole was still rather undeveloped.

Wage labor, besides limiting the time available for subsistence pursuits, also provides those who work with access to the means by which to acquire equipment that enables them to successfully harvest subsistence resources within that limited period of time from an extended use area. Many hunters have enough disposable income that they can concentrate on preferred subsistence

resources (whale, caribou, furbearers, birds) and less so on other resources (seals, fish). While no study has had this question as its focus, it appears likely that with higher incomes individuals are harvesting 'higher price" subsistence resources. This is especially clear in the case of bowhead whale. With the institution of the quota this has now become essentially a regional harvest (although quotas are assigned on a community basis). Even individuals from non-whaling villages travel to take part in the hunt, so that whaling has become a part of every community's seasonal round.

It is also indisputable that hunters much prefer to hunt in pleasant conditions rather than in extreme ones and that winter hunting trips have become less frequent. The equipment that many hunters can now afford allow them to exploit preferred resources (especially caribou) essentially year-round. Furthermore, wintertime has now become a time devoted to indoor pursuits, festivities, and vacations. Many families now spend at least part of the winter off-slope, with Hawaii, California, and Las Vegas as common destinations. Many times these trips are scheduled in conjunction with school vacations around Thanksgiving or Christmas-New Year's. It is easiest for students to pursue subsistence harvest activities in the summer. The school district has attempted to be flexible in its leave policy, but the result has been that for the most part students participate mainly in whaling and fall fish camp during the school year. While caribou hunts could fit into the time frame of time available to a student after school (after all, adult males go hunting after work and on the weekends), it is difficult to learn caribou hunting skills within this time frame. Inexperienced hunting companions are a disadvantage as they lessen the chances for success. At both whale camp and fish camp there is much more time for observation/instruction, novices are generally assigned only tasks for which they are deemed ready, and (especially for whaling) seine long apprenticeships to prepare them for their eventual responsibilities. It is also interesting that both whaling and fall fish camp are subsistence activities that have relatively short temporal boundaries within which they occur.

2. Subsistence Ideology

If one set of activities were to be chosen to represent the Inupiat identity, it would have to be the pursuit of subsistence resources. Since most anthropologists find it difficult to equate culture with behavioral patterns, the ideology of subsistence and the relationship between the Inupiat and the land (and the resources of the land) should be added to this. The amount of energy, time, and money that Inupiat devote to subsistence pursuits is one measure of the importance of these activities. For the Inupiat, whaling represents the entire constellation of subsistence resource harvest activities better than any other. Historically, 90% of the budget of the NSB Department of Wildlife Management has been devoted to bowhead whale studies. The NSB and ASRC support the activities of the AEWC not only in their efforts to obtain an increased quota but also in ensuring that all whalers adhere to the rules so that they are perceived by worldwide observers as responsible stewards of their resources. The recent (1988) "whale rescue" near Barrow, although it involved gray whales rather than bowhead, further illustrates the point. NSB Inupiat are fully aware of the importance of symbols, and have consciously made efforts to translate their relationship to the land and its animal resources into a single image, that of the relationship between the Inupiat and the bowhead. This process has perhaps been in progress for as long as ethnography has been done on the North Slope, but has been accentuated by the ability of the NSB to mobilize the latest technology in its dissemination.

Subsistence ideology is also evident in the resistance to oil development, especially to offshore development. Environmental degradation is opposed on that ground alone, but the preservation of opportunities for subsistence harvest activities further supports it. When development threatens what is perceived as the most important of subsistence resources, the bowhead, it is likely that ideology will win out. Marine resources may actually contribute fewer calories to Inupiat households than do terrestrial resources, especially once an account is made of the amount harvested but not consumed, the amount sent out of the village to relatives and friends, and the amount consumed by visitors at special feasts. The amount of time, energy, and cash devoted to the harvest of marine mammals, and especially whales, would hardly seem to make this a cost-effective activity.

There are also the undesired social effects of increased contact with outsiders, more pressure to work and less time for other activities, and potentially less land to travel on in the pursuit of game. It is no mistake that the official seal of the NSB pictures an Eskimo and various species of animals harvested, and a single oil well in the Prudhoe Bay area.

### 3. Attitudes Toward Development

This topic is probably more properly a subtopic of subsistence ideology. Ideologically, protection of the environment (for the preservation of subsistence resources) is the top priority of the NSB. Pragmatically, oil development" must continue if the present system is to continue, and at a minimum must be phased out gradually so that the decline in revenues is gradual and predictable rather than sudden and catastrophic. The compromise of choice is to allow exploration and development on land until those reserves are exhausted, and only the offshore development. Offshore exploration would probably have to be allowed in the later stages of onshore reserve depletion under this scenario. Note that this compromise is consistent with the subsistence ideology that marine mammal resources are more central to the Inupiat hunter identity than terrestrial resources.

There is remarkable consistency in the degree to which this compromise is accepted among Inupiat. Only in Nuiqsut, which is in some danger of becoming surrounded by oil fields, and in Kaktovik, where a segment of the population (the size of which is really unknown) prefers that ANWR not be developed, is onshore oil development questioned on environmental grounds. Even in these communities many people favor or are neutral to onshore oil development. Most informants, when asked, will comment that the Prudhoe/Kuparuk field does demonstrate that oil development and the preservation of terrestrial subsistence resources need not be incompatible, since they say that the population of caribou in that area is larger than ever. They will then qualify this by remarking that they (or most people) do not like to hunt in this area, or are not allowed to hunt in this area.

## C. Traditional Sharing

The NSB clearly articulates the value of sharing and distributing that which one has. This is one reason for the revival of the Messenger Feast and holding Elders' Conferences. It is very important for individuals who are related to be able to know, at least in general, the nature of this

relationship. In Point Lay this is expressed as "We are all family." In other villages it is similarly expressed. Even in those villages where political or other factionalism is most often expressed in terms of kinship (Point Hope, Nuiqsut), the ideology of kinship and sharing is expressed as the desired norm. The NSB job creation programs are sometimes justified in this way. The NSB (and the NSB Mayor as its titular head) is the distributor of desired resources to his kinsmen. In the case of the NSB, this "fictive kinship" relationship would extend to all residents. The negative aspects of this institution are interpreted in the Western world as corruption, graft, nepotism, or featherbedding. It is very difficult to discuss this on the North Slope, not because it does not happen, but because it is nearly impossible to obtain good information about it. One's informant usually has an axe to grind, making interpretation difficult.

Different villages do certainly have different characteristics, some of which can be related to the kinship composition of the community. Size and history are also quite important. Point Hope has a long history as a community with a continuous population and is fairly large compared to the other villages in the region. As discussed in the Point Hope chapter, political issues and other community conflicts are often expressed in terms of kinship groups, but in everyday life the dominant social form seems to be the sharing networks of households, which are in turn based on kinship for the most part. These networks vary in size from only a few households to those which encompass a significant fraction of the village. The overall tone of the village is one of cooperation. It is interesting that Point Hope is one of the villages most isolated from Barrow in terms of transportation and communication, and this has been suggested as another reason for the relative harmony within the village. Most residents have tend to have an historical connection with the area and tend not to have conflicting economic (village corporation shareholder) ties elsewhere.

Perhaps the village closest to sharing this sort of "village tone" is Kaktovik. Kaktovik, or Barter Island, is another community that has been somewhat isolated from Barrow. When other groups were moving to Barrow, a core group of Kaktovik residents remained in Kaktovik. In fact, among Kaktovik residents many ties are stronger with Canada than with Barrow. Kaktovik has a core group of related families, all with senior men, which helps maintain community harmony. Kaktovik is relatively small, and most people are related, so sharing networks are extensive. Contact with the outside world has also been part of the Kaktovik life experience since the modem village was formed (by means of a trading post, the DEW-Line, and oil exploration) so that people do not feel as dependent on Barrow and the NSB to mediate for them as perhaps some other villages might. In Kaktovik, a large percentage of the residents are shareholders in the Kaktovik village corporation.

Nuiqsut is perhaps the community on the North Slope with the most visible factional politics. Nuiqsut is a "reconstituted" village and thus drew people from a number of different places. Because of various circumstances (personal choice, lack of information, chance), current residents did or did not choose to enroll in the Nuiqsut village corporation. Many current residents are enrolled in UIC (Barrow) or other village corporations, and a fair number of non-residents are Kuukpik (Nuiqsut) Corporation shareholders. This causes some tensions in the village. Different people also have different degrees of past connection to the area, and different degrees of relatedness to each other. The population is younger than in some other villages, although there are a significant number of Elders. There are also a few individuals in Nuiqsut who are natural politicians, it seems, which leads to factions. There are several large kinship groupings in Nuiqsut, and factional politics is sometimes expressed in terms of those groupings. This expression of

divisions based on kinship appears to reflect reality in **Nuiqsut** much more so than do similar expressions in Point Hope.

Point Lay is another reconstituted community and is the smallest Native community on the North Slope. It is, in some ways, an opposite of Point Hope. Kinship is publicly expressed as the means of community integration ("We are all one family") while at the same time problems are often behaviorally expressed and solved along kinship lines. People have come to Point Lay from many different areas, but most are related in one way or another. Those who came first, however, clearly distinguish between themselves and the "newcomers," much as in **Nuiqsut.** As a complication, many of the "newcomers" are enrolled in some other (non-Point Lay) village corporation. The village corporation avoids this problem by deferring to the village IRA council, and the IRA council surmounts the problem by allowing any Native to vote on village matters. In **Nuiqsut,** there is talk of forming a tribal government, but the organizers are also talking about forcing individuals to choose to register either as residents of the Native village of **Nuiqsut** or elsewhere (that is, allowing no joint memberships). Only enrolled members of the **Nuiqsut** tribal government would be allowed to vote. This would clearly be another dividing force in **Nuiqsut,** whereas in Point Lay it has been used as one way to reaffirm fundamental **Inupiat** (and even Native) unity.

Wainwright is another older community where kinship and sharing networks are fundamental social units. Most of the statements made above about Point Hope would apply and the reader is referred to **Luton** 1986 for a more complete treatment. Ongoing work by Braund and Associates for MMS (the Barrow and **Wainwright** Subsistence Studies) may also have some information of interest in this area.

Barrow is the most implicated community to characterize. Because of the great diversity of the Barrow population, sharing patterns and networks are often greatly different from those in other villages. Non-Natives are more frequently incorporated into such networks, although the resources they contribute may be different from those contributed by Natives. This has not been investigated. There are also extended Native household networks in Barrow which are very much like those described for Point Hope, as well as more confined networks. Diversity is perhaps the key descriptive word. Because of the size of the Barrow population, people sometimes complain about the decline of the sharing ethic in Barrow. This is perhaps exemplified best by the common complaint that crew shares from whaling have been significantly reduced in size because of the large number of crews. This is actually a sign that sharing is perhaps too much adhered to. Those who produce the harvest often, in fact, feel that they receive too little. The true extent of this feeling or perception is not clear, but it certainly contributes to the ebb and flow of population between Barrow and the outer villages.

No current published information on kinship and sharing exists for the communities of Anaktuvuk Pass and **Atqasuk.** Given the complexity of the topic, investigation of this in these communities was well beyond the scope of field research for this project.

D. Local Control of the Schools

In the discussion of the schools in each of the village chapters, a common problem expressed in all villages was that the local community had little or no influence over what was taught or the operation of the local school. For the most part the only 'local' person with any influence at all was the principal, an outsider hired by the central school board in Barrow. Nearly all teachers are non-Inupiat. The content of what is taught is nearly totally non-Inupiat. For the most part parents are not familiar with the school experience of their children. Even if they have completed high school, few Inupiat adults have any practical experience with a computer. Mathematics is avoided by most students, and few advance beyond arithmetic. It is interesting in this regard to note that the 1988 NSB census figures on highest educational level achieved suggest that current high school students (those ages 18-2S) are graduating at a significantly lower rate than those people who are slightly older than they are (ages 26-39, who in most cases would have attended high school outside of the village). It maybe that some in the younger category who are actually still in school answer the census question as not having finished school. It is not possible to know which interpretation of the data is more likely to be correct. It is possible, however, that people in this younger age group are not graduating from high school at the same rate as has been true in the past. The smaller NSB villages (Point Lay, Nuiqsut, Atqasuk, Wainwright) seem to display this pattern, with the 1988 census indicating that for every three individuals in this age group who report graduating from high school, about two report that they did not. Again, this may be a systematic problem with the census data from the smaller communities. It could also indicate that graduation rates in those smaller communities are lower than in larger communities and for the NSB as a whole, and that the 18-2S age group has a graduation rate lower than the 26-39 age group.

The socialization of the young is also quite different from that of the past. In all villages the peer group has attained more importance than the immediate family for many teens. This is more pronounced in the larger villages, where there are a large number of similarly aged adolescents. In smaller villages with fewer individuals in each age group there is more interaction with a wider age range. This is offset by the lack of diversity available in a smaller village. Barrow is very much different in this regard than the other villages. Barrow offers more variety and greater size than any of the outer villages. Access to off-slope locations and resources is also substantially greater.

E. Language and Language Use

This portion of the report consists of four sections and was originally developed for the Point Lay Case Study (in draft). The first three are primarily the work of Dr. Lawrence Kaplan, a linguist specializing in Inupiaq. The last section is based upon field observations by the principal researchers. Dr. Kaplan notes that section three, "The Language of Point Lay," can not be considered definitive because linguistic fieldwork was not possible. The findings in this section are based upon a limited number of tapes recorded for the oral history (biography) portion of the Point Lay case study. We have tried to make our discussion in part four as general as possible by including observations from all the villages. It nevertheless remains true that these observations are at best limited as none of the primary researchers speak Inupiaq, and time was very limited. Our best information on language use does come from the villages of Point Lay and Point Hope,

secondarily from Barrow and Nuiqsut, and only to a small degree from the remaining villages. The topic is of such regional importance, however, that we felt it worthwhile to attempt this regional treatment.

## 1. Orthography and a Brief History of North Slope Inupiaq Writing

The first dialect of Inuit to be written at any length was West Greenlandic, written in the mid-eighteenth century by missionaries. A practical orthography was devised for that language by Samuel Kleinschmidt in the mid-nineteenth century, representing a landmark in Native American linguistics. Alaskan Inupiaq writing began with eighteenth century explorers in the Bering Strait area who first transcribed place names and lists of basic words in the dialects of that region. Some of the earliest examples of writing were done in the cyrillic alphabet by speakers of Russian. The earliest known writing on the North Slope also stems from explorers, beginning with a word list by Beechey from the 1820s. In 1885 Ray and Murdoch of the International Polar Expedition at Cape Smythe published a list of over 2,000 words, many showing features of the old Point Barrow dialect. Another important collection of Inupiaq words was made in about 1905 by Dr. S.R. Spriggs, a medical missionary in Barrow. Later, missionaries began writing Inupiaq for the purpose of translating religious writings, such as prayers, scriptures, and hymns. In 1923 a prayer book was printed for the Episcopal Church at Point Hope, probably the first publication in North Slope Inupiaq. This early writing involved individual attempts at symbolizing what the writer heard, usually according to the orthographic principles of the writer's native language. Much of the Inupiaq writing of the period was thus English-based and in no way standardized. The quality varied tremendously with the writer's ability to apply some sort of consistent principles in symbolizing what he heard. Some writers had a remarkable degree of linguistic skill and did quite well, so that their writings can be fairly easily interpreted by us today. Others were inconsistent and did not write in any systematic way, so that their writing is difficult to interpret.

An interesting chapter in Inupiaq writing involves the writing system developed by Helper Neck (Uyaquq), a Central Yupik Eskimo who wrote his language with pictographic symbols around the turn of the century. His pictographs soon became phonological and spread beyond the Yupik area. They became used by Inupiat in the Kobuk and Kotzebue areas, the first example of Native writing in Inupiaq.

The present standard orthography in use for Inupiaq was first devised in 1946 by Roy Ahmaogak, a Barrow man who later became a Presbyterian minister, and Eguen Nida, a linguist working with the Summer Institute of Linguistics and Wycliffe Bible Translators. The two worked together in Norman, Oklahoma, to analyze the sound system of Inupiaq and develop a writing system suitable to the language. Their orthography was phonemic and linguistically quite accurate. It has been revised as described below to give the modem system currently in use. Perhaps the main criticism of this work is the fact that it was done with no eye to compatibility with writing systems in use for other Inuit dialects in Canada and Greenland. Today, pan-Arctic cooperation makes a common Inuit writing system desirable.

The original system proposed by Ahmaogak and Nida had the following vowels:

| | | | |
|---|---|---|---|
| Short vowels: | a | i | u |
| Long vowels: | aa | ii | uu |
| Diphthongs: | ai | au | |
| Vowel clusters: | ia | ua | |
| | ui | iu | |

Their original consonant symbols may be arranged as follows:

| labials | alveolar | spalatals | retroflexes | velars | uvulars | |
|---|---|---|---|---|---|---|
| p | | c | | k | k | stops |
| | ŧ/s | ŧ | ș | | | voiceless fricatives |
| v | l | l/y | z | g | ġ | voiced fricatives |
| m | n | ii | | ŋ | | nasals |

After Ahmaogak finished his work with Nida, be became minister at Wainwright and published several pamphlets, including translations of religious material and a primer, all in Inupiaq 'using the new orthography. When the missionary Don Webster came to the North Slope in 1959 to help Ahmaogak in translating the New Testament (published in 1966), he made several changes to the orthography. s was changed to sr, c to ch, and z to r to represent the voiced retroflex sound. This is significant, since r is used in all other Inuit orthographies to represent the voiced uvular fricative (ġ in Inupiaq). This is a major and important difference between writing in Inupiaq and that in related dialects and languages. One further change in symbols was adopted at an Inupiaq language conference in 1972: k was changed to q, making Inupiaq similar to other Eskimo languages on that point at least.

The modem writing system is now in use for the Inupiaq language throughout Alaska. Inupiaq classes at school teach this way of writing, many churches continue to use it, and it is found in other sundry uses within Inupiaq Alaska. English-based, non-systematic writing still occurs, especially where usage has made that form familiar. Common names fall into this class, as do many "official" names. For example, the name "Cully" Corporation would be spelled "Kali" in the standard orthography and the NANA Corporation's hotel in Kotzebue, "Nul-luk-vik," would be written "Nullaġvik," meaning "place to stay overnight."

The era of pan-Eskimo cooperation was born in 1977 at the First Inuit Circumpolar Conference held in Barrow. Since then contact among Eskimo groups has increased, with new emphasis placed on old cultural and linguistic ties. Awareness of similarities in language among various Inuit groups has made differences in writing conventions appear glaring and unnecessary. In designing a writing

system, the choice of one symbol over another to represent a particular sound is to a great extent arbitrary, dictated largely by considerations of familiarity, i.e., the way a given letter is used in the European language found in a particular area. Inuit writing in Greenland thus bears some relation to Danish, while in Canada Latin-based alphabets have a relation to English and French. Early German missionaries also played a role in Eskimo linguistics in Canada and Greenland. It was quite natural for German, French, and Danish speakers to choose the symbol r to stand for the voiced uvular fricative, while in Alaska r was used for a retroflex sound as in English. The result has created a degree of discontinuity in writing across the Arctic, even where the same sounds are present in the same words. For example, the word for "woman" is pronounced the same in nearly ail Eskimo languages, and most of them spell it **arnaq.** Only Alaskan Inupiaq and St. Lawrence Island Yupik do not use this spelling, using instead **aġnaq** and **aghnaq** respectively.

Members of the Inuit Circumpolar Conference have in recent years suggested changes in local orthographies to promote standard usage. Alaskan Inupiaq has the smallest group of speakers and writers when compared with Canada and Greenland, and it was thus recommended that Inupiaq institute spelling changes. Two possibilities existed: either Alaska Inupiat could elect-to. change their writing or else the ICC could adopt an auxiliary international orthography for use in communication by Inuit around the world. This auxiliary system would not replace current writing, which would continue to be used locally as speakers desire. The ICC in 1983 passed Resolution 83-16 which stated that 'the Inuit speak one language and that written communication is impeded by the lack of a common writing system, the adoption of which could have the result of strengthening use of the Native language, especially in Alaska. "Differences in the writing systems impose purely artificial barriers to potential Inuit language unity," the resolution stated. The Alaska Inuit were therefore called upon to make the following changes in writing 1) replace **ġ** with r, 2) replace **ŋ** with ng, 3) replace r with **z,** 4) replace **sr** with s, 5) replace **nŋ** with ring, 6) replace **ŋŋ** with ngg.

These changes would modify the features that make Alaska Inupiaq hard for other Inuit to read and represent in some cases a return to symbols used by Ahmaogak and Nida in their original orthography of 1946. Despite the advantages for Inuit unity, many Inupiat are unwilling to change the writing system to which they have become so accustomed and which was developed by a beloved member of their community and used in translating the holy scriptures. Many of the Inupiat who have become literate in their language have done so at great effort and do not wish to learn a new way of writing. As a result the proposal was not put into use in Alaska, and the Ahmaogak-Nida writing system continues in use.

## 2. The Status of Inupiaq in Alaska and Specifically on the North Slope

The Status of Alaska's Native languages has undergone significant change over the past century. In almost all parts of Alaska, the use of English has increased while the use of Native languages has decreased. In some areas, the Native language has fallen off dramatically so that it is barely spoken today. This is the case of Eyak, traditionally spoken around Cordova but now known partially by only two people. Other Alaskan languages are still spoken by quite a number of people, although the vast majority of them are adults. This is the case of Alaskan Inupiaq, whose speakers are for the most part over the age of forty, with few or no children that speak the language fluently. Related Inuit dialects are spoken by young children, however, in Greenland and

most of Eastern Canada. Two other Alaskan Eskimo languages, Central Alaskan Yupik and St. Lawrence Island Yupik, are still used by members of all generations (including young children).

The decline in Native language use must be attributed to a number of complex factors, all relating to the coming of outsiders to Alaska. The history of contact was different in each area of the state, and yet many common elements are present. The first colonists in Alaska were Russians, whose presence apparently produced no serious decline in Native language use. There are several probable reasons for this. First, the actual number of Russians in Alaska was never very great, and what Russians there were stayed mostly in the southern portion of the state. Second, there appear to have been no policies discouraging or urging elimination of the Native languages. Third, Russian colonization preceded the technological era, so the Russian language was not spread by mass media and modem means of transport. Overall, the number of Alaska Natives in close contact with Russian was not great.

The American colonization followed the Russian period, with the purchase of Alaska by the U.S.A. in 1867. By the 1890s large numbers of English speakers flooded into Alaska, largely in connection with several gold rushes, whaling, and fishing. During World War II military personnel arrived and many remained following the end of the war. The number of non-Natives in Alaska now far exceeds the number of Natives, who make up less than 15% of the total population. The English language is very strongly present, even in predominantly Native areas of the state. Schools, courts, and government agencies, as well as media and publications are overwhelmingly in English. There is some broadcasting in Native languages, notably Inupiaq language radio in Barrow and Kotzebue and Yupik radio and television in Bethel, but such programming is the exception rather than the general case even in those areas. There are also school programs in Native languages. In North Slope Borough schools, Inupiaq classes are taught daily for an hour. English is used for all other school purposes, and most parents consider the school to be much more effective at teaching English than it is at teaching Inupiaq.

Airplanes have increased ease of travel. Residents of Alaskan villages which used to be quite isolated have been brought into contact with more and more people who do not speak their language. English has become the *lingua franca* which is used for communication among Natives from different language areas as well as by Natives communicating with non-Natives.

As American institutions came to Alaska, they of course brought more English, and this was true of the schools in a particularly important way. Many school officials believed that it was extremely important for Native schoolchildren to speak only English, for a variety of reasons. Most obviously, it would benefit their education, since instruction was exclusively in English. Many educators and school officials felt in addition that Native people would be better off speaking English, believing that Native languages were inferior forms of speech. This unreasonable prejudice was probably due to the inability of these educators to respect a language they could not understand and especially that was not traditionally written, i.e., that had "only" an oral tradition and no widespread literacy. In the Western world education has been so closely identified with literacy that Native people were seen as uneducated, rather than educated and skilled in their own traditions. In school, children were discouraged from speaking their Native language and many were punished for it. Many adults tell stories of the ill treatment they received for speaking their Native language, even when this was the only language they knew. To this day many people

harbor bitter memories associated with restrictions placed on their use of their native language in school.

This misunderstanding of Native culture on the part of white educators is important to the subject of fluency in Native languages. The negative attitude of some administrators and educators and their willingness to proclaim the superiority of English over Native languages has had a lasting effect on many Alaska Natives and is responsible at least in part for the declining use of Native languages in Alaska today. The most obvious manifestation of the decline is found in the fact that most young Native people are no longer capable of speaking a Native language and know only' English. A major factor that has given rise to this situation is that many parents speak English at home rather than the Native language, even when they are bilingual. Many Native parents are . monolingual English speakers and do not have the choice of which language to speak with their children.

The phenomenon may be rooted, at least partially, in the school policies discussed above. Adults who were propagandized about the value of learning English over the Native language probably often assimilated this message and stressed English with their children. One Inupiaq mother says that she never wants her child subjected to the humiliation that she felt as a child for speaking her language in schocd. As a result she would be quite happy for her child to learn only English. Some parents also espouse the "practicality argument," which says that English is a much more useful language in the modem world than Inupiaq and that children should be maximally proficient in English if they are to have access to all the advantages society has to offer. There is much truth to this argument, but learning English does not preclude bilingualism with Inupiaq as the home language. In fact, most of the middle-aged generation is fully bilingual and able to function successfully in both languages, providing an excellent model for their children and grandchildren. In many parts of Alaska, however, English is taught to the exclusion of the Native language, both at home and in school. This situation may also stem from negative attitudes presented in school. Even today, many school officials do not recognize the value of learning another language besides English and place little emphasis on programs to teach Native languages (or foreign languages, for that matter). On the other hand, a new breed of teachers and school officials do recognize the value of learning languages, especially as publicity is given to the idea that the U.S. lags behind the rest of the world in this area.

On the North Slope, parents have shown support for the teaching of Inupiaq in school. A survey was conducted about ten years ago which showed that a great majority of Inupiaq parents wanted their language taught in the school alongside English. This strong support made it possible to fund an Inupiaq language program, with local teacher training and materials development components. Most local parents regard the success of this program as far from adequate, however, as few (if any) students can be considered fluent in Inupiaq by the time they graduate from high school. The Inupiaq teacher position tends to be one where there is rapid turnover, and often the choice must be made between a person who knows Inupiaq well but has little formal teaching training or experience and a person who does not know Inupiat (or at least the local dialect) that well but who is more formally trained. The mixed results obtained so far clearly indicate that Inupiaq teachers need to possess both skills in Inupiaq and in teaching. It may well be that more time and resources will need to be devoted to the learning of Inupiaq if this is really to be one of the missions of the public school system. Such an emphasis would require an enormous increase in the support students receive from their home environment as well.

Bilingual education -- or more accurately, Native language teaching in school -- has had the positive effect of elevating Native languages in status, since they were earlier denigrated or simply ignored. There seems to be confusion, however, on the question of how children "acquire" a first language, which is one that they will learn to speak with native fluency. First languages are generally learned at home from one's parents or primary care givers or in some other situation where the child is immersed in language. It is usually not taught in a pedagogical way. While we all learn our native language through this "juvenile immersion" method, we may learn second languages through formal instruction -- or by immersion -- generally somewhat later in life. While everyone learns a first language, the success of second language instruction varies tremendously with the methods employed by the teacher and the motivation of the students. It is generally acknowledged today that methods based on comprehension and oral production work better than those based on translation, grammar, and vocabulary memorization.

Native language teaching in the Inupiaq area of Alaska is of the second language variety First language "immersion" type activities at home take place largely in English, and the active language of children is thus English in almost all cases. Radio and television as well as peer speech are included in the "early language input" which helps determine what language(s) a child will learn. The most a successful school program could possibly be expected to do would be to impart some degree of second language knowledge to schoolchildren. It is very unlikely, or even impossible, that native fluency could be developed in a language which is only heard and practiced during one class period a day. If Inupiaq language teachers use memorization of vocabulary to teach language, rather than oral communication methods, it is even more improbable that pupils will learn to speak the language. (It is, however, possible to teach fairly fluent spoken language at school. There are special language immersion schools outside of Alaska whose goal is to teach fluency in a second language, but this involves having most or all school instruction in the language.)

Native language loss among younger generations of Alaskan Natives has given rise to non-standard English as an attendant phenomenon in most rural areas of the state. Children brought up in English by parents for whom English is a second language often learn many of the features of their parents' English. The result is that they learn a Native language-influenced variety of English which has been called Village English. This English shows aspects of pronunciation and grammar that may be directly traced to the Native language of the parents or to other sources of non-standard English, such as whalers, trappers, or miners who were among the first whites to visit Native areas of Alaska. In linguistic terms there is nothing "wrong" with Village English, since linguists value all dialects of a language equally.

However, non-standard English is by definition at variance with what may be called "educated" or "standard" English. As a result, teachers feel the necessity of stressing standard English in the classroom, especially if students are to be prepared for college or occupations requiring writing or communication skills. Frequently, educators consider Village English a problem or a deficiency which must be corrected. If the original policies which discouraged Native languages and even recommended replacing them with English intended to give Native people easy access to a variety of institutions within the society at large, the policy was a failure. Not only is the survival of many Native languages in Alaska now threatened, but also many children have ended up speaking Village English.

If Inupiaq is not the first language of young Inupiat on the North Slope or elsewhere in Alaska, it is unlikely that it will be retained as the first language of the region. School programs will foster some degree of competency in Inupiaq, and a well-taught program can even produce speakers of the language. Learning a language in school, however, will almost never give one native fluency, and this fact is crucial to understanding the situation of most Alaska languages today.

The above remarks address the history and current situation of Alaskan languages in general and of the Inupiaq language more specifically. The information presented above is based in part on experience in North Slope villages, especially in Barrow, Wainwright, and Point Hope. As for the particular case of Point Lay, it has been reported to be similar to Point Hope in terms of the Inupiaq fluency of its residents. The youngest fluent speakers are generally in their forties by now, with occasional exceptions of people in their thirties. The "language shift," as linguists call it, from Inupiaq to English in younger generations has resulted from the sorts of influence described above. An Inupiaq school language program has the usual and expected effect of imparting some knowledge of the language without producing fluent speakers, a situation common with school second language programs.

In a recent article Louis-Jacques Dorais discusses the potential for loss of the Inuit language in the Eastern Canadian Arctic, where use of this language is generally much stronger than in Alaska. On the North Slope a monolingual generation of elders, those who speak only or nearly only Inupiaq, is followed by a generation of bilingual middle-aged people. This addition of a new language (English) where there was previously only one (Inupiaq) seems promising as first, but Dorais warns of "subtractive bilingualism" in the case of Canadian Inuit. "In the Eastern Arctic, a majority of the Inuit under 40 years of age are now bilingual, a very positive factor, objectively speaking, as these individuals are able to use two different linguistic codes. But when taking a closer look at how such bilingualism works, one is struck by the fact that very often the knowledge of English seems to displace, or even replace that of the first language, rather than simply compliment it. This is what linguists call subtractive bilingualism" (Dorais 1989:199). As applied to Alaska, Dorais's article explains how the desired goal of bilingualism can turn out to foster monolingualism in English, rather than continued bilingualism in succeeding generations. Use of the Native language may be very much desired in theory, e.g., surveys, interviews, and speeches show strong support for it. Everyday life, however, has its own reality, and Native language supporters often find themselves on a par with the rest of the community, engaging in activities which promote English, e.g., speaking English rather than Inupiaq at home or in the community or allowing long hours of English television to enter their home.

Although the survival of Inupiaq as a spoken language in Alaska is gravely threatened because it is not being passed on from parent to child int he traditional manner, this is not to say the Inupiaq culture and identity will not be maintained in other ways. Many small groups around the world are experiencing language shifts in the twentieth century and discussing what degree of cultural assimilation, if any, this change must entail.

### *3.* Dialect Differences in Inupiaq

The Alaska Inupiaq language consists of two major dialect groups. North Alaskan Inupiaq is found in the area of the Kotzebue Sound, Kobuk River, and North Slope. Seward Peninsula

Inupiaq is spoken on the Seward Peninsula and offshore islands and along the shore of Norton Sound as far south as Unalakleet. North Alaskan Inupiaq comprises two dialects, North Slope and Malimuit, which includes Kobuk and Kotzebue Sound. Seward Peninsula comprises the Bering Strait and Qawiaraq dialects.

In Point Lay, North Slope Inupiaq is the Native language which has been spoken by residents and their ancestors for generations. The North Slope presents a rather complex picture in terms of dialect difference, because there has been a lot of migration and population movement, especially over the past century. Nevertheless, several distinct dialects can be recognized. The Nunamiu dialect spoken at Anaktuvuk Pass, is in many ways transitional between the general North Slope dialect and the dialect of the Kobuk River. Nunamiu closely resembles the Inupiaq of the Noatak River, and indeed, many ancestors of the presentday Nunamiut came from that area. In addition, Nunamiu Inupiaq is virtually identical to the dialect of Aklavik in the Canadian Northwest Territories, since that village was settled by Alaskans. The Nunamiu dialect is illustrated well in the book Nunamiut Texts, published by the North Slope Borough Commission on History, Language, and Culture in 1987 and containing an introduction by Knut Bergsland, presenting salient features of the dialect.

The Inupiaq of Point Hope is also quite distinctive when compared with the majority North Slope dialect. First, there are lexical differences, which distinguish Point Hope: the verb stem meaning 'awake' is **iqiiq** -- rather than itiq - as in Barrow. 'Yes' is **aa** rather than ii. In addition, there are phonological differences: Point Hope Inupiaq has no voiceless fricatives except s, and what are elsewhere clusters of voiceless fricatives are voiced: **siksrik** 'ground squirrel' is **sigrik** and ak**ɬaq** 'brown bear' is **aglaq**. The process of palatalization is different in Point Hope from the rest of North Alaska, and palatal consonants, while they occur, are not distinctive or contrastive. Whereas **ini** 'place' generally contrasts with **iñi-** 'hang up to dry' in that the latter has a palatal nasal, there is no contrast for most Point Hope speakers. Assimilation of t to s or **č** occurs consistently throughout the North Slope except in Point Hope, where it is irregular and somewhat marginal, even for the oldest speakers. Where there is no alteration, i.e., stem internally, the assimilation is found, e.g., 'four' is always **sisamat** rather than **sitamat** as in Seward Peninsula dialects which lack assimilation completely. But 'he arrived' can be either **tikittuq** or **tikitchuq** [tikitčuq], and the latter form does not seem to be necessarily more conservative as in other North Slope Inupiaq. Plurals in Point Hope are quite distinctive, since they do not end in -t but in a voiced alveo-palatal fricative **ž**.

Since Point Hope is the next village down the coast from Point Lay, one might expect to find linguistic similarities, especially in terms of the special dialect features found in Point Hope. This is apparently not the case, however, and the particularities of Point Hope Inupiaq are not shared by Point Lay. The only feature mentioned above also found in Point Lay is the voicing of clusters of voiceless fricatives. Although this process is quite consistent in Point Hope, it is merely a tendency in Point Lay and also in Wainwright.

Otherwise, the Inupiaq of Point Lay appears to be linguistically quite similar to what is spoken in Barrow and on the majority of the North Slope. At first glance, this fact may appear surprising, since Point Lay is quite far from Barrow, and in Alaska this sort of distance usually signals significant dialect variation. Dialect variation ought to be greater in this case, and there are two possible reasons why it is not. (1) Point Lay Inupiaq speakers have mostly spent time living in

Barrow and are influenced daily by the language of Barrow, heard on the radio and found in publications; Barrow Inupiaq may thus have strongly affected the original dialect, which has all but ceased to exist. (2) Most or many of the features of what we call Barrow dialect originated in Point Lay and the surrounding area, so that is actually Point Lay Inupiaq that has influenced Barrow.

The second possibility would appear to be the more likely. Although there has been some leveling of dialect features throughout all of the North Slope, and modem Point Lay speech may bear influence from other areas, it seems likely that the modem Barrow dialect bears a great deal of influence from Point Lay. The original dialect of Barrow was that spoken at Point Barrow, which was the oldest settlement in the area. During whaling days, large numbers of people moved to Barrow from elsewhere on the North Slope, and many came from Icy Cape and the Utokok River area. We know that the Point Barrow dialect has been largely replaced by other North Slope dialects -- only a few people speak Point Barrow today. It seems quite probable that the Utokok River/Icy Cape dialect is the one that took precedence in Barrow and is what we call today Barrow Inupiaq. The Inupiaq dialect currently spoken in Barrow -- and Point Lay -- is quite well documented and described in terms of phonology, syntax, and lexicon; there is thus no need to present a description of it here.

## 4. Language Use and Sociocultural Change

### *Introduction*

Use of Inupiaq in public varies widely by context. At some public gatherings it is used almost exclusively, and at others hardly at all. In Point Hope, for example, at the 1988 annual Tigara Corporation shareholder meeting, Inupiaq was the language of choice with very little of the meeting conducted in English. The one adult who wanted to speak at length and could not speak Inupiaq was at a marked disadvantage and, in fact, his inability to speak Inupiaq was the subject of a self-depreciating comment. The virtually exclusive use of Inupiaq was interesting, because there are a significant number of people who do not speak or understand Inupiaq well, especially the younger shareholders. This seems to be a way to assert the Inupiat identity of the corporation, as well as perhaps a way of the older shareholder to retain control. Based on a few comments, it seems likely that younger shareholders feel that they ought to know their native language, and this prevents them from demanding that corporation business matters be presented equally in English and Inupiaq.

Similar observations were made at a NSB meeting held in Point Hope. The NSB Mayor said that things would be done in Inupiaq first, and then translated fully into English. Many things, however, did not get translated, meaning that monolingual English speakers were effectively disenfranchised. Interestingly, this contrasts to an analogous NSB meeting held in Point Lay, where most of the business was conducted in English. This provides a rare example of outside (Barrow-based) Inupiaq speakers going into both communities and in one (Point Hope) conducting business in Inupiaq and in the other (Point Lay) conducting business in English. In Point Lay public meetings are always in English. On occasion there is something that must be said in Inupiaq, either as a joke to be hidden from or made at the expense of non-Inupiaq speakers or because someone is present who can contribute who does not know English. It is recognized in

Point Lay that there are many more people who have trouble understanding Inupiaq than those who have trouble with English. There are a significant number of non-Inupiat Alaskan Natives living in Point Lay, as well as a few Caucasians. Most young (age twenty and below) Inupiat in Point Lay do not readily comprehend Inupiaq because they did not grow up hearing it in the home. If they are to be encouraged to come to meetings and participate, the meetings almost have to be in English. This is a "Catch-22" of language retention that the residents in Point Lay are fully aware of but have no real answer for.

The use of language at City Council meetings can also be discussed, at least for a subset of the villages for which such observations exist in the literature. Not all City Council meetings are functionally equivalent, of course, since often the language of choice depends on the business to be conducted and who is in attendance. These factors can be taken into account in a narrative discussion, however, and will serve to illuminate some of the contextual features which help determine the language of choice. Language use at church services, at public hearings, and in other contexts, can also be addressed.

***Language Use at City Council Meetings***

In Point Hope, all City Council meetings observed were conducted primarily in English. This may have been due to the common presence of monolingual English speakers with whom the City Council had to deal at that meeting (primarily NSB functionaries). As mentioned above, Inupiaq is the language of choice at other public forums in Point Hope where topics that could be considered to affect only Inupiat are discussed.

In Point Lay, all IRA Council meetings are held predominately in English. If Elders are present an attempt is made to translate for them when necessary for them to follow what is being discussed. Comments are sometimes made in Inupiaq and short discussions are sometimes conducted as asides in Inupiaq, but all business and most discussion is in English.

In Wainwright, most parts of City Council meetings are held in Inupiaq. The only exceptions are those issues where monolingual English speakers (local PSOS, contractors discussing the progress of local projects, certain NSB functionaries) make presentations to the council. These presentations are made in English and questions are addressed to them in English. Most of the time these presentations are not translated into Inupiaq as those present can fully understand them. Those points that are not clear to certain board members are discussed in Inupiaq. This corresponds well with the observations of other public meetings in Wainwright, where the primary presentation was made in English but a full translation into Inupiaq was also made because people were present who did not understand English well.

No City Council meetings were observed in Barrow, and the literature does not document language use at these meetings. NSB Assembly meetings, also held in Barrow, are conducted almost totally in English. Again, asides may be made in Inupiaq and especially problematic English terms may be glossed with an Inupiaq expression, but most people in attendance have good fluency in English. Many have no knowledge of Inupiaq. The church most closely identified with Barrow Inupiat conducts much of its service in Inupiat, and takes pains to translate the English portions of the service (notices and the sermon, since the pastor does not speak Inupiaq) into Inupiaq.

Nuiqsut is an interesting case because in 1983-84 City Council meetings were conducted primarily in English while currently they are primarily in Inupiaq. The village corporation annual meeting in 1983-84 was conducted in both English and Inupiaq, but the most difficult issues were discussed totally in Inupiaq. The City Council in this period had a non-Native clerk who may have exerted a pressure to conduct meetings in English. Whatever the reason, the current council has evidently made a decision that is in the best interests of the village to use Inupiaq. Several of the members are the same as in the earlier period, so differential knowledge is not a good explanation. Although the clerk had changed, the position was still held by a non-Native with little knowledge of Inupiaq. It could well be that this is a mechanism by which the council ensures that it controls what is recorded in the minutes, as the present clerk needs the help of council members to write the minutes of council meetings. A common complaint about non-Native clerks in such situations is that they often exert too much influence over council members and record too much of the discussion (and disagreement) leading to a decision which is most often formally unanimous. The current City Council in Nuiqsut seems to be more concerned with local control than was the council in 1983-84. Most church services in 1983-84 were conducted in English and this remains the case as of 1989.

Public meetings were not observed in Kaktovik, but the knowledge that until recently the Mayor was non-Native implies that meetings were most often in English. Church services are predominately in Inupiaq, however, so it is clear that Inupiaq is also used in public meetings. It may be that Inupiaq is used unless there are overwhelming reasons for the use of English such as having a non-Native Mayor.

Little information exists in the literature on language use on public occasions in Anaktuvuk Pass and Atqasuk. Our fieldwork in these locations did not correspond with any public meetings and informants considered the topic a strange one to discuss. In any event, no generalized statements on language use were obtained from local informants.

### *Language Use and Church Services*

During Episcopal church services in Point Hope the prevalence of Inupiaq use varies from week to week and is, in part, dependent upon whether or not several non-Inupiaq speakers are present or high-status individual non-Inupiaq speakers. For example, when the bishop's assistant, the highest church official who visits the community on a regular basis, was in Point Hope, services were almost entirely in English. During "typical" weeks, Inupiaq was used predominantly throughout the service, particularly for the sermon, but there was some variation in this that could not be accounted for merely by examining the number of non-Inupiaq speakers present. Few non-Inupiaq speaking Inupiat individuals, other than young children, attend the services on a regular basis. As noted in the discussion of the church itself, on any given Sunday, the congregation is in large part composed of elders and other older adults and their grandchildren. The Episcopalian religious functionaries in Point Hope are presently all Inupiat whose first language was Inupiaq. The Assembly of God Church in Point Hope uses English for the most part, with an occasional Inupiaq hymn or testimony given in Inupiaq. The minister is non-Native, which accounts in part for the use of English. The congregation is also smaller and, on the average, younger than the Episcopalian congregation.

Episcopalian Church services are not frequent in Point Lay, as there is no church and no resident minister. Episcopalian services are conducted whenever an outside functionary is in the village and are usually held in the community center. The services are in English except for an occasional hymn in Inupiaq. A Baptist Church has recently been established in Point Lay and the services are entirely in English. The pastor is non-Native, as is most of his small congregation. The Baptist pastor says that his role in ministering to the villagers in their everyday lives can be as important as anything he says in church services, however, so that the small size of his congregation is not necessarily the best measure of his effect on the village. Baptist services are conducted at least once a week.

Wainwright has two established churches, both with Inupiat identities. The Presbyterian Church currently has a non-Native minister, but services are frequently led by local Elders and conducted primarily in Inupiaq. The Presbyterian church has been led Inupiat ministers in the past and is the largest church in Wainwright. The Assembly of God Church is smaller, and has services led by a local lay Inupiat. Informants say that the Assembly of God congregation tends to be younger, on average, than the Presbyterian congregation. There is also a Baptist Church in Wainwright with a non-Native pastor, but his congregation is almost entirely non-Native. On occasion a few Inupiat will attend Baptist services. These services are entirely in English. The Baptist Church is the only church in Wainwright that operates a Sunday school, and many Inupiat children do attend these classes. The Sunday school has apparently had little effect on the parents of the children who attend, however, and the long-term effect on the attenders themselves is uncertain.

The religious situation in Barrow is the most complex on the North Slope and we will confine ourselves to language usage in this section. Both the Presbyterian and Assembly of God Churches in Barrow have primarily an Inupiat identity. The Assembly of God has much less of a formal hierarchy than the Presbyterian Church. The leaders of the Assembly of God Church are Inupiat whereas the Presbyterian minister is non-Native. Language use in Assembly of God services is not clear, as no information exists in the literature and no services were attended. The first Assembly of God pastor on the North Slope arrived in Barrow in 1954. He was a non-Native, as was his successor. It is clear, however, that Inupiat converts soon became quite important in the spread of that church, especially to Wainwright (Bills 1980:138-150). It is most likely that much of the service is in Inupiat, however, as the principal component of services are testimonies from members of the congregation and singing. In the Presbyterian Church, on the other hand, services are structured around a sermon. For the morning service the sermon is delivered in English and then translated into Inupiat. In the evening a senior lay Inupiat delivers the message and much more of the service is in Inupiat. The pastor reports that attendance is greater at the morning service than at the evening service and that on the average evening attenders are older than morning attenders (and a certain core group attend both services). The Episcopal, Catholic, and Baptist Churches all conduct services in English and up to this point have predominately non-Inupiat congregations.

Nuiqsut has two churches, but only the Presbyterian Church is active. The Assembly of God has a building and at least a few families who are members, but services are not held with any regularity. In the past there have been resident Assembly of God ministers, both Inupiat and non-Inupiat, but no single individual stayed for very long. Apparently the congregation in Nuiqsut is not large enough to support a local church. The Presbyterian Church, on the other hand, is

considered the established church in Nuiqsut. An ordained, fluently bilingual, Inupiat minister conducts the regular morning service primarily in English. He translates the notices for the benefit of those who do not understand English well, and on certain occasions will also translate the sermon as he delivers it. Services are sometimes also held in the evening, but if so are usually led by someone other than the ordained minister and are conducted mostly in Inupiaq. There is also a service that is regularly held on Wednesday evenings which is conducted almost exclusively in Inupiaq and is organized by the Elders who are members of the congregation. Attendance is highest at Sunday morning services and lowest at Wednesday evening services.

The Presbyterian Church is the major church in Kaktovik and services are conducted in Inupiaq. Senior members of the congregation lead the services. Little other information is available. There is no information available on language use in church services in Atqasuk and Anaktuvuk Pass.

The generalizations that can be made about language use and church services are fairly straightforward. Services conducted by locals, regardless of denomination, tend to be in Inupiat while those conducted by non-Inupiat or ordained pastors tend to be in English. Services in English tend to be better attended, all other things being equal, than services held in Inupiaq. This seems to be related to age and language competency, in that older people will attend services held in either language whereas younger people are observed to attend services held in English more often then they attend services held in Inupiaq. Semites held in English sometimes provide translations for those who do not understand English all that well, but seldom do services held in Inupiaq provide English translations. This seems to reflect the perception that those who attend services held in Inupiaq are all Inupiaq speakers, whereas those who attend services conducted in English may well not be fluent in English. It is a common observation by local informants that the young are not acquiring a high degree of fluency in Inupiaq.

### *Language Learning in the School*

*The* school is a place where Inupiaq language instruction for children and young adults takes place and, it is hoped, where the pace of-language loss can be slowed. However, on the North Slope it is almost universally agreed 'that the Inupiaq language program in the school has been ineffective. Major reasons for this are the high rate of turnover of the Inupiaq teacher, the frequent lack of formal training for this teacher, the lack of integration of what this teacher does into the other curriculum, the irregular work habits of past Inupiat teachers, and the lack of reinforcement of the Inupiaq language in most of the students' home environments. There is strong School Board support for teaching Inupiaq (and other aspects of Inupiaq culture) in the schools, but it is not uncommon to observe less than whole-hearted adherence to this policy in the village schools. This is a complex issue and involves many different issues. Educational philosophy, NSB politics, the realities of level of staffing and available money, differing village characteristics, and even the personalities of the people involved are only some of these issues. It is not, however, a problem unique to any single village, and no village has that much of a higher success rate that it can be said not to have a problem in this regard.

Perhaps the most common observation of village (outside of Barrow) schools is that in many cases they are trying to do too much, or expected to do too much. In the best of all possible worlds all students would, at a minimum, have the options of vocational (or career) education, "college

preparatory" education, and/or culturally enriched education. In the practical world of a small village and a very limited teaching staff, it is rare if just one of these options can be presented well. North Slope teachers outside of Barrow are by necessity generalists -- they simply have too many different teaching responsibilities to allow for the luxury of specialization. The right to small, local schools has its price, and that price is most often the narrowing of choice. We are not qualified to say if the present lack of achievement in NSB schools is due, at least in part, to the small size and village setting of those schools. Such achievement problems are evident in schools throughout America and there are any number of confounding factors. Certainly it is recognized on the North Slope that village schools are not educating students as well as they should be, which is one reason why a regional high school is once again receiving serious consideration.

In Point Lay and those other villages for which information is available, the lack of success of the Inupiaq language program has not created any large scale community problems, at least up to present time. The most commonly expressed attitude is that it is not the role of the school to teach Inupiat culture in any event. Parents are held responsible for the ability (or lack of it) of their children to speak Inupiaq. Parents are held responsible for the transmission of subsistence skills. While language classes in the school are supported, sometimes it seems this is because of the professional jobs they create for local people in what is otherwise a nearly totally non-Inupiat environment. The field trips to subsistence harvest sites (mostly fish camp) that used to be sponsored by the village schools are remembered with fondness, but for the most part no longer take place. No one has wanted to take charge of such an undertaking recently (the last attempt in Point Lay was canceled due to extreme weather conditions). It may seem strange that parents are not held accountable by other villagers for the attendance of their older children at school, but are held responsible for their language and subsistence skills. This becomes clearer once it is realized that it is the expectation that the choice of whether to learn or not still rests with the individual child or person, but that the opportunity to learn is expected to be provided by the parents (or community) in the sphere of language and subsistence. Relations between the school and community have been said to be very good in most villages, yet the School Advisory Council meetings in those same villages are also acknowledged to be very poorly attended. The strongest evidence for this generalization comes from the Nuiqsut and Point Lay case studies, but conversations with school personnel in the other villages for this project has made it clear that this is true in general. It appears to be the case that the education the Inupiat people of the North Slope still value the highest is not the "book learning" of the school but the subsistence skills of the hunter.

### *Language Use and Age*

In Point Hope, almost no people under the age of 22 use Inupiaq by choice, and when they do they are not fluent. People 30 and older are generally fluent in both languages, but English is the language used in almost all public contexts. Discussions with Elders are typically in Inupiaq, as well as some discussions between adults. Inupiaq is rarely heard being spoken to a child other than by Elders. The only jobs in the community that would appear to more-or-less require fluency in Inupiaq (other than for Inupiaq-specific programs, such as the bilingual program at the school) are those jobs that involve continual interaction with Elders, such as the Elder housekeeping positions. There are a number of significant (in terms of functions) adults in the community who do not speak or understand Inupiaq.

In Point Lay, few young people use Inupiaq as their language of first choice. Most students in the school are not at all fluent, while those between the ages of 20 and 25 are usually somewhat more able to communicate in Inupiaq. People over the age of 30 are usually fairly fluent in Inupiaq, but will still converse in English unless they wish to ensure privacy of their conversation from non-Inupiaq speakers, or unless the person they are speaking with does not know English very well. The few people in Point Lay over the age of 50 are all primarily speakers of Inupiaq.

While field information from the other villages is not as rich as that from Point Hope and Point Lay, the general pattern is the same. Children in general are simply not learning Inupiaq with any degree of fluency. One teacher who taught in Wainwright for several years remarked that the transition between those who knew Inupiaq and those who did not was dramatic. Those above a certain age (grade level) were proficient and those below that age were not. The transition point was attributed to when the modem high school was built in Wainwright and the increasing influence of television and other media. This teacher also agreed that the adolescent peer group was perhaps becoming more important in terms of socialization then it may have been in the past. In Nuiqsut, those young people who have learned Inupiaq with the greatest degree of fluency are those people whose parents were primarily speakers of Inupiat. Their parents may well have understood English well, but did not speak it fluently and used Inupiaq as their language of choice, and certainly in the home. These same young people often use English as their language of first choice, so that their children learn English as their first language. The same dynamic can be observed in Barrow and is likely to exist in all the NSB villages.

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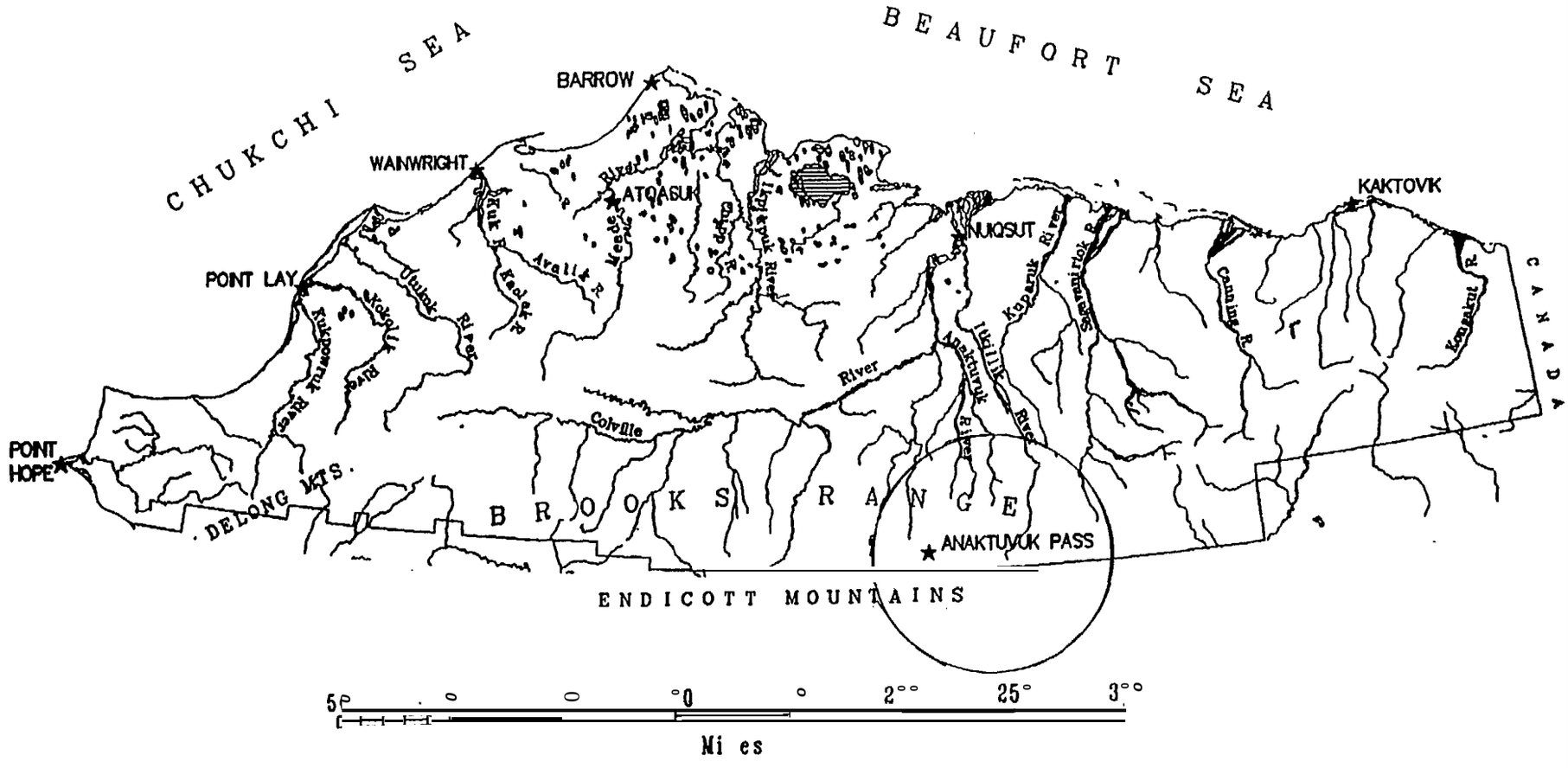
# ANAKTUVUK PASS

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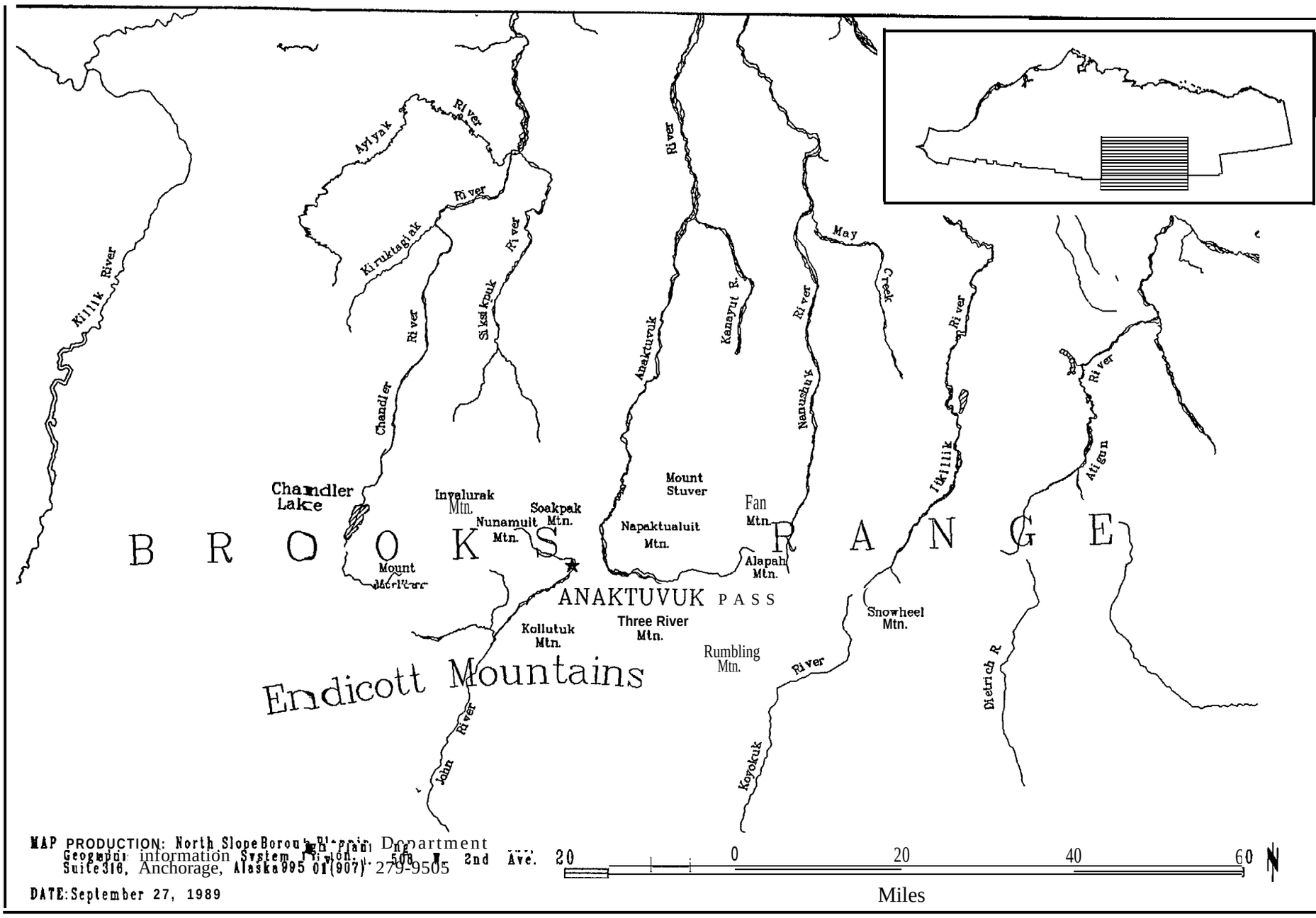


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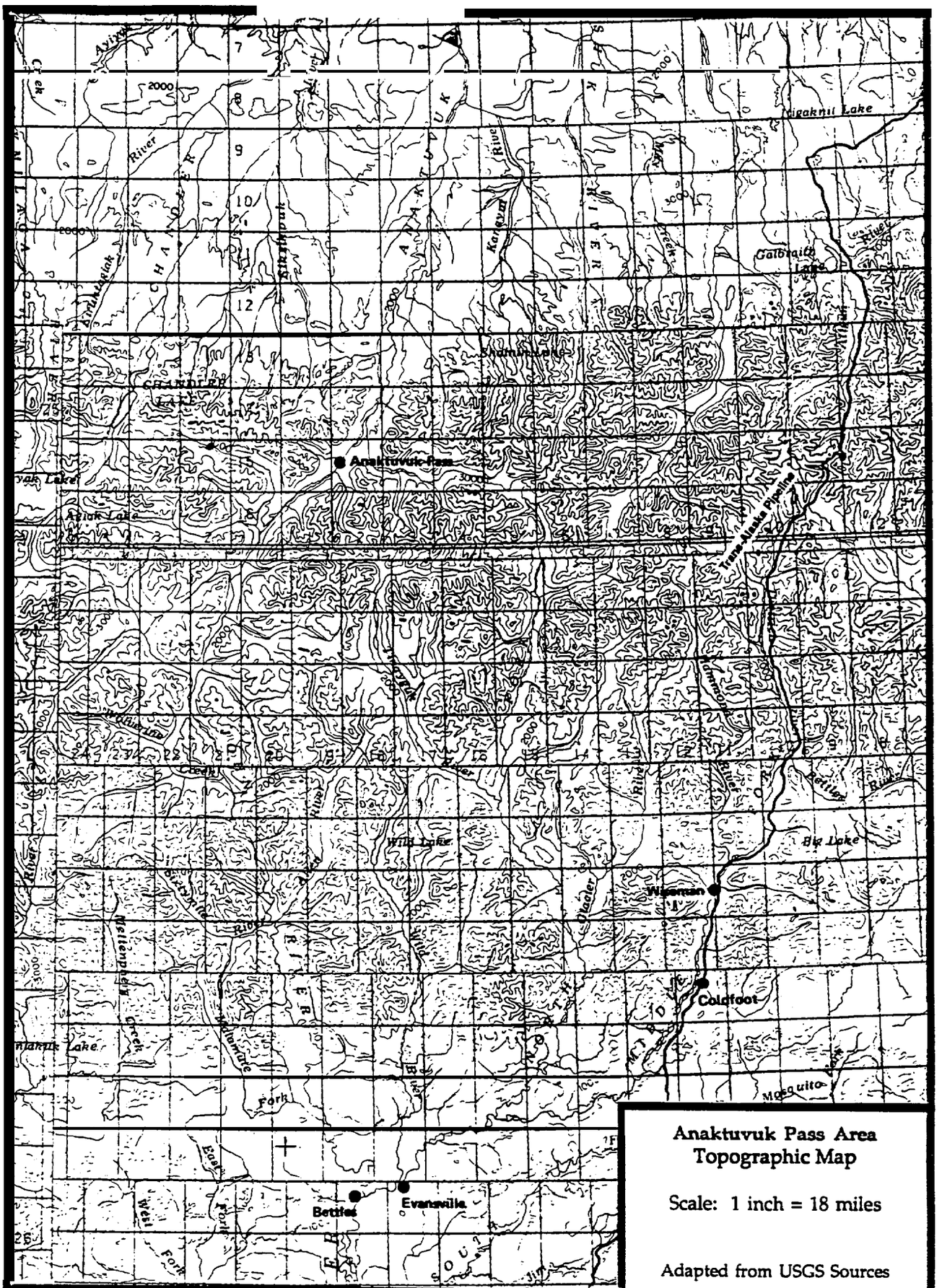
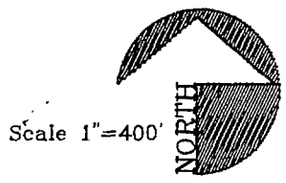



**Anaktuvuk Pass Area**
**Topographic Map**

Scale: 1 inch = 18 miles

Adapted from USGS Sources

# ANAKTUVUK PASS, ALASKA




Scale 1"=400'

LEGEND:

NSB REAL PROPERTY

1. Tank Farm
2. Util. & Sch. Dist. Whse.
3. Fire Station
4. Generator Facil.
5. Sch. Classrooms
6. Sch. Shop
7. Sch. Gym
8. Teacher Housing Duplex
9. Mobil Eq. Stor.
10. Sch. Principal Housing
11. Four-Plex
12. Teacher Housing Tri-Plex
13. Public Safety Office
14. Village Coord./Housing Maint.
15. Health Clinic
16. Old Sch. Residence
17. Museum

NSB Planning Dept.
Geographic Information System
September 1988

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# ANAKTUVUK PASS

## SECTION I: POPULATION

### A. Size and Composition

#### 1. Demographic Characteristics

Binford's data from 1969 recorded a total of 126 permanent residents in Anaktuvuk Pass. The sex ratio was 70 males to 56 females. Binford attributed this sex differential to females marrying outside of the village and secondarily to adoption of females out of Anaktuvuk Pass (Binford and Chasko 1976:68).

The U.S. Censuses from 1970 and 1980 provide data on the ethnic composition of Anaktuvuk Pass (cited from Alaska Consultants [ACI] 1983:22). In 1970 there was a total of 99 people in Anaktuvuk Pass, 97 of whom were Alaska Native. As can be seen in Table 1-AKP, by 1980, according to a privately conducted census, the population had more than doubled to 234 persons, 181 of whom were Alaska Native (ACI 1981:21). This figure is significantly greater than that tallied by the U.S. Census Bureau in 1980 which found 203 total residents in Anaktuvuk Pass, 191 of whom were Alaska Natives (ACI 1983:22). (As a general rule, the North Slope locally-sponsored censuses result in higher totals than official U.S. Census figures.)

The growth rate between 1960-1970 was 11%, 7.4% between 1970-1980, and 2.9% between 1980-1982. (The resident population figures compiled in the 1980 Census Tape STF1 printouts is slightly different from the ACI data.) The Census Tape printouts show a higher percentage of the total population (94% compared to 77%) to be Native and a lower percentage (5.9% compared to 22.6%) to be non-Native.)

The 1989 NSB records a total population in Anaktuvuk Pass of 264 persons. Of this total, 226 are Inupiat and 38 are non-Inupiat. The sex ratio among Inupiat is about 48.4% male to 51.6% female. Among non-Inupiat, males constitute 64.8% of the population and females constitute 35.2%. The age distribution is shown in the accompanying table (NSB Census 1989:Table 2-AKP). It is important to note that in the age brackets that cover the span of ages from age 18 to age 39, non-Inupiat males dramatically outnumber non-Inupiat females 15 to 3. These years maybe considered the "prime employment years"; if the age cohorts are extended to include the 40-59 and 60-65 years of age ranges, non-Inupiat males aged 18 to 65 ("total employment years") outnumber non-Inupiat females of the same age range 21 to 9. One may conclude, therefore, that male non-Inupiat are a more significant presence in the Anaktuvuk Pass workforce than are female non-Inupiat. It is also significant that among non-Inupiat only 19% of the population is under 18 years of age; therefore, 81% of the non-Inupiat population is in the workforce. For Inupiat residents of Anaktuvuk Pass, fully 46% of the population is under the age of 18. These figures have changed little since 1980 when 77.4% of the non-Inupiat population and only 48.6% of the Inupiat population were in the work force (20-65 years old).

Table 3-AKP presents the ethnic composition of the population of Anaktuvuk Pass. This table further defines the non-Inupiat category of the previous table. In 1988, non-Inupiat residents made up 14.496 of the population, a slight decrease from the 1980 non-Native figure of 22.7%, "whites" accounted for 11.0% of the total population, American Indians accounted for 1.1%, and Hispanics accounted for 2.3%. There were no Alaska Native non-Inupiat residents of Anaktuvuk in 1988.

At the time of field research (March 1989), there were a total of six adult non-Native individuals residing in the community, excluding the full-time school staff and the Public Safety Officers. Three were female and three were male. Two of the females were married to an Inupiat spouse, and the third had a son who was living in Anaktuvuk Pass and was married to an Inupiat woman. Of the three non-Native male residents, two were married to Inupiat spouses and the third was unmarried.

Figure 1-AKP graphically presents the total population of Anaktuvuk Pass by five-year age brackets for 1988. Inupiat and non-Inupiat subcomponents of the population of Anaktuvuk Pass in 1988 are also depicted. Figure 2-AKP presents a population pyramid of Anaktuvuk Pass arranged by ten-year age brackets. Noteworthy in this figure is the preponderance of male non-Inupiat within the employment years. Of particular note is the 31 to 40 year-old age bracket where male non-Inupiat outnumber male Inupiat. Figure 3-AKP graphically represents the Inupiat and non-Inupiat portions of the total population, and provides a break-out of the non-Inupiat portion of the population by ethnic category.

*2.* Influences on Population Size and Structure

One factor affecting population size and structure is fertility. Fertility is obviously related to the frequency of conception, but what factors have affected rates of conception over the course of the history of the community and its antecedent seasonal settlements are not so obvious. By dividing the settlement history of the Nunamiut into three periods and comparing the fertility rates for each period, Binford and Chasko (197688) were able to isolate variables associated with fluctuation of fertility. Their findings indicate that the main factor associated with fertility rates prior to the contemporary era was the availability of food resources. When resources were 10W, caloric intake was lowered, and low caloric intake is directly correlated with the probability of conception. In addition, when stores were low or resources unreliable, men often would travel out of the settlement for long periods of time searching for game. The absence of men in the village for significant periods of time clearly contributed to lowering the probability of conception.

In addition to fertility rates, there were certain pivotal events in the history of Anaktuvuk Pass that coincided with population fluctuations. These events may have affected, or were affected by, in varying capacities, the availability of food resources. The first of these events was the epidemic(s) of imported diseases such as tuberculosis and whooping cough during the first half of the twentieth century. The morbidity and mortality rates of these diseases were controlled after the construction of a permanent airstrip in 1960 when public health workers were brought in to treat and vaccinate Natives (Binford and Chasko 1976113).

Table **1-AKP**

Population Composition *
**Anaktuvuk** Pass - July 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Under 5 years | 13 | 15 | 28 | 4 | 2 | 6 | 17 | 17 | 34 |
| 5-9 | 8 | 9 | 17 | 3 | 2 | 5 | 11 | 11 | 22 |
| 10-14 | 6 | 11 | 17 | 0 | 0 | 0 | 6 | 11 | 17 |
| 15-19 | 12 | 14 | 26 | 0 | 1 | 1 | 12 | 15 | 27 |
| 20-24 | 12 | 9 | 21 | 3 | 0 | 3 | 15 | 9 | 24 |
| 25-29 | 10 | 6 | 16 | 11 | 3 | 14 | 21 | 9 | 30 |
| 30-34 | 5 | 5 | 10 | 4 | 3 | 7 | 9 | 8 | 17 |
| 35-39 | 5 | 2 | 7 | 2 | 1 | 3 | 7 | 3 | 10 |
| 40-44 | 6 | 4 | 10 | 5 | 3 | 8 | 11 | 7 | 18 |
| 45-49 | 4 | 5 | 9 | 3 | 1 | 4 | 7 | 6 | 13 |
| 50-54 | 4 | 3 | 7 | 2 | 0 | 2 | 6 | 3 | 9 |
| 55-59 | 2 | 2 | 4 | 0 | 0 | 0 | 2 | 2 | 4 |
| 60-64 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 65-69 | 3 | 2 | 5 | 0 | 0 | 0 | 3 | 2 | 5 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and over | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL | 93 | 88 | 181 | 37 | 16 | 53 | 130 | 104 | 234 |
| Median Age | 22.2 | 18.3 | 20.4 | 29.4 | 30.0 | 29.5 | 260 | 18.8 | 23.3 |

• Figures exclude one person (an Alaska Native male) for whom no age information was provided. Thus, a total of 235 persons in Anaktuvuk Pass was surveyed by Alaska Consultants, Inc.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **2-AKP**

**Age, Sex,** and Race Composition of Population - **1988**
**Anaktuvuk** Pass

| | IAT | | | | | | OTAL | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | TOTAL |
| UNDER 4 | 14 | 12 | 26 | | 1 | 1 | 14 | 13 | 27 | 10.4% |
| 4 - 8 | 18 | 21 | 39 | 2 | 2 | 4 | 20 | 23 | 43 | 16.5% |
| 9 - 15 | 13 | 18 | 31 | 1 | 1 | 2 | 14 | 19 | 33 | 12.7% |
| 16 - 17 | 1 | 6 | 7 | | | 0 | 1 | 6 | 7 | 2.7% |
| 18 - 25 | 15 | 16 | 31 | 1 | | 1 | 16 | 16 | 32 | 12.3% |
| 26 - 39 | 25 | 20 | 45 | 14 | 3 | 17 | 39 | 23 | 62 | 23.8% |
| 40 - 59 | 20 | 17 | 37 | 5 | 6 | 11 | 25 | 23 | 48 | 18.5% |
| 60 - 65 | 1 | 3 | 4 | 1 | | 1 | 2 | 3 | 5 | 1.9% |
| 66 + | 1 | 2 | 3 | | | 0 | 1 | 2 | 3 | 1.2% |
| TOTAL | 108 | 115 | 223 | 24 | 13 | 37 | 132 | 128 | 260 | 100.0% |
| % | 41.5% | 44.2% | 85.8% | 9.2% | 5.0% | 14.2% | 50.8% | 49.2% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | | | 4 | |
| TOTAL POPULATION | | | | | | | | | 264 | |

| | AVERAGE AGE (years) |
|---|---|
| ENTIRE POPULATION | 24.4 |
| MALE | 25.3 |
| FEMALE | 23.6 |
| INUPIAT | 23.0 |
| NON-INUPIAT | 33.0 |

Source: NSB **Census of Population and Economy,** 1989.

Table **3-AKP**

Ethnic Composition of Population -1988
**Anaktuvuk** Pass

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 110 | 116 | 226 | 85.6% |
| OTHER AK NATIVE | 0 | 0 | 0 | 0.0% |
| WHITE | 20 | 9 | 29 | 11.0% |
| AMERICAN INDIAN | 2 | 1 | 3 | 1.1% |
| HISPANIC. | 2 | 4 | 6 | 2.2% |
| TOTAL | 134 | 130 | 264 | 100.0% |
| % | 50.8% | 492% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | 0 | |
| TOTAL POPULATION | | | 264 | |

Source: NSB Census of Population and Economy, 19S9.

Figure **1-AKP**

**Inupiat** and Total Population -1988
**Anaktuvuk** Pass

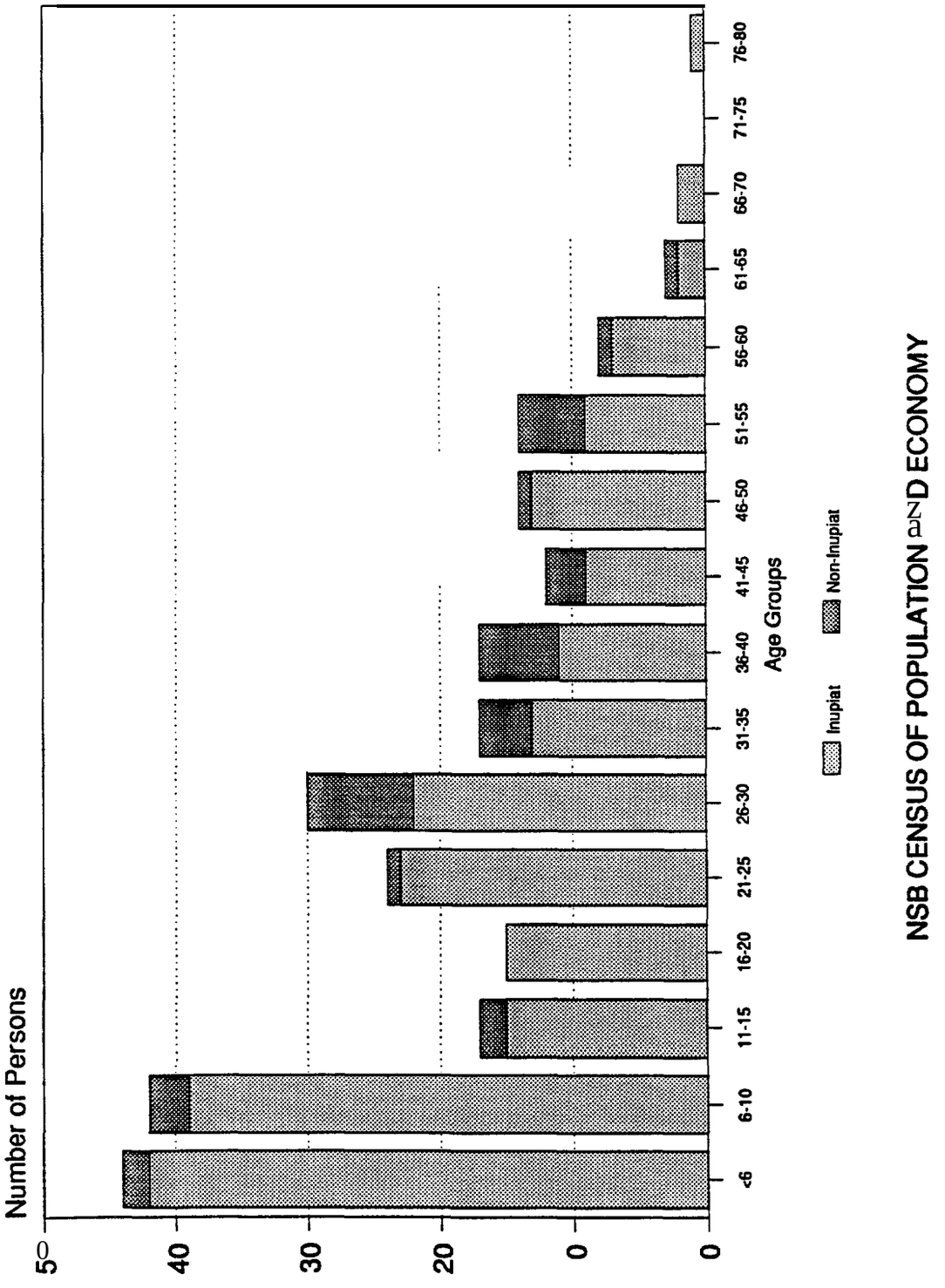


Figure **2-AKP**

Population Characteristics -1988

**Anaktuvuk Pass**

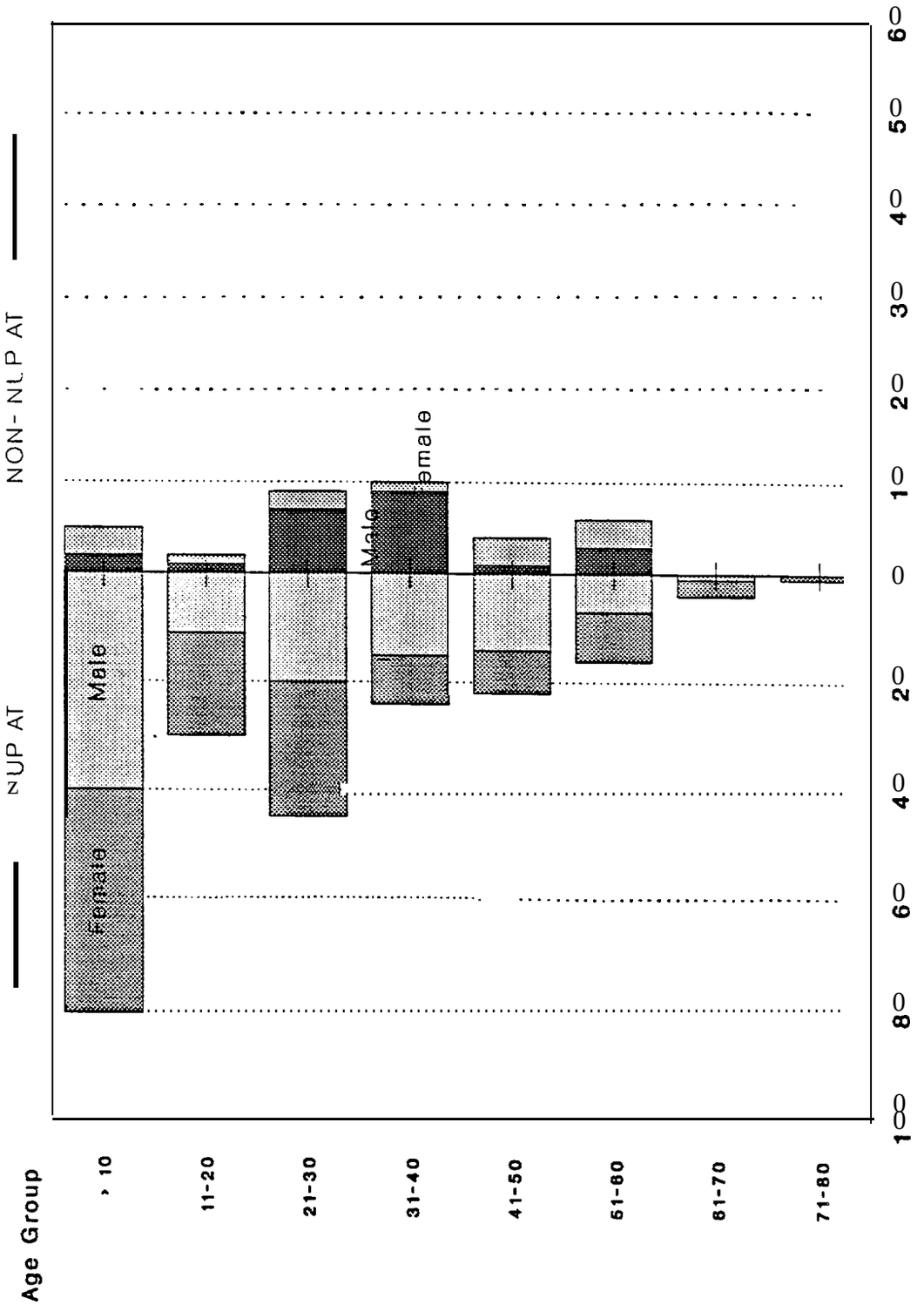
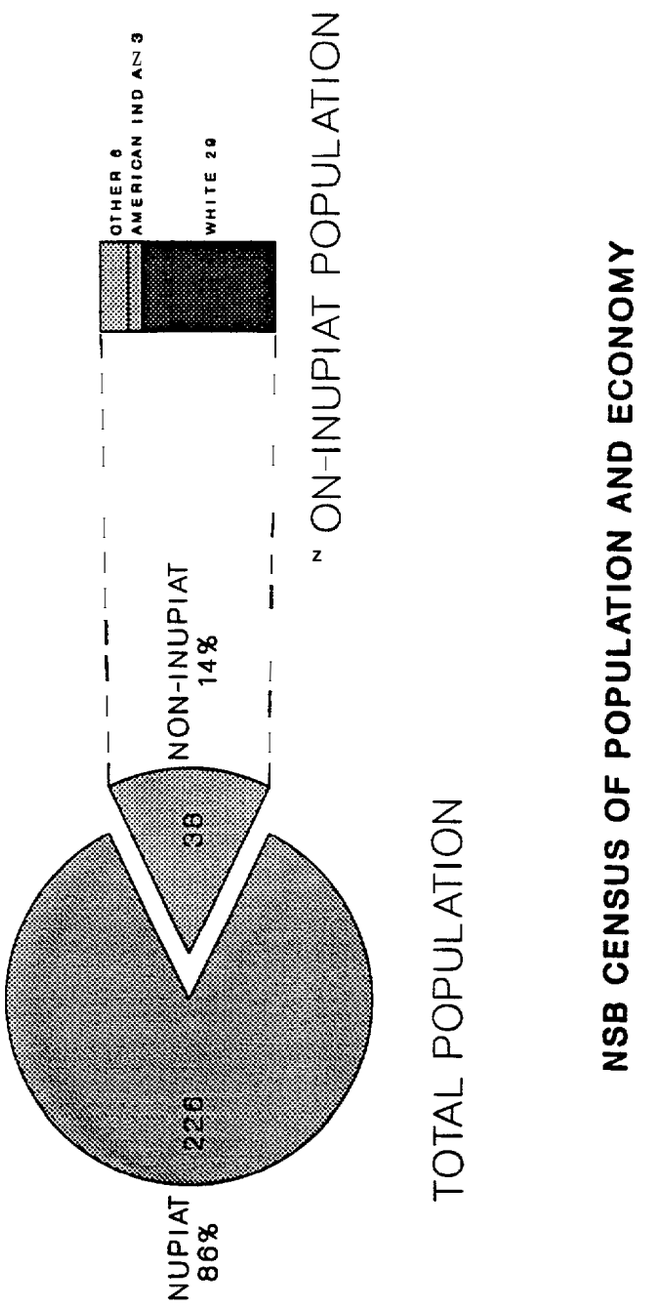


Figure **3-AKP**

Ethnic Composition of Population -1988
**Anaktuvuk** Pass



A second event that affected a major change in the population structure was the establishment of Anaktuvuk Pass as a permanent settlement in the early 1950s. The onset of sedentism coincided with a doubling of the crude birth rate between 1949-1954 (Binford and Chasko 1976:70). After the initial baby boom in the 1950s, the birth rate slowed. Between 1970-1977 the birth rate declined by more than 50% among North Slope Inupiat as a whole (Kruse et al. 1981:11). These changes had obvious effects on the age structure of the Native population. For example, the median age of Inupiat increased from 14 in 1%9 to 20 in 1977 (Kruse et al. 1981:23). This shift in the population structure has important implications for the relative size of the labor force in the community, the importance of which is discussed elsewhere. In general, the growth of the population in the age cohorts that correspond with the labor force is outstripping the availability of employment on the North Slope, and this is considered to be one of the major issues facing the Borough in the coming years.

In addition, migration to and from Anaktuvuk Pass was influenced considerably by the incorporation of the North Slope Borough (NSB) and the establishment of the Alaska Native Claims Settlement Act (ANCSA), which provided economic incentives for residency both in Anaktuvuk Pass and elsewhere on the Slope. In tandem, the formation of the NSB and the implementation of ANCSA contributed directly to the resettlement of Atqasuk, Nuiqsut, and Point Lay as permanent communities in the early 1970s and influenced growth in the smaller North Slope villages between 1970-1980 (Institute of Social and Economic Research [ISER] 1986:II-15). The influence of the incorporation of the NSB and the passage of ANCSA on cultural change and economics are still important in Anaktuvuk Pass today, as they are in all the villages of the North Slope.

Population size is also, of course, influenced by attitudes toward the desirability of having children. As is the case in other North Slope communities, children are generally much desired and are the focus of considerable attention and affection, with younger children receiving the lion's share. Although systematic research was not done, it is considered indicative of widely held attitudes that no Inupiat adult was ever heard to express the opinion that he or she would rather not have children. One adult male summed up what appear to be many people's attitude when he said, "Children are good to have. With them you never get bored."

## B. Household Size and Composition

### 1. Characteristics of Households

Before the advent of sedentism, the extended family household lived together in one tent (Gubser 1965:66-67). Traditionally and ideally this extended family consisted of a young couple living in the wife's family's household, although variation depended upon seasonal rounds (Gubser 1%5:66-67). A household typically remained together and cooperated economically while in the same band, but households did not necessarily remain a permanent unit when bands dispersed after the fall hunting season. Obviously, the extended family unit, or household, was the precursor to the contemporary type of household in Anaktuvuk Pass, the nuclear family household. It is important to note, however, that data do not now exist that show the relationship between the extended families of several decades ago and the current household relationships in the community, nor the influence of housing programs and structure type on the present residential arrangements.

*2.* Recent Trends in Household Size and Composition

With the establishment of a permanent village at Anaktuvuk Pass, nuclear family Native households dominated, but extended family members usually resided near each other in "household clusters" (Gubser 1%5). During the summer of 1960 Gubser (1965:347) recorded% Nunamiut camped in 28 tents at Anaktuvuk Pass. These tents comprised 18 households in which there were 15 conjugal couples. One can infer from the fact that there are more tents than households that people living in separate tents considered themselves to be from the same household -- thus the term "household cluster." In August 1%9, Binford and Chasko (197668) reported 21 households in Anaktuvuk Pass. Among them were 17 nuclear families, two extended families, one household with unmarried adults and their offspring, and one containing an adult with an unmarried brother.

The average size of Inupiat families living on the North Slope declined along with the birth rate between 1960-1970. In 1960 the average family was made up of 6.5 persons, and in 1970 the average family had about 6 persons. The composition of these families also changed with a shift in age structure. The average family in 1960 had more than half its members under 18 years of age; by 1977, in an average Native family, more than half the members were 18 or older (Kruse et al. 1981:23). In 1980 the average size of households among Natives in Anaktuvuk Pass was four persons. This average was calculated from a total of 46 Native households ranging in size from one to nine persons as depicted in Table 4-AKP (ACI 1981:89). In contrast, there were only 11 non-Native households in 1980, although their size was close to that of Natives, 3.6 persons (ACI 1981:90).

According to the 1989 NSB Census, there are presently 73 households in Anaktuvuk Pass. The 57 Native households range in size from one person to nine persons, although the majority contain two to four persons. These data confirm the trend toward nuclear family households. Non-Native households, on the other hand, contain between one person and five persons but most of the households (ten out of sixteen) contain just one person, a decrease from 1980 figures. These data are presented in Table 5-AKP. (As will be developed in a later section, the relatively small size of non-Inupiat households has implications for patterns of wage earning and sharing.)

Another characteristic of households in Anaktuvuk Pass, apparent in the early 1980s, was the unusually high cost of living to relative the median household income. The median household income on the North Slope was $31,378 in 1980. Anaktuvuk Pass's median household income was $25,455, about equal to that of the state of Alaska as a whole. However, because of the expense of importing goods and the high cost of living in Anaktuvuk Pass, the net purchasing power of its residents was less than that for the rest of Alaska and the borough (ACI 1983:14). Average household income distribution in Anaktuvuk Pass for 1980 is shown in Figure 4-AKP. Data from the 1989 NSB Census of Population and Economy on the number of households by ethnicity and income category are presented in Table 6-AKP. This table shows the decreasing percentage of households in the higher income brackets, with the largest cluster below $20,000 per year (35.2%) and the smallest cluster (12.7%) in the highest income bracket of $60,000 and above per year. Inupiat and non-Inupiat disparities in income are obvious from this table as' well. Forty percent of Inupiat households fall into the lowest income bracket while only 14% of the non-Inupiat households do; conversely, only 7% of the Inupiat households are in the highest income range while 36% of the non-Inupiat households fall into this range. It is important to note that non-Inupiat households are, on the average, much smaller than Inupiat households so that the relatively higher

incomes are distributed among fewer members within each household. It is also the case that non-Inupiat households, on the average, share less with other households. Given that non-Inupiat households tend not to be as committed to long-term residency as Inupiat households, the income that is earned by non-Inupiat households has very different implications for the long-range economic vitality of Anaktuvuk Pass.

Most of the housing currently in use in Anaktuvuk Pass is of recent origin. In fact, while sod-covered houses were common until quite recently, there is only one sod house still in use. It is owned by an individual who is not presently residing in the community and it is occupied by a single non-Inupiat resident. Once one of the larger homes in the community where village dances and other events were formerly held, it is now one of the smaller houses in Anaktuvuk Pass. It features timber framing with a sod outer shell. Few unoccupied sod structures remain in the village, although a handful in various states of repair are still utilized for storage. Clearly the housing programs available through the NSB have influenced spatial location of residents and household size, but the data are not readily available to examine this matter in detail. There is only one custom-built house in the community, with the rest being part of housing programs. (The one custom home, however, also resulted from government action. In this case the individuals had a house that was determined to be too near the airstrip and its facilities, and the federal government underwrote the construction of a new house for this family.)

It is the opinion of several of the village leaders that there is a shortage of housing in Anaktuvuk Pass. They cite the fact that there are young people with children of their own who are still living with their parents, and they want to move out on their own, but there is no new housing being planned. This has not meant that people are moving out of the village because of the crowding, nor that people are not coming back to the village who would otherwise be living there. According to these leaders, everyone who has wanted to move back to Anaktuvuk Pass is there now, with one known exception. There are no empty housing units in the community, whereas according to a village leader, "It used to be that there were one or two units available if people needed them." According to one man active in the affairs of the village, "The problem with housing now is that the Borough is saying there is no more housing available now, that what people will have to do is go out and get their own loans. There is no way that is going to happen . . . given the way things are now in the state anyway, what bank is going to want to give someone in a small village a long-term loan? Then what are they going to do if he defaults? The Borough would end up with the house anyway." This individual estimated that there is a need for about eight more housing units in the village to meet the needs of young people. Further, "this is at a time when the Borough is spending millions on a beach reclamation project in Barrow . . . that is not sitting too well here."

Table **4-AKP**

Age of Head of Household for
**Alaska** Natives*, Non-Natives**, and All Groups
**Anaktuvuk** Pass, June 1980

| Household size | 14-24 | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total |
| 1 person | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 2 | 5 |
| 2 persons | 0 | 0 | 0 | 2 | 1 | 3 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 1 | 6 | 1 | 7 |
| 3 persons | 3 | 0 | 3 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 3 | 1 | 0 | 1 | 8 | 2 | 10 |
| 4 persons | 0 | 0 | 0 | 7 | 1 | 8 | 3 | 0 | 3 | 3 | 1 | 4 | 0 | 0 | 0 | 13 | 2 | 15 |
| 5 persons | 0 | 0 | 0 | 3 | 1 | 4 | 4 | 1 | 5 | 1 | 0 | 1 | 0 | 0 | 0 | 8 | 2 | 10 |
| 6 persons | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 4 | 0 | 4 |
| 7 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 3 | 0 | 3 |
| 8 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 4 | 1 | 5 | 14 | 5 | 19 | 11 | 3 | 14 | 12 | 2 | 14 | 5 | 0 | 5 | 46 | 11 | 57 |

• For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.
• * Includes two units used as group quarters.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **5-AKP**

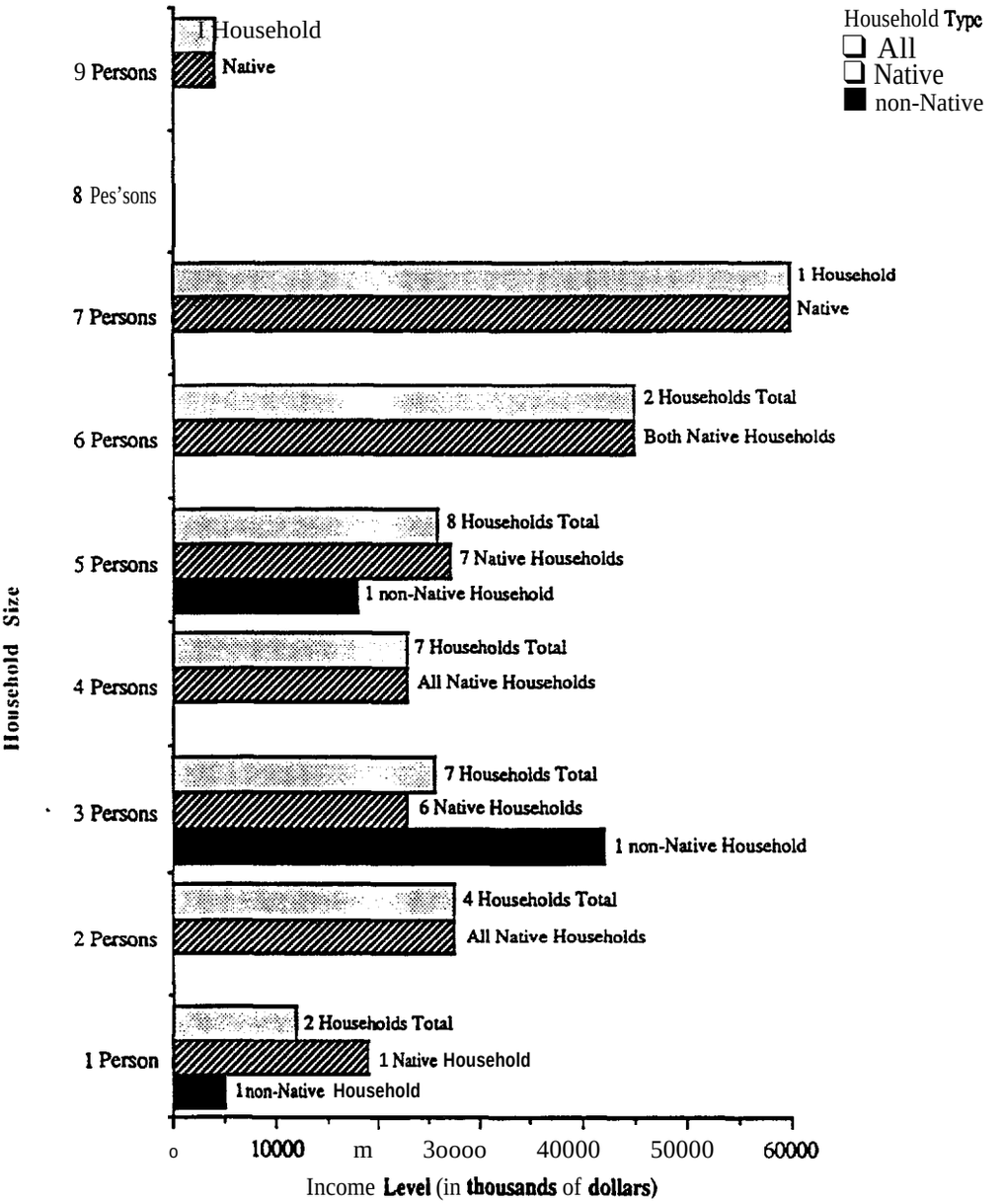
Household Size -1988
**Anaktuvuk** Pass

| NUMBER OF PERSONS | NUMBER OF HOUSEHOLDS: INUPIAT | NON. INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| 1 | 5 | 10 | 15 | 20.5% |
| 2 | 10 | 1 | 11 | 15.1% |
| 3 | 10 | 3 | 13 | 17.8% |
| 4 | 9 | 1 | "lo" | 13.7% |
| 5 | 8 | 1 | 9 | 12.3% |
| 6 | 8 | | 8 | ": 11.0% |
| 7 | 3 | | 3 | 4.1% |
| 8 | 2 | | 2 | 2.7% |
| 9 | 2 | | 2 | 2.7% |
| 10 | | | 0 | 0.0% |
| 11 | | | 0 | 0.0% |
| 12 | | | 0 | 0.0% |
| TOTAL OCCUPIED HOUSEHOLD | 57 | 16 | 73 | 1 00,0% |
| AVERAGE HOUSEHOLD SIZE | 4.1 | 1.9 | 3.6 | |

**Source: NSB Census of Population and Economy, 1989.**

Figure **4-AKP**

Average Household **Income** Distribution* ** ***
Native and non-Native Households by Household Size
**Anaktuvuk** Pass, July 1980




**Total Number of Households:** 32
Mean Household Income:
All: $26,184
Native: S26,652
Non-Native: S21.667

- Figures exclude 25 households (17 Alaska Native and 8 non-Native) for whom no income was obtained.
- * Includes two units used as group quarters.
- *** For purposes of the housing survey, the adult Alaska Native m combination Alaska Native/non-Native households was always designated head of household.

Source: Alaska Consultants, Inc., Norrh Slope Borough Housing Survey.
Prepared for the North Slope Borough Public Works Department. Anchorage, September 1980.

Table **6-AKP**

Household Income and Spending -1988
**Anaktuvuk** Pass

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 23 | 2 | 25 | 35.2% |
| $20,000 - $40,000 | 16 | 4 | 20 | 28.2% |
| $40,000 - $60,000 | 14 | 3 | 17 | 23.9% |
| $60,000 & ABOVE | 4 | 5 | 9 | 12.7% |
| TOTAL | 57 | 14 | 71 | 100.0% |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 2 |
| TOTAL OCCUPIED HOUSEHOLDS | 73 |

| | FOR ALL VILLAGE HOUSEHOLDS MEDIAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $35,282 | $32,500 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 60.0% | 58.0% |
| MONTHLY HOUSING PAYMENT (2) | $100 | $178 |
| MONTHLY HEATING COSTS | $170 | $198 |
| MONTHLY ELECTRICITY COSTS | $75 | $98 |

Notes: (1) For food, dotting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

*3.* Influences on Household Size and Composition

Historically, male absenteeism was one influence on household size and composition. However, the magnitude of its influence depends on the particular historical context. Before sedentism, when men would go away on hunting expeditions for up to six weeks during fall caribou migration, the economic impact of their absence was accommodated by the other household members (Binford and Chasko 1976:93). Following the establishment of Anaktuvuk Pass as a permanent settlement, male absenteeism took on more importance as sedentism coincided with the shift from extended family to nuclear family households in Anaktuvuk Pass. This shift to nuclear family households alone need not have been particularly noteworthy. It became important, however, after the discovery and exploitation of oil on the North Slope. It was directly because oil was discovered in large quantities that the NSB was formed and ANCSA was passed, and the resulting development changed most of the remaining traditional aspects of Nunamiut society. Individuals, particularly men in the early oil development years, could and would leave the village for jobs. In a nuclear family household, as opposed to an extended family household, the absence of one of the only two adults was an important change for the households of Anaktuvuk Pass.

Second, sedentism coincided with compulsory education, and the effect of having young adults and adults away at school must be considered as an influence on household size and composition. According to Cline (1975:18), "In 1968-69, 123 Nunamiut considered Anaktuvuk Pass home. Of this number 18 were absent from the village at least 9 months. There were the 14 high school students and 4 men attending trade school in Illinois and California." Today, of course, there is a high school in the village and students remain in Anaktuvuk Pass through their high school years. Few individuals pursue post-secondary education outside of the community (see section on education).

As noted above, housing in the community which, to a large degree, influences household size, has in recent years been a function of NSB-administered housing programs. In other words, while economics may influence household size to a degree, the presence of affordable housing is a function of the political process. Politics on the Borough level influences household conditions in Anaktuvuk Pass to a marked degree. There is some evidence that sociocultural factors are influencing changes in household size over time as well, although there are difficulties with this. Clearly, where extended families lived together in the past, the nuclear family unit is now the stated household preference of residents of Anaktuvuk Pass. Unfortunately, it is unknown to what degree household size in the past was a function of preference or economy. Confounding this further is the fact that sedentism is relatively recent for the Nunamiut, which renders attempts to address long-term changes impossible.

The following table (Table 7-AKP) presents information on Anaktuvuk Pass household characteristic in 1988. In this table, household size is correlated with a number of different descriptive characteristics, and there are several important associations. For example, under average income in Inupiat households, the larger the household, the higher the average income. The opposite is true for non-Inupiat households -- the smaller households, on the average, have higher incomes. For Inupiat households, it would appear that more household members corresponds to more wage earners, and small households are likely to contain young children. For non-Inupiat households, on the other hand, small households are likely to be composed of only wage earners, and the relatively larger households are likely to contain children.

Table **7-AKP**

**Anaktuvuk** Pass Household Characteristics- 198S
By Categories of Household Size

| | HOUSEHOLD SIZE | | | |
|---|---|---|---|---|
| | SMALL | MEDIUM | LARGE | ALL HHs |
| **Average HH Income** ($): | | | | |
| Inupiat HHs | $24,600 | $34,300 | $42,857 | |
| Non-Inupiat HHs | $55208: | $35,000 | | |
| All HHs | $34,527 | $34,352.. | $42,857 | $35,282 |
| Cases: | 37 | 27 | 7 | 71 |
| **Average HH Size** (# persons per HH): | | | | |
| Inupiat HHs | 2.2 | 5.0:.:.. | 7.9 | |
| Non-Inupiat HHs | 1.5 | 4.5 | | |
| All HHs | 1.9 . | 4.9".: | 7.9" | 3.6 |
| Cases: | 39 | 27 | 7 | 73 |
| Average Meat & Fish Csmptn from Own HH Subsistence (%): | | | | |
| Inupiat HHs | 33.6% | 40.2% | 67.1'% | |
| Non-Inupiat HHs | 8.5% | 40.0% | | |
| All HHs | 25.0% | 40.2% | 67.1% | 34-6% |
| Cases: | 3a | 27 | 7 | 72 |
| Average Meat &Fish Csmptn from Other HH Subsistence (%): | | | | |
| Inupiat HHs | 33.0% | 34.2% | 4.3% | |
| Non-Inupiat HHs | 7.s%": | 0.0% | | |
| All HHs | 24.4% | 31.7% | 4.3% | 25.2% |
| Cases: | 36 | 27 | 7 | 72 |
| **Average** Meal & Fish Harvested end Given Away (%): | | | | |
| Inupiat HHs | 17.0% | 21.2% | : 20.0% | . |
| Non-Inupiat HHs | 2.5% | 25.0% | | |
| All HHs | 121% | 21.5% | 20.0% | 16.4% |
| Cases: | 38 | 27 | 7 | 72 |
| Average Proportion HH Income Spent in Wage(%): | | | | |
| Inupiat HHs | 60.4% | 68.8% | 81.4 . . . . | |
| Non-Inupiat HHs | 20.8% | 45.0% | | |
| All HHs | 46.5% | 67.0% | 81.4% | 57.7% |
| cases | 37 | 27 | 7 | 71 |

Notes: Household size categories measured as follows:
SMALL: Under 4 persons per household
MEDIUM: 4-6 persons per household
STRONG: 7 or more persons per household.
Total cases (households). 73.

Source: NSB Department of Planning and Community Services
Census of Population and Economy

From the same table, one can also see that the larger the household, the higher the average meat and fish consumption from that household's own subsistence activities. For Inupiat households, small households average 33.0%, medium households 40.2%, and large households 67.1 %. It is apparent that large households rely more heavily on subsistence to make ends meet than do other households. For non-Inupiat households, of the meat and fish they consume, only 8.5% comes from their own subsistence activities, while for medium-sized households (the largest non-Inupiat households in the community) this figure is 40%. These figures are consistent with the interpretation that small non-Inupiat households are composed primarily of wage earners and are likely to be oriented exclusively toward those activities. The larger households are likely to be more like their Inupiat counterparts in structure and, in fact, when one compares the "own subsistence consumption" figures for medium-sized Inupiat and non-Inupiat households they are virtually identical (40.2% and 40.0% respectively).

### c. Educational Status

#### 1. Current Educational Levels

In 1981 the "median years of education among North Slope Eskimos ages 25 and over doubled between 1960 and 1977, moving from less than 4 years to 'nearly 9 years. Younger Eskimos had much higher levels of education than older Eskimos. .:. While more than 70% of adults 35 and older had less than 8 years of education in 1977, 70% of those 18-34 had graduated from high school" (Kruse et al. 1981:11, 24). It also appears that women received more years of education than men did which represented a reversal of earlier trends. "While 70% of women 18-24 had at least graduated from high school by 1977, only 55% of men of the same ages had graduated from high school" (Kruse et al. 1981).

The trend in 1989 is similar. Among all Anaktuvuk residents, 74.5% between 18 and 39 yearn of age had at least finished high school. For those older than 39 years, only 41.1% had completed high school (NSB Census 1989:Table 8-AKP).

#### 2. Social and Ethnic Differences in Educational Levels

It should be noted that Table 8-AKP combines information for short- and long-term residents. That is to say, the educational figures do not accurately represent either the educational status of long-term residents in the community or the end results of educational opportunities available in the village. The table includes, for example, the educational levels attained by professionals who are hired to work in the village but who do not necessarily stay in the village more than a few years, such as the teachers and school administrator. These individuals received their formal education outside of the village and typically they do not raise children in the community who then go through the village-based educational system. In other words, there are no individuals present in Anaktuvuk Pass who received their secondary education in the community, left the community and completed post-secondary education, and returned to the community. Indeed, there are few children in the village who have parents who have completed post-secondary education.

### *3.* Education and Employment Opportunities

An Anaktuvuk Pass schoolteacher in the early 1970s observed that because "most Nunamiut under twenty years of age can read, write, and speak English, they are able to travel, complete business transactions, and secure employment if they so desire" (Cline 1975:178). However, the experience of many Natives has shown this to be an oversimplified observation. Obtaining desired employment today, particularly employment outside of the community, requires much more than English language skills.

## D. Marriage Patterns

### 1. Characteristics of Marriage

Little information is available on characteristics of marriage in Anaktuvuk Pass. In the early 1970s, girls reportedly exhibited an interest in marrying individuals from outside of the village. According to Cline, twice during his two-year stay Native women married non-Native men, and, in general, women showed interest in marrying more acculturated Inupiat men than were available in the village (Cline 1975). This suggests a trend of increasing numbers of women marrying out of the village. However, recent data on interethnic marriage is not complete since people who leave the village because of marriage are lost from the data base

Table 9-AKP, titled "Marital Status by Ethnicity," presents data on marital status in Anaktuvuk Pass for 1988. This table shows that 41.3%, 52 out of 60, of Inupiat over 16 years of age are married in contrast 66.7% of non-Inupiat. The higher percentage of non-Inupiat married persons compared to Inupiat in Anaktuvuk Pass is consistent with the population composition of the non-Inupiat population. The non-Inupiat living in Anaktuvuk Pass are for the most part working age adults. Those who live in the community on a permanent basis are almost all married. There are very few pre-working age non-Inupiat or post-working age non-Inupiat adults persons in Anaktuvuk Pass -- the segments of the population that fall on either end of the prime married age cohort. It should be remembered that this table does not include adults "living together" in a stable relationship that resembles formal marriages.

When non-Inupiat residency patterns are examined, there are two main categories of non-Inupiat residents. One category is composed of teachers and Public Safety Officers; the second category is composed of all others. Within the "all others" category, every non-Inupiat resident of the community is married to an Inupiat individual, with the only exception being an unmarried individual. Within the "teachers and PSOS category," one of the PSOS was unmarried and the other was married but his spouse was not resident in the community at the time of field research; those teachers who did not live alone were the only non-Inupiat couples resident in the village.

Table **8-AKP**

Highest **Level** of Education Attained by Age Group
**Inupiat Residents: Anaktuvuk** Pass -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | 1 | 24 | 1 | 26 |
| 4 - 8 | | | | | | 35 | 4 | | 39 |
| 9 - 15 | | | | | | 31 | | | 31 |
| 16 - 17 | | | | | 1 | 6 | | | 7 |
| 18-25 | | 1 | 1 | 16 | 9 | 3 | | 1 | 31 |
| 26 - 39 | 1 | 4 | 0 | 32 | 6 | | | 2 | 45 |
| 40 - 59 | 0 | 1 | 2 | 8 | 23 | | | 3 | 37 |
| 60 - 65 | 0 | | | | 3 | | | 1 | 4 |
| 66 + | | | | | 3 | | | | 3 |
| TOTAL | 1 | 6 | 3 | 56 | 45 | 76 | 28 | 8 | 223 |
| % | 0.4% | 2.7% | 1.3% | 25.1% | 20.2% | 34.1% | 12.6% | 3.6% | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | | | 4 |
| TOTAL POPULATION (Inupiat) | | | | | | | | | 227 |

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Table **8-AKP** (continued)

Highest Level of Education Attained by Age Group
**Non-Inupiat** Residents **Anaktuvuk** Pass -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | | | 1 | 1 |
| 4 - 8 | | | | | | 4 | | | 4 |
| 9 - 15 | | | | | | 2 | | | 2 |
| 16 - 17 | | | | | | | | | 0 |
| 18-25 | | | | 1 | | | | | 1 |
| 26-39 | 5 | 3 | 1 | 5 | 3 | | | | 17 |
| 40 - 59 | 8 | | | 3 | | | | | 11 |
| 60 - 65 | 1 | | | | | | | | 1 |
| 66 + | | | | | | | | | 0 |
| TOTAL | 14 | 3 | 1 | 9 | 3 | 6 | 0 | 1 | 37 |
| % | 37.8% | 8.1% | 2.7% | 24.3% | 8.1% | 16.2% | 0.0% | 2.7% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 0

TOTAL POPULATION (Non-Inupiat) 37

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1939.

2. Changes in Marriage Patterns

According to Cline, marriage patterns have been greatly affected by education. Women who have had a formal education have more alternatives open to them in terms of what age they decide to marry and whom they marry (Cline 1976181). Men and women have been delaying marriage, resulting in increasing numbers of single men and women in the village. In addition, there appears to be little or no social pressure on young people to marry, even if pregnancy or the birth of a child occurs. This should not be taken to mean, however, that there is not considerable social pressure to form exclusive, even if short-lived, relationships. As has been noted in field research in other villages, it is difficult for an adult to maintain "casual" relationships with one or more individuals of the opposite sex in the village. Given the size of the community, there is little privacy in relationships, and there appears to be considerable peer pressure toward the establishment of monogamous, if not formalized, relationships.

## E. Migration Patterns

1. Characteristics of Migration

In the contemporary village of Anaktuvuk Pass "traditional" seasonal migration, as described above, no longer exists. Seasonal migration was an economic necessity when the Nunamiut were nomadic hunter-gatherers. By the early 1970s, except for fighting forest fires which required men to leave the village for a month or so at a time, people were no longer typically required to leave the village for economic reasons (Cline 1975:24). Today, few if any people leave the village out of perceived economic necessity.

Recent migration statistics specifically for Anaktuvuk Pass do not exist. However, for the North Slope as a whole, about eighty-five more Inupiat moved to the area than moved away between 1970 and 1977 (Kruse et al. 1981:21). Many of those returning to the North Slope to live were young adult males who had lived away from the area in 1970 but had returned by 1977 (Kruse et al. 1981:21). Also, among young adult Inupiat 18-24 years old, women were just as likely, or more likely, to have lived outside the North Slope region as men. This trend differs from Inupiat over 35 years old who were much more likely to have lived outside of the North Slope if they were male (Kruse et al. 1981:25).

It is interesting to note the results of a survey conducted by Alaska Consultants, Inc. which asked Native heads of household of Anaktuvuk Pass if they would prefer to live in a different village in the North Slope. Of 46 Native heads of household questioned, only three reported a preference for a different village (ACI 1981:129).

Table **9-AKP**

Marital Status by **Ethnicity** -1988
**Anaktuvuk** Pass

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| NOW MARRIED | 22 | 30 | 52 | 14 | 6 | 20 | 72 | 46.2% |
| WIDOWED | 1 | 7 | 8 | | 1 | 1 | 9 | 5.s% |
| DIVORCED | 3 | 2 | 5 | | 1 | 1 | 6 | 3.6% |
| SEPARATED | 1 | | 1 | 1 | | 1 | 2 | 1.3% |
| NEVER MARRIED | 35 | 25 | 60 | 6 | 1 | 7 | 67 | 42.9% |
| TOTAL | 62 | 64 | 126 | 21 | 9 | 30 | 156 | 100.0% |
| % | 39.7% | 41.0% | 60.8'% | 13.5% | 5.8% | 19.2% | 100.0% | |

NUMBER OF MISSING OBSERVATIONS 1

TOTAL POPULATION (age 16+) 157

Note: Figures include persons age 16 and above,

Source: NSB Department of Planning and Community Services
Census of population and Economy, 1969

### 2. Influences on Migration Patterns

According to Kruse et al. (1981:25), "Most men and women who lived off the North Slope at some time before 1977 reported they had been going to school, getting job training, or working." Education may also affect migration patterns indirectly as out-of-village marriage becomes more frequent. There is little evidence for economic influences on migration in Anaktuvuk Pass. Even though it was reported in the field that there have been difficulties adjusting expenditures and expectations to a decline in household income associated with decline of the NSB CIP program, people are reported not to have left the village to seek employment. At the time of field research (March 1989), there were only two individuals from Anaktuvuk Pass reported working at industrial sites on the North Slope, and both of these individuals were working at Prudhoe Bay. Due to the fact there are no large-scale construction projects at present in the village, there are no individuals who have recently moved to Anaktuvuk Pass for employment. Occasionally, contractors and NSB personnel come to the village on a short-term basis for temporary employment associated with specific projects or programs, but these individuals do not consider themselves residents, nor are they considered as such by residents. In fact, there are individuals in the village at the present time who are desirous of employment but who cannot obtain it in the village, but nonetheless remain in the village due to the strength of their ties to the community, or their perceived lack of alternatives outside of it. Marriage is also a consideration in emigration and immigration decisions. As noted above, long-term non-Native residents of the community, outside of teachers and Public Safety Officers, are either married to Inupiat spouses or are lineal kin of someone married to an Inupiat spouse, with but a single exception. In other words, non-Native individuals who are working in job categories other than those that are exclusively filled by non-Natives are "married into" the village, again with a single exception. Only one non-Inupiat individual is known to have "married into" Anaktuvuk after having spent a significant amount of time in another North Slope village, whereas there are several cases known of a Inupiat individuals "marrying into" Anaktuvuk from other North Slope villages.

Subsistence activities do not affect migration patterns as they did before Anaktuvuk Pass became a year-round village. The present practice of subsistence hunting differs from traditional migrations insofar as Anaktuvuk Pass is now the hunter's permanent home as opposed to a temporary base camp. Men do, however, continue to leave the village for hunting expeditions. It would be more appropriate to term these forays hunting trips or seasonally differentiated subsistence land use patterns rather than "migration." Anaktuvuk Pass residents do travel on different parts of the land at various times of the year for a variety of fish and game resources, but today, of course, the village itself (or its component social groups) does not move.

### 3. Community History

Before the early 1900s the Nunamiut, or "inland," people lived as nomadic hunters and gatherers, depending primarily on caribou for their survival. (Although the use of the term "Nunamiut" has become conventional, Burch [1976] makes a strong case for abandonment of its use as a cultural or geographical identifier of Inupiat people who live "inland" - or at minimum not on the coast. Inupiat words ending in "miut" only make sense (to the Inupiat) vis-a-vis the speaker's or someone else's location. This means that who or what group is identified as "Nunamiut" changes depending

on the context. Anthropologists' use of the term has always been in reference to a fixed point in space such as latitude, longitude, or a mountain range and is thus not relative to anything variable, such as the speaker. Because conventional use of "Nunamiut" does not correspond to that which the Inupiat use, Burch suggests we drop it. Instead, he suggests we refer to the people based on our own system of defining them, such as the location of the village. However, for the sake of consistency, the term Nunamiut will be applied in this report to the present-day residents of Anaktuvuk Pass or their ancestors.) The ancestors of residents of Anaktuvuk Pass numbered perhaps 1,500 throughout the entire Brooks Range area living in bands consisting of 50 to 150 closely related people (Spearman and Calkins 1982:4). "A band was composed of several households, the members of which resided together in a recognized hunting territory and traveled and camped as a group on trading expeditions to other regions" (Gubser 1965:165). Beginning in the early 1900s the caribou population declined dramatically (Hall et al. 1985:4, Spearman and Calkins 19828). This, coupled with the impact from diseases brought by increasing numbers of non-Native traders and miners, triggered a major exodus to the coastal communities of northern Alaska (Spearman and Calkins 1982:9). Schrader (190433) recorded 100 Natives on the upper Koyukuk and 35 near the south fork of the Koyukuk in 1900. In 1901-1902 he reported that about 200 non-Native miners and prospectors had migrated to the area from the Yukon territory and that number increased to 350 in the year 1903-1904.

When the fur market collapsed and trading posts closed along the coast in the mid-1930s, the Nunamiut people were able to migrate back to their former inland ranges because these economic changes were coincident with increasing animal resources in the area. By the 1940s there were at least three year-round populations that had resumed the nomadic way of life in the Brooks Range (Hall et al. 1985:4, Spearman and Calkins 19S211).

In the early 1950s Anaktuvuk Pass was transformed from a base camp into a permanent village (Spearman and Calkins 1982:15). (The reasons for this are described below in the section entitled "Influences on Population Size and Structure"). A population census of Anaktuvuk Pass has been taken fairly regularly since 1960 at which time there was estimated to be 35 permanent Native residents (Institute of Social and Economic Research 1986:II-ll). In 1970 there were 99 residents in Anaktuvuk Pass.

Based on Amsden's (1977) work, Hall and associates (1985:51-74) formulated an alternative perspective on Anaktuvuk Pass prehistory and history. They have reviewed the settlement patterns of the ancestors of the people presently living in Anaktuvuk Pass by examining distinct time periods in the Anaktuvuk Pass Inupiat settlement history. These categories are the prehistoric period (prior to A.D. 1860), the protohistoric period (1860-1890), the historic period prior to the removal to the crest (1890-1920), the coastal hiatus period (1920-1934), the return years (1934-1949), and the settlement period (including the early years -- 1949-1960- and the period of mechanization, 1960-1984). These periods will be summarized below because they comprise a clearly articulated and comprehensive synopsis of Nunamiut history.

*The prehistoric period (prior to 1860).*

The scant archaeological evidence indicates that the northern Alaska interior was occupied at Tukuto Lake in the Etivluk River drainage from A.D. 1000 until well after 1400. After 1400, new

immigrants entered the western Brooks Range from the southwest. The Inupiat bands moved through the area from the west to the east. The eastern Brooks Range Valleys where Anaktuvuk Pass is located was rarely occupied until after the mid-1800s.

*The protohistoric period (18601890).*

This period refers to the time the immediate ancestors of the Anaktuvuk Pass Inupiat people began to occupy the eastern Brooks Range until 1890. Although only one party of non-Natives is known to have reached the central Brooks Range by this time, the Nunamiut were nevertheless affected by ideas and events that occurred on the coasts with missionaries, non-Native explorers, and whalers through trade.

*The historic period prior to the removal to the coast (1890-1920).*

This period is marked by a drastic decline in the caribou population which had always been the Nunamiut's primary source of subsistence. Indeed, caribou were necessary to enable much of the area used by the Nunamiut to be occupied. There was general hardship during this period and many people in the area starved. Also during this period diseases such as measles and influenza brought by non-Native traders on the coast killed many Natives. It is likely that the population dropped in the inland area from 1,400 people during the prehistoric period to as few as 200 by the beginning of the twentieth century (Hall et al. 1985:63). By 1920, none of the region's subsistence resources were being used as most of the inland peoples had migrated to the coast (Hall et al. 1985:64).

*The coastal hiatus period (1920-1934).*

Some of the families that abandoned the interior after the shortage of subsistence resources moved away permanently to Wainwright, Barrow, and other coastal villages. Some moved far east into the Canadian Arctic. The families that later repopulated the interior spent the coastal hiatus period in the Colville River delta.

During the late 1920s and early 1930s several men travelled deep into the interior of the Brooks Range and returned reporting sightings of "...plentiful caribou herds and many foxes, wolves, and wolverines to trap" (Spearman and Calkins 198242-43). This report prompted the resettlement of the interior Brooks Range.

*The return yearn (1934-1949).*

The return began with only four families, but this was augmented by two others in 1939. Trade increased during this period as airplanes began to frequent the northern interior. Some Native camps were even relocated to be near suitable landing areas. However, hunting caribou and the mobility this way of life required resumed its importance in the lives of the Nunamiut (Hall et al. 1985:66).

*The settlement yearn - the early period (1949-1960).*

During the early years of settlement contact occurred only when some Inupiat family(ies) happened to be camped near Anaktuvuk Pass when scientists or others were there. In the summer of 1948 a school teacher spent a couple of months among the families who were camped at Tulugak Lake, affording the Nunamiut their first opportunity to attend classes taught in English. However, the initial settling of the Inupiat people in Anaktuvuk Pass was a pragmatic decision related primarily to their desire for contact with the outside world (Hall et al. 1985:67).

During the winter of 1949-1950 a non-Native trapper/trader built a small cabin and store at the site of present-day Anaktuvuk Pass where he sold tea, sugar, salt, flour, ammunition, candy, and soda pop during the summer months (Spearman and Calkins 1982:14). In 1951, a permanent post office was built which marked the official establishment of Anaktuvuk Pass as a village (Hall et al. 1985:67). However, only the postmaster's family actually lived in Anaktuvuk Pass on a year-round basis at this time. In 1958 Presbyterian missionaries from Barrow helped start a church at the pass. This church doubled as the school building until a permanent school building was constructed and full-time teachers arrived in 1960 (Spearman and Calkins 198215). Air traffic into Anaktuvuk Pass increased and gradually families began to build more permanent structures and spend winters there.

*The mechanization period (1960-1984).*

This period is marked by the initiation of classes in the new school building and the introduction of all-terrain vehicles (ATVs) and snowmobiles into the subsistence practices of the residents of Anaktuvuk Pass. The discovery and exploitation of petroleum in the North Slope also occurred during this time which served to cement the shift from a system of economic exchange based on social relationships to one based on money (Hall et al. 1985:63). Although the people of Anaktuvuk Pass adapted to a sedentary lifestyle, they maintained their traditional hunting practices and knowledge of the land.

The Anaktuvuk Pass of 1989 remains in the mechanization period as defined by Hall. The inland location of Anaktuvuk Pass makes it unique among contemporary North Slope villages. It is a village that is supplied exclusively by air with those resources that are not obtained locally. The orientation toward terrestrial resources is also unique among the contemporary villages.

## **SECTION II:** ECONOMY

### **A.** Historical *Overview*

#### 1. Early Contact

The economic impact of early contact on the ancestors of the Anaktuvuk Pass Inupiat was via the coast, where the goods brought by non-Native explorers and whalers, such as ammunition, salt, coffee, tea, and flour reached the inland peoples through trade (Hall et al. 1985:62). Indirect contact through trade began as early as the eighteenth century with Russian fur traders coming from across the Bering Strait. Later trade contacts sometimes provided the Nunamiut with a source of income in hard times. Importantly, when the "caribou crash" occurred around 1900 and traditional subsistence methods were curtailed, the commerce on the coast attracted the Nunamiut and provided alternative economic means.

#### *2.* Post-War Economy

The time surrounding World War II was one of relative economic strength and resource abundance compared to the preceding era of caribou shortages and starvation. The difficult period that had forced most Nunamiut to the coast had ended in the mid-1930s and people were returning to their traditional hunting areas. By 1949, the inland Inupiat families included 74 individuals (Binford 1978:321). Air traffic had increased to various inland sites. This greatly facilitated trading for necessities because the Nunamiut were no longer required to make the long journey overland to the coast (Hall et al. 1985). The majority of Nunamiut, however, centered their subsistence activities on the Killik River drainage until, as discussed above, the establishment of a post office and a school at Anaktuvuk Pass, in 1950 and 1951 respectively, provided the catalyst for the growth of a year-round village.

#### 3. ANCSA and Its Effect on the Regional Economy of the North Slope

The Alaska Native Claims Settlement Act was set in motion in 1970 by the discovery of oil in Prudhoe Bay. However, prior to that time "...Native groups across Alaska had begun asking the federal government to award them title to lands they had historically used for hunting and fishing; these land claims had been instigated in part because of land transfers the federal government had begun making to the newly formed state government of Alaska" (Kruse et al. 1981:1). The negotiations on the land claims were unresolved at the time of the Prudhoe Bay discovery. But with the discovery came plans for an overland pipeline that would carry North Slope oil south to the port of Valdez, at the opposite end of the state (Kruse et al. 1981:2). Because state and federal leaders were anxious to initiate construction of the pipeline, settlement negotiations with the Natives were expedited. In 1971, under the Alaska Native Claims Settlement Act, Alaska's Eskimos, Indians, and Aleuts were awarded 44 million acres and nearly $1 billion. The act also called for establishment of Native-owned regional and village corporations throughout the state to manage this land and money. The North Slope Inupiat were awarded 5.6 million acres and $52 million as their share of the settlement, and the Arctic Slope Regional Corporation (ASRC) and

individual village corporations were established to manage Inupiat money and land (Kruse et al. 1981:2). In Anaktuvuk Pass, the Nunamiut Corporation was formed as the village corporation.

4. The North Slope Borough

The North Slope Borough (NSB) is the North Slope's regional government representing eight villages scattered over 88,000 square miles. The discovery of oil at Prudhoe Bay was the "cause" for the formation of the NSB; ANCSA was indirectly responsible for the formation of the borough in that it cleared the way for oil development. The NSB had more money at its disposal and was able to supply many more jobs than was the ASRC. Because the NSB'S jurisdiction included Prudhoe Bay it was able to collect taxes sizable enough to take over public services that had formerly been provided by the state and federal governments. The NSB "...started construction of new schools, houses, utility systems, airports, and roads in those villages -- and in the process created hundreds of jobs in government administration and on construction projects" (Kruse et al. 1981). The creation of these "hundreds of jobs" is very significant. As can be seen in the tables from the 1989 NSB Census, the NSB directly accounts for about 64.4% of the total employment in Anaktuvuk Pass (Figure 5-AKP, presented below). It is important to keep in mind that the Borough also accounts for a great deal of the other employment in the village, if indirectly. For example, in many sources "construction" employment is listed as private sector employment for the North Slope villages. While these individuals may be employed by the village corporation, a 'private" firm, the governmental ties should be recognized. First, the local corporations were created as the result of political, not economic forces. Second, local Native corporations are given preferential treatment in the awarding of Borough-related construction contracts. Third, virtually all construction projects in the communities are Borough-related if not directly Borough funded.

B. The Public Sector

1. Organization

The public employment sector is organized into three levels: federal, state, and local government. Federal government employment in Anaktuvuk Pass in 1980 was with the U.S. Geological Survey in 8 out of 9 cases (ACI 1981:25). State-level employment is not specifically described in any of the published literature prior to the 1989 NSB Census. However, employment by the state is practically non-existent. Local governmental jobs fall into three categories: NSB general government, NSB school district, and NSB construction. The following table, Table 1O-AKP, describes the industry composition of employment by sex and ethnicity in Anaktuvuk Pass in 1988. The influence of government and government-related employment is apparent when one includes Native Corporation and construction jobs under "government-related." Calculating the figures in this reamer, the proportion of jobs that are non-government or non-government-related drops to 11% (15 out of a total of 132 jobs in the community). In fact, an argument could be made that there is, effectively, no private sector employment in Anaktuvuk Pass when one considers the degree of subsidization of most businesses. For example, one may consider the agents for the air carriers in Anaktuvuk Pass to be clear examples of persons who are employed in the private sector. On closer examination, however, it is clear that the only way it is possible for there to be as many air carriers as there are serving Anaktuvuk Pass (three passenger carriers with four flights per day,

plus freight carriers) is due to the subsidies provided by carrying mail. Each carrier receives a portion of the federal mail contract, and this allows carriers to stay in business on routes, such as Anaktuvuk Pass, that would otherwise not be profitable. Were it not for this federal contract the positions of agents in the village would not exist, for at least two of the three main carriers.

There are some individuals in Anaktuvuk Pass who believe that commercial quantities of natural gas have been found near the community, and that development of this resource would be of great economic benefit to the community. One particularly vocal individual suggested that a major problem with the economy in the community is the high cost of "fuel oil that everyone is burning to heat the houses that the Borough forced down our throats. Piping the gas here would be no problem. It would be a capital improvement, it would create jobs, and it would address the high cost of energy in the village."

## 2. Employment

According to Kruse et al. (1981:35) the largest employer of Natives in the North Slope between October 1976 and September 1977 was the NSB, which employed 52% of the Inupiat workers 18 and over in Anaktuvuk Pass. The next highest employer during the same year was the Arctic Slope Regional Corporation with 19% of the Inupiat workers 18 and over. Three out of four Inupiat men who had jobs between October 1976 and September 1977 worked as construction laborers, heavy equipment operators, carpenters, and in other skilled and unskilled blue-collar jobs largely associated with construction projects (Kruse et al. 1981:36). The construction boom was part of the massive regional construction program that began to take place in 1975 as part of the Capital Improvements Program.

Women, in contrast, held few construction jobs. Their employment in the public sector was usually clerical or service-related. However, women also took up professional and technical jobs with the NSB where they worked as planners and accountants. These types of jobs are at variance from those that women had prior to 1977, especially in the 1960s, when they were employed primarily as school cooks, health aides, or in other service-related work. The percentage of women in the work force increased from 4% in 1960 to 54% in 1977. It is also interesting to note that although a greater percentage of all men worked, women worked more months during the year between October 1976 and September 1977 --7 months versus 8.5 months (Kruse et al. 1981:37). This statistic is a reflection of the nature of the jobs held by men and women. Men typically worked seasonally in construction jobs while women worked in administrative or service jobs.

In July 1980, 80 individuals were employed explicitly in the public sector as shown in Table 10-AKP. Fifty-seven of those were Native and 23 were non-Native. Of the 57 Natives employed in the public sector, one was employed by the federal government, none were employed by the state of Alaska, and 56 were employed by the local government. The non-Native population had eight persons employed by the federal government, one employed by the state, and 14 employed by local government (ACI 1981:23). The local government was the major employer in Anaktuvuk Pass, employing 72.5% of the total population. This was followed by contract construction (which may or may not be considered governmental as discussed below in C.2), employing 9.8% of the total population (ISER 1986:E-18). (The figures provided by ACI vary substantially from those provided by the 1980 Census Data, Census Tape STF3A, Table 67 as shown on page E-15 of the ISER 1986

document. The ISER document recorded a total of 30 (Native and non-Native) persons, as compared to 80 in the ACI data, working in the public sector.)

Table 11-AKP, which lists composition of employment by age, race, and sex indicates that in 1980 28.6% of employed Natives versus 7.7% of employed non-Natives were in the age category between 15 and 19 years. This may reflect differences in the types of jobs held by Natives and non-Natives. Natives held the blue-collar jobs that required little education, implying that many young adult Inupiat are in the work force. In contrast, non-Natives held the jobs that required some years of education and preparation -- hence their older average age.

Table 12-AKP "Industry Composition of Employment by Sex and Ethnicity" clearly shows that the economy of Anaktuvuk Pass is largely supported by NSB subsidies as 64.4% of all employment is NSB-related. There is a seasonal fluctuation in employment in Anaktuvuk Pass that coincides with the construction season, even in the absence of major employment associated with CIP projects. In addition, employment is not randomly distributed by ethnicity.

There is also a differentiation of non-Native employment by length of residence. As noted in the population section, all non-Native individuals who are employed in positions other than at the school or as Public Safety Officers, with one exception, have married into the village, or are lineal kin of someone who has married in the village. Four of these long-term resident individuals do work in NSB jobs, one is a federal employee, and one works for the Nunamiut Corporation.

It might be expected that some employment in the village would derive from National Park Service activities, but this is not the case, at least to any significant degree. According to all informants asked in the village, tourists coming to the Gates of the Arctic National Park spend virtually no money in Anaktuvuk Pass. The National Park Service seldom has employees in the village, and when they do, they are not local people but rather individuals who rotate through the community in the summer season. Numerous tourists do visit the museum in the community, and although there is no admission charge, many do make a donation during their visit. Tour operators do not pay the museum on a formal basis either.

All individuals asked in the village reported that there are not enough jobs in the community. Those in local government indicate that there are no firm plans to bring more employment to the village, although it is assumed that there will be sporadic construction employment associated with NSB projects for the foreseeable future. This construction-related employment is on a much smaller scale than was seen with the CIP program. By the time of field research in March 1989, all of the major capital improvement projects in the village had been completed. The only individuals working in the community were those with permanent jobs, and none of those jobs were in construction. There were a few individuals who were working in jobs classified as temporary under the Mayor's Job Program (MJP), but those jobs were expected to be reclassified as permanent positions and fully funded through the NSB in the near future. In March 1989 there were seven such jobs in Anaktuvuk Pass, including four positions associated with the housekeeping program. It was expected that with the coming summer construction season, construction jobs with the Rural Employment and Living Improvements (RELI) program would restart.

**Figure 5-AKP**

Population, Labor **Force,** and Employment
**Anaktuvuk Pass:** 1980, **1988,** and 1994 (projected)

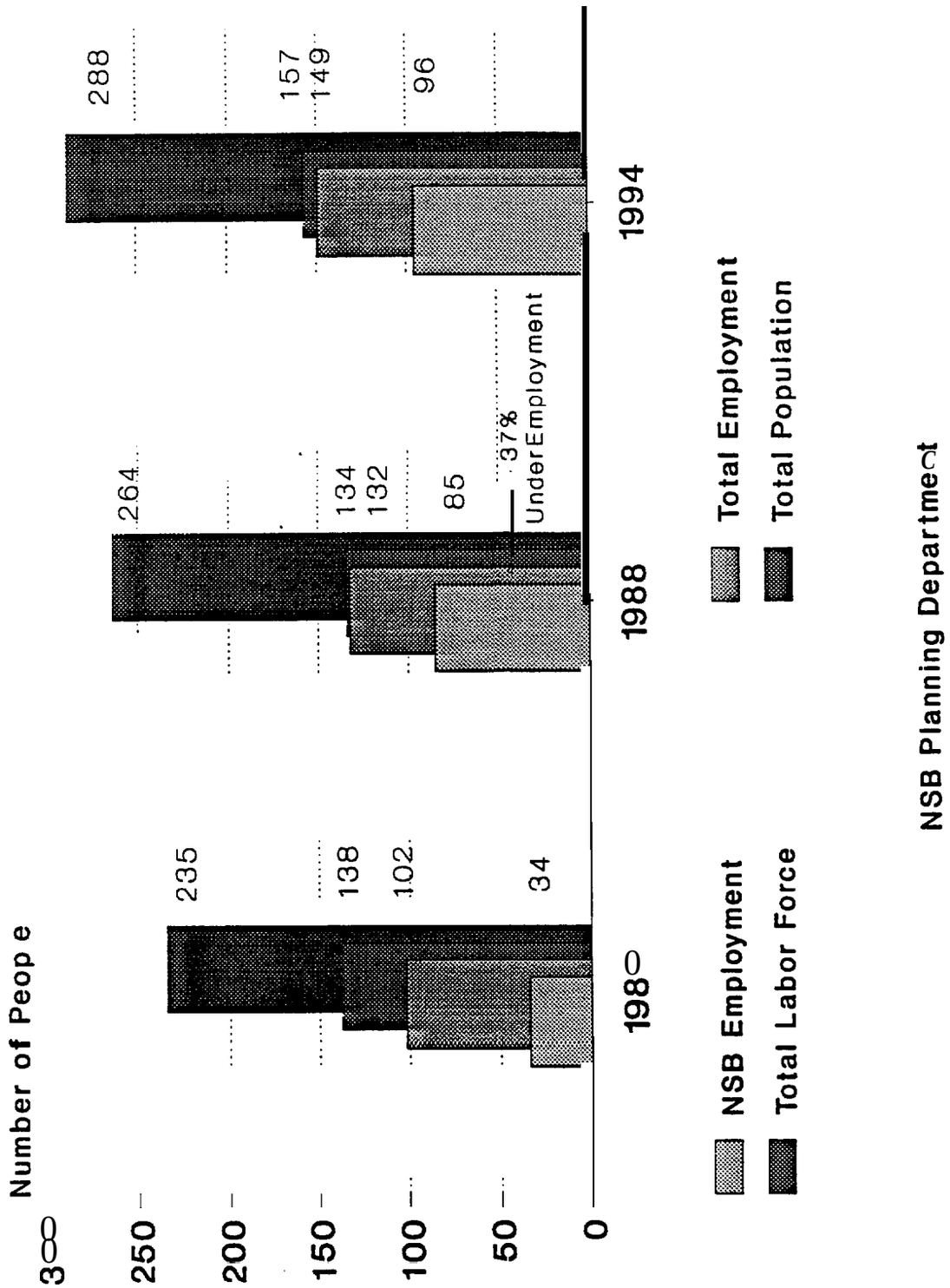


Table 1O-AKP

Composition of Employment by Race and Sex* **
**Anaktuvuk Pass, July** 19S0

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Contract Construction | 3 | 0 | 3 | 13 | 2 | 15 | 16 | 2 | 18 |
| Tranaportation, Communication, and Public Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Trade | 2 | 1 | 3 | 0 | 1 | 1 | 2 | 2 | 4 |
| Finance, Insurance, and Real Estate | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Services | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Government | | | | | | | | | |
| Federal | 0 | 1 | 1 | 8 | 0 | 0 | 8 | 1 | 9 |
| State | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| Local | 38 | 18 | 56 | 9 | 5 | 14 | 47 | 23 | 70 |
| Construction | (25) | ( 9) | (34) | ( 2) | ( 0) | ( 2) | (27) | (9) | (36) |
| Non-Construction | (13) | (9) | (22) | ( 7) | (5) | (12) | (24)) | (14) | (34) |
| TOTAL | 43 | 20 | 63 | 30 | 9 | 39 | 73 | 29 | 102 |

• Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

•• Employment figures exclude 9 Alaska Natives (5 males and 4 females) who listed various forms of assistance, primarily Social Security, as their major source of income. Employment figures afao exclude 43 Alaska Nativea (15 males and 23 females) and 3 non-Natives (all female) aged 16 and over for whom no employment information waa provided or who claimed to be unemployed.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

Table **11-AKP**

Composition of Employment by **Age, Race,** and Sex •
**Anaktuvuk** Pass, July 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 3 | 4 | 7 | o | 0 | 0 | 3 | 4 | 7 |
| **20 - 24** | 9 | 2 | 11 | **3** | **0** | **3** | 12 | 2 | 14 |
| 2s -29 | 8 | 3 | 11 | 11 | 3 | 14 | 19 | 6 | **25** |
| 30-34 | 4 | 0 | 4 | 4 | 2 | 6 | 8 | 2 | 10 |
| 35-39 | **4** | 2 | 6 | 2 | 1 | 3 | 6 | 3 | 9 |
| 40-44 | 5 | 2 | 7 | 5 | 2 | 7 | 10 | 4 | 14 |
| **45 - 49** | 2 | 2 | 4 | **3** | **1** | **4** | 5 | 3 | 8 |
| **50-54** | 3 | 2 | 5 | 2 | 0 | 2 | 5 | 2 | 7 |
| **55-59** | 2 | 2 | 4 | 0 | 0 | 0 | 2 | 2 | 4 |
| **60-64** | **0** | 1 | 1 | 0 | 0 | 0 | **0** | 1 | 1 |
| **65-69** | **0** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| **70-74** | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| **75** and over | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| Age unknown | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL | 43 | **20** | 63 | 31 | 9 | 39 | 73 | 29 | **102** |

• **Employment was** not **necessarily** full-time or permanent. **People** were asked only to list their employer or major source of income.

**Source: Alaska Consultants,** Inc, North Slope Borough Housing Survey, **prepared** for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **12-AKP**

Industry (Imposition of Employment by Sex and **Ethnicity** -1988
**Anaktuvuk Pass**

| INDUSTRY GROUP | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| PRIVATE SECTOR | | | | | | | | |
| FISHERIES | | | 0 | | | 0 | 0 | |
| MINING | 2 | 3 | 5 | 2 | | 2 | 7 | |
| CONSTRUCTION | 8 | | 8 | 4 | | 4 | 12 | |
| T RANSP/COMM/PUBLIC UTIL | 1 | | 1 | | | 0 | 1 | |
| TRADE | 1 | | 1 | | 1 | 1 | 2 | |
| FINANCE/INSUR/REAL EST | | | 0 | | | 0 | 0 | |
| BUSINESS/REPAIR SERV | | | 0 | | | 0 | 0 | |
| ENTERTMT/REC/TOURIST SERV | | | 0 | | | 0 | 0 | |
| HEALTH, SOCIAL, & EDUC SERV | | 1 | 1 | 1 | | 1 | 2 | |
| SELF-EMPLOYED | | 1 | 1 | | | 0 | 1 | |
| NATIVE CORP & AFFILIATE | 11 | 4 | 15 | | | 1 | 16 | |
| OTHER | 1 | 1 | 2 | | | 0 | 2 | |
| SUBTOTAL | 24 | 10 | 34 | 8 | 1 | 9 | 43 | 32.6% |
| NSS Government | | | | | | | | |
| HEALTH | | 7 | 7 | | 1 | 1 | 8 | |
| PUBLIC SAFETY | | | 0 | 1 | 1 | 2 | 2 | |
| MuNICIPAL SERV | 15 | 1 | 16 | 1 | | 1 | 17 | |
| FIRE DEPT | | | 0 | | | 0 | 0 | |
| SEARCH & RESCUE | | | 0 | | | 0 | 0 | |
| HOUSING | 3 | 3 | 6 | 1 | | 1 | 7 | |
| WILDLIFE MGT | | | 0 | | | 0 | 0 | |
| RELI & MJP | 3 | 13 | 16 | | | 0 | 16 | |
| LAW OFFICE | | | 0 | | | 0 | 0 | |
| ADMIN & FINANCE | | | 0 | | | 0 | 0 | |
| PLANNING | 1 | | 1 | 1 | | 1 | 2 | |
| INDUSTRIAL DEVELOPMENT | | | 0 | | | 0 | 0 | |
| HIGHER EDUCATION CENTER | | | 0 | | | 0 | 0 | |
| MAYORS OFFICE & ASSEMBLY | 1 | 1 | 2 | | | 0 | 2 | |
| OTHER NSS | | | 0 | 3 | | 3 | 3 | |
| SUBTOTAL | 23 | 25 | 48 | 7 | 2 | 9 | 57 | 43.2% |
| NSS SCHOOL DISTRICT | 6 | 13 | 19 | 5 | 4 | 9 | 26 | 21.2% |
| Nss SUBTOTAL | 2s | 38 | 67 | 12 | 6 | 18 | 85 | 64.4% |
| OTHER LOCAL GOV'T | | 1 | 1 | | | 0 | 1 | 0.8% |
| STATE GOVT | | 1 | 1 | | | 0 | 1 | 0.6% |
| FEDERAL GOV'T | | | 0 | | 1 | 1 | 1 | 0.3% |
| ARMED FORCES | 1 | | 1 | | | 0 | 1 | 0.s% |
| SUBTOTAL ALL GOV'T | 30 | 40 | 70 | 12 | 7 | 19 | 63 | 67.4% |
| GRAND TOTAL | 54 | 50 | 104 | 20 | 8 | 28 | 132 | 100.0% |
| % OF TOTAL | 40.9% | 37s% | 76.s% | 152% | 6.1% | 212% | 100.0% | |

Notes
(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1363.

There is a good deal of concern in the village over "local hire." It is deemed desirable by residents that all projects in the community be carried out by locals as much as possible. What is always problematic for authorities on these projects is deciding what jobs locals are qualified to perform. One particularly sensitive project in the recent past was the construction of the "Washeteria" building. According to one resident, what angered people living in Anaktuvuk Pass was that outsiders were brought in to do painting work, despite the availability of locals who could have painted. To address the concern over local hire, a number of Borough programs in recent years have been specifically targeted to provide employment in the village. In Anaktuvuk Pass, two of these are Mayor's Job Program and the Rural Employment and Living Improvements program. As their names imply, the purpose of these two programs is first and foremost local employment and secondarily any other benefits that may derive from the programs. It should be noted that this is quite different from the thrust of the Capital Improvements Program, which emphasized construction of capital improvements for the villages with provision of employment as a desired spin-off of the primary programmatic goal.

### *3.* Revenues

No published information on public revenues for Anaktuvuk Pass is available. What information is available from the North Slope Borough appears in the NSB regional economic discussion in this report.

## C. The Private Sector

### 1. Organization

The organization of the private sector will be divided into several categories that are based upon divisions used in previously published literature the oil-related industry, Native profit corporations, and service-related employment. Additional data on private sector employment will be based on categories used in the ACI (1981) report. These fell into 5 additional categories: mining contract construction; transportation, communications, and public utilities; trade; and finance, insurance, and real estate (ACI 1981:23).

It has been observed by several residents of the village that there is virtually no private enterprise in the community. More than one individual observed that there would seem to be a real market for "trinkets" for tourists who visit the Gates of the Arctic National Park, but that local individuals have not taken advantage of this opportunity apart from the manufacture of caribou skin masks.

One individual contacted during field research observed that employment, or rather relative lack thereof, is still a problem in the village, but that perhaps the worst times are already behind the community. It was his observation that it was difficult during the transition from the capital projects-based economy to the present service-oriented economy. This was attributed in large part to a change in expectations. "People were making $30 per hour when the Borough realized that there was a bottom to the bucket. Now there is the Mayor's Job Program, which doesn't replace the other employment, but it is something. The very difficult thing was for people to make $15

perhour rather than $30. . . that was a big difference in the money caning into a household." It should be noted that people have not left the village to seek employment as a result of the drop in wages. At the time of field research (March 1989), for example, there were only two individuals from Anaktuvuk Pass working at Prudhoe Bay.

The Nunamiut Corporation, while ostensibly a "private enterprise" is, like other village corporations on the North Slope, a quasi-public enterprise. It was formed under ANCSA, which is to say it was formed out of legislative, not economic, processes. Most of the business of the corporation is derived from Borough activity, which also lends to its quasi-public attributes.

### 2. Employment

Specific employment figures for workers from Anaktuvuk Pass who were employed in the oil-related industry are lacking. However, past general trends can be inferred from a table provided by Kruse et al. (1981:35) which shows 16% of Natives in Anaktuvuk Pass employed in "private business." Private business included "...Wein Air Alaska, oil and pipeline companies, and other commercial business. Those working for oil and pipeline companies made up a very small part of this category" (Kruse et al. 1981:35). For the entire North Slope Borough there were 178 persons employed in the oil industry in 1983 (ISER 1986:E-12). This number constituted 3.7% of persons at oil-related work sites in the North Slope Borough naming Alaska as their usual place of residence (ISER 1986).

There is confounding evidence concerning profit-oriented enterprises in Anaktuvuk Pass. Data from the 1980 census shows zero (including both Native and non-Native) persons in the category "self-employed" in Anaktuvuk Pass in 1980 (ISER 1986:E-15). Contradictory information is provided by Cline (1975:12) who reported that of the approximately $78,000 entering the village in 1968, over $20,000 accrued from the sale of local handmade masks. This mask style was originated by Bob Aguk and Zak Hugo for Christmas festivities in 1951. By the late 1950s, especially after Justice Mekiana developed the wooden mould for shaping masks as they were being made, these masks became a popular tourist item. A comprehensive account by Sarkis Atamian about the origin of skin masks appears in a Science article (March 18, 1966, pp. 1337-45). Some families did little other than make masks to support themselves. According to Cline, the sale of masks was the second largest source of income in the community of Anaktuvuk Pass following the income from state and federal governments, which brought in over half the total community income. (The third largest source of income in the community, about $5,000, reportedly came from various other sources, such as the $320 he and his wife paid their babysitter.) Profits from mask sales remain significant in Anaktuvuk Pass, but this has not been quantified in recent years.

During field research in 1989 four sizes of masks were produced baby, which sell for around $25; child, which sell for around $35; regular, which sell for around $45; and large, which according to one maker sells for around $225. No large masks were for sale in the village at the time, and the price for them is so high, according to one person who does make them occasionally, because he does not care to make them. Both men and women make masks. With hard work one person could sew six masks in one day. Most masks are sold through the local store and some are sold in the Nunamiut Corporation offices which are located in the same building as the "camp"/hotel. Masks are reportedly also used at times to make house payments to the Borough in lieu of cash.

Masks are said to vary comparatively little in style. It appears that mask-making is a relatively easy, reliable, and profitable means of earning money locally, which no doubt contributes to a high rate of productivity. Mask-making unquestionably is the most traditionally-oriented craft skill that still prevails in the village.

Employment in the service-related industry is provided by ACI for the year 1982 (ISER 1986:E-18). The average annual number of full-time employees in the service industry for that year was 5.5 out of a total of 76.5. Although this figure is not broken down for Natives and non-Natives, as an employment group, its size is quite small.

Among Natives in Anaktuvuk Pass a total of 63 persons were employed in July 1980 (please refer back to Table 1O-AKP). Only six of those persons were employed in jobs other than governmental. There were none employed in mining, three employed in contract construction, none employed in transportation, communications, and public utilities, three employed in trade, and none employed in finance, insurance, and real estate and services (ACI 1981:23). The same general proportions of individuals in the private versus the public sector existed in 1982. Within the total population, there were 76.5 employed individuals in Anaktuvuk Pass. Only 20 were employed in jobs other than governmental, 26.2% (ACI 1983:11).

Among the *39* non-Natives employed in Anaktuvuk Pass in July 1980, 16 were working in jobs not categorized as governmental. Fifteen of those persons were employed in contract construction and one was employed in trade. No non-Natives were employed in any of the other "non-government" jobs described above. It must be noted, however, that contract construction jobs are frequently directly or indirectly government-related because many of them are contracted by the North Slope Borough (Hall 1985:6). Again, the ISER data were different from the ACI data. The ISER data recorded 15 persons, Native and non-Native, as being employed in the private sector (ISER 1986:E-15).

During field research (March 1989), the Nunamiut Corporation employed people in a number of different capacities. . Unlike some of the other villages on the Slope, however, the position of corporation president was an unpaid one. A minimal number of positions were associated with the cafe and camp. There were more positions associated directly with NSB-related projects, and there is direct cooperative planning between the corporation and the city council on such projects. For example, a bedroom expansion project was planned for the summer of 1989. The project will employ approximately ten individuals. The council sets the priorities for which homes receive the improvements, while it is the corporation that is awarded the contract to perform the work. The RELI kunnichuk project, which is governmental in its origin at the Borough level, is also run through the Nunamiut Corporation and will provide approximately four jobs in the community during the summer 1989 construction season.

According to the mayor, there are no private enterprise jobs for locals in the community related to the National Park except that "a couple of guys made some money showing people around the village and nearby." Also according to the mayor there is a lot of opportunity there to make money, but there aren't the right things in the village to do it now. "A place for people to buy crafts would be good, and some good lodging would make money, too."

According to several of the longer-term non-Native residents of the community, the lack of private enterprise in Anaktuvuk Pass is not a function of there being no opportunities in the village. In numerous conversations, points were made that the village is a "natural" for tour development. It has the features of being north of the Arctic Circle, it is in a National Park, and it is an "Eskimo village," all of which would be positive attributes to well-heeled travelers. According to one individual, these are all things that people would pay a lot of money to be able to say that they have been to. There is a clear impression that a lodge could be filled virtually every day during the summer months if it were promoted through some of the upscale tour agencies. As an example, one individual pointed out that an individual in Wiseman has started a business with some construction trailers, and is doing well with tourists by billing it as a lodge north of the Arctic Circle, and this is in country that is less dramatic than the region around Anaktuvuk Pass.

It is also a contention of some of the longer-term residents who are not originally from the community that the residents of Anaktuvuk Pass 'just don't have the private enterprise idea" which is to say that they don't know what appeals to tourists from Outside or how to market such an idea. This is expressed by some who say that villagers are just "not of that mind-set" or "just don't think that way." This extends to the very few tour-oriented positions that are available in town. The one formal summer tour guide employed by the airlines is from outside the community, and this individual was hired after the position was made available in the community. This position pays about $10 per tourist taken to the museum, to the camp for a snack, and to buy masks. Other suggestions offered during field research for appealing to tourists have been to build a lodge in the community and a second lodge, a fishing lodge, over on Chandler Lake where the Nunamiut Corporation owns land. Under this scenario, tourists could be flown there from Anaktuvuk Pass and money made on both the flight and food and lodging portions of the trip. According to several residents, a lodge would be appropriate because tourists are passing through the village already, but without spending an appreciable amount of money. As much speculation as there is in the community about a lodge, however, there are several relevant questions as to whether or not such an enterprise would really be profitable. These include: whether there is a viable market (other than in the summer) for such a facility whether a "summer only" lodge is financially feasible in Anaktuvuk Pass; whether there is capital available to start such an enterprise; whether the management expertise is available; and whether it would have an adverse effect on the community.

Aside from the difficulties in initiating private enterprise for tourists, there are also difficulties associated with providing goods and services to fellow village residents as well as to outsiders in the community. This is perhaps best illustrated by a case that is reported to have taken place in the community a few years ago. A community resident became a distributor for several major outdoor equipment manufacturers. This individual, with the price breaks that he got as a distributor, was able to sell products to other village residents at a savings over what they could get from either direct purchases in Fairbanks or from catalogs. After a period of time, however, people apparently came to perceive that this individual was making money off of other villagers, and so they stopped buying goods through him. The irony of the situation was not lost on some in the village. People were willing to pay more money to strangers in Fairbanks rather than saving themselves a substantial amount of money by paying a lesser amount to someone they knew for the same goods. This is consistent with much of the small-scale economic behavior that occurs in the village. It is not acceptable to give money to someone locally on a consistent basis, as that individual will eventually be seen as taking advantage of a face-to-face relationship. Another example provided during field research was set in the context of the summer village poker game. Individuals at the

poker game will pay high money for drinks and snacks various people bring from the village, but were adverse to the idea of a single individual selling drinks and snacks on a consistent basis, even at a lesser rate. That would clearly be considered inappropriate behavior. In other words, people are willing to pay consistently high prices to a number of individuals, but are unwilling to pay consistently low prices to a single known individual. The "economic facts" are not the major motivating principals in individual's 'economic" behavior in the village in cases such as these.

*3.* Revenues

No information on private sector revenues is available for Anaktuvuk Pass.

D. Economic Issues and Concerns

Population, labor force, and employment for Anaktuvuk Pass are shown in Figure 5-AKP for 1980 and 1988. Also, these variables are projected to the year 1994. The figures for 1980 and 1988 show that while village population increased from 235 to 264, the labor force (employed and unemployed persons age 16 to 64 that were willing and eligible to work) fell slightly from 138 to 134 persons. This modest decline probably reflects shifts in the age distribution of the population. While the total population of Anaktuvuk Pass increased over the eight-year period, the number of young persons entering the labor force was not sufficient to offset labor force attrition from retirement and from other factors.

Total village employment increased from 102 to 132 persons between 1980 and 1988. This employment increase, coupled with a declining labor force, translates to a direct reduction in unemployment. Indeed, between 1980 and 1988, the rate of unemployment (the number of persons unemployed divided by the labor force) in Anaktuvuk Pass fell from 22 to 2%.

The shift toward full employment is explained in part by a significant increase in direct NSB government employment. An absolute reduction in the size of the labor force also contributed to this favorable outcome. Between 1980 and 1988 NSB government employment more than doubled from 34 to 85. These figures understate NSB government contributions to village employment because they do not include employment expansion in the private sector brought about by NSB-funded projects and programs. Private sector employment and indirect NSB government employment are depicted in the bar labeled "Total Employment."

While the rate of overall unemployment declined markedly over recent years, a fairly high level of underemployment was observed in 1988. "Underemployment" refers to persons that worked part of the year but would have worked more if additional jobs had been available. Indeed, there is some difficulty with this definition of "underemployment" as utilized by the NSB, as many of the individuals who are classed as "underemployed" consider themselves "unemployed." For example, if a person worked for a period near the start of a year and then subsequently lost that employment (for whatever reason), this person would be considered by definition "underemployed." If that person desires more work, however, and has no viable prospects for employment in the future, they are likely to consider themselves "unemployed."

In sum, the data for 1980 and 1988 overall indicate good news. Despite the high underemployment in 1988, nearly everyone that wanted to work was able to do so for at least part of the year. This suggests that in 1988 jobs were widely distributed across the village labor force. Field research suggests that there are perceived inequities in the distribution of jobs, however, as is the case in virtually all small communities. Because Anaktuvuk Pass is small and its residents closely related, there is no way that jobs can be allocated without the possibility of someone claiming nepotism.

As for overall trends, employment has shifted away from capital improvements projects and toward more service employment. Government-related employment has become less project-oriented and more directly oriented toward the provision of employment as an end in and of itself. This prioritization of employment on the local level as a Borough goal may be seen as an integral part of the North Slope political decision-making process. It is clear that there will be less seasonal employment for the foreseeable future than in the recent past, but the influence of this shift on the integration of employment and subsistence pursuits is unknown at this point. As discussed elsewhere, much of the subsistence by Anaktuvuk residents is done as day-trips on the weekends, and otherwise fitted around work schedules through use of leave of absence and other means. However, there are reportedly a number of individuals (five or so, by one reliable estimate) who are what one might term "subsistence specialists" whose major and preferred activity is subsistence, and who fit their work schedules around their subsistence pursuits rather than vice versa. That is, these individuals work enough to get by and pursue subsistence as much as possible. These are the individuals most likely to be negatively affected by a decline in seasonal or project-specific labor in favor of full-time, permanent labor.

Another trend in employment in Anaktuvuk Pass is one of locals going after positions, particularly those in NSB jobs that have been formerly held by outsiders. One individual, who has been active in local-level politics noted that he was the first Inupiat in his particular position in Anaktuvuk Pass. In his opinion it is imperative for local residents to move into jobs that have formerly been held in the communities by non-Native outsiders. In order for there to be real change in these positions, he reasons, one has to push and, if necessary, threaten the NSB with discrimination suits if local hire is not forthcoming.

Table 13-AKP presents data on household characteristics by levels of household income. It can be seen that the average household income in Anaktuvuk Pass is $35,282. For purposes of this discussion, a very important set of data is found on the part of the table concerning average proportion of household income spent in the village. Income spent in the village translates into employment and income for other village residents - in effect, the dollars earned and then spent in the village do double duty (at least) in the local economy. Examining Inupiat households, it may be seen that households in the middle of the income range spend the highest proportion of their income in the village. For households with an income of less than $20,000/year, 55.0% is spent in the village; for households in the $20-40,000 and $40-60,000/year ranges, 77.5 and 73.6% is spent respectively, while in the above $60,000/year range the spending in the village drops back to 65%. One interpretation of the observation that those in the higher income range spending less in the village is that higher income families are larger, on average, and are more likely to buy a number of high-dollar capital items, such as snowmachines, from outside of the village. Non-Inupiat households, on the average, spend much less of their household income in Anaktuvuk Pass than do their Inupiat counterparts. The lower two income brackets spend 35.0 and 37.5%, respectively, while those non-Inupiat households in the $40-60,000 range spend only 11.7% of their income in

the village, compared with the 73.6% that Inupiat households in the same income range spend. Non-Inupiat households in the highest income range spend 17% of their income in the village.

Table 14-AI(T displays the occupation composition of employment by sex and ethnicity for Anaktuvuk Pass in 1988. There are several important relationships clearly illustrated here. Among Inupiat residents of the community, nearly as many women as men were employed (50 and 55 individuals respectively). Distribution of employment by sex, however, was not even. For women "service" was the largest occupational category, 'account-kg for 42% of the jobs, and "laborer" was the second largest occupational category with 20% of the jobs. The largest categories for Inupiat men, on the other hand, were "operator/mechanic," which accounted for 33% of the jobs, and "craftsman," which accounted for 22% of the jobs. Non-Inupiat employment is distributed differently from Inupiat employment. For example, over 71% of the jobs held by non-Inupiat individuals are filled by males. The second largest category of non-Inupiat employment is "teacher," a category which features no Inupiat employees. Unlike the case with Inupiat individuals, non-Inupiat males outnumber females in the "service" category.

Table **13-AKP**

**Anaktuvuk** Pass Household Characteristics -1988
By Levels of Household Income

| | HOUSEHOLD INCOME CATEGORIES | | | | |
|---|---|---|---|---|---|
| | BELOW $20K | $20-40K | $40-60K | ABOVE $60K | ALL HHs |
| **Average HH Income ($):** | | | | | |
| Inupiat HHs | $13,370 | $29,375 | $48,929 | $77,500 | |
| Non-Inupiat HHs | $10,000 | $33,750 | $47,500 | $87,000 | |
| All HHs | $13,100 | $30,250 | $48,676 | $82,778 | $35,282 |
| Cases: | 25 | 20 | 17 | 9 | 71 |
| **Average HH Size (# Persons per HH):** | | | | | |
| Inupiat HHs | 3.0 | 4.8 | 4.9 | 5.3 | |
| Non-Inupiat HHs | 1.0 | 3.3 | 1.0 | 1.6 | |
| All HHs | 2.8 | 4.5 | 4.2 | 3.2 | 3.7 |
| Cases: | 25 | 20 | 17 | 9 | 71 |
| **Average Meat & Fish Csmptn from Own HH Subsistence (%):** | | | | | |
| Inupiat HHs | 35.0% | 38.1% | 45.0% | 67.5% | |
| Non-Inupiat HHs | 10.0% | 20.0% | 3.3% | 6.0% | |
| All HHs | 33.0% | 34.5% | 37.6% | 33.3% | 34.6% |
| Cases: | 25 | 20 | 17 | 9 | 71 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | | |
| Inupiat HHs | 33.3% | 35.3% | 18.6% | 30.0% | |
| Non-Inupiat HHs | 15.0% | 5.0% | 0.3% | 6.2% | |
| All HHs | 31.8% | 29.3% | 15.4% | 16.8% | 25.3% |
| Cases: | 25 | 20 | 17 | 9 | 71 |
| Average **Meat & Fish Harvested and Given Away (%):** | | | | | |
| Inupiat HHs | 18.7% | 17.2% | 17.9% | 36.0% | |
| Non-Inupiat HHs | 0.0% | 12.5% | 3.3% | 0.0% | |
| All HHs | 17.2% | 16.3% | 15.4% | 16.9% | 16.3% |
| Cases: | 25 | 20 | 17 | 9 | 71 |
| **Average Proportion HH Income Spent in Village (%):** | | | | | |
| Inupiat HHs | 55.0% | 773% | | 65.0% | |
| Non-Inupiat HHs | 35.0% | 37.5% | 11.7% | 17.0% | |
| All HHs | 53.3% | 69.5% | 62.6% | 38.3% | 58.3% |
| Cases: | 24 | 20 | 17 | 9 | 70 |

Note: Total cases (**households**). 73.

Source: NSS Department **Of** Planning and Community Services
Census of Population and Economy

## Table 14-AKP

Occupation Composition of Employment by Sex and **Ethnicity** - 198S

**Anaktuvuk** Pass

| OCCUPATION GROUPS | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| EXEC. ADMIN. MGR. | 5 | 2 | 7 | 1 | 1 | 2 | 9 | 6.8% |
| PROFESSIONAL | | | 0 | 1 | | 1 | 1 | 0.8% |
| TEACHER | | | 0 | 3 | 3 | 6 | 6 | 4.5% |
| TEACHER AIDE | | 5 | 5 | | | 0 | 5 | 3.8% |
| TECHNICIAN | | 4 | 4 | 1 | | 1 | 5 | 3.8% |
| ADMIN. SUPPORT | | 8 | 8 | | 1 | 1 | 9 | 6.8% |
| SERVICE | 9 | 21 | 30 | 5 | 3 | 8 | 38 | 28.6% |
| OPERATOR/MECHANIC | 18 | | 18 | 3 | | 3 | 21 | 15.8% |
| PILOT | | | 0 | | | 0 | 0 | 0.0% |
| LABORER | 9 | 10 | 19 | | | 0 | 19 | 14.3% |
| CRAFTSMAN | 12 | | 12 | 6 | | 6 | 18 | 13.5% |
| ARTISAN | | | 0 | | | 0 | 0 | 0.0% |
| ARMED FORCES | 1 | | 1 | | | 0 | 1 | 0.8% |
| TRAPPER/HUNTER | | | 0 | | | 0 | 0 | 0.0% |
| OTHER | 1 | | 1 | | | 0 | 1 | 0.8% |
| TOTAL EMPLOYED | 55 | 50 | 106 | 20 | 8 | 28 | 133 | 100.0% |
| % OF TOTAL | 41.4% | 37.6% | 79.9% | 15.0% | 6.0% | 21.1% | 100.0% | |
| LABOR FORCE | 57 | 50 | 107 | 20 | 8 | 28 | 135 | |
| % OF TOTAL | 42.2% | 37.0% | 79.3% | 14.8% | 5.9% | 20.7% | 100.0% | |
| TOTAL UNEMPLOYED | 2 | | 2 | 0 | 0 | 0 | 2 | |
| UNEMPLOYMENT RATE | 3.5% | 0.0% | 1.9% | 0.0% | 0.0% | 0.0% | 1.5% | |
| TOTAL UNDER-EMPLOYED | 24 | 17 | 41 | 7 | 1 | 8 | 49 | |
| UNDER-EMPLOYMENT RATE | 42.1% | 34.0% | 38.3% | 35.0% | 12.5% | 28.6% | 36.3% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment.
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate = persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services Census Of Population and Economy, 1989.

SECTION III: FORMAL INSTITUTIONS

This section presents information on formal institutions in Anaktuvuk Pass. These include government, Native corporations, social services, health, religion, infrastructure, fire protection, search and rescue, public safety, and schools. To a remarkable degree, the formal institutions found in Anaktuvuk Pass are local representatives of NSB institutions, or analogues of institutions found at the regional level. The primary exception to this is found in the area of religion. In this respect, Anaktuvuk Pass is much like the other villages in the region outside of Barrow.

A. Government

1. Organization and Scope of Operations

Government recognition of the community dates from 1951 with the establishment of a local post office. It not only represented the first formal tie-s with the outside world, marking the establishment of Anaktuvuk Pass as a settled community, but it provided villagers with far greater access to information. The original postmaster was a local (Inupiat) person. He not only became the first local government employee, but initially he and his family were the only year-round residents of the community. Mail delivery led to regular mail service by air, which made Anaktuvuk Pass more accessible, especially to scientists and government representatives. By 1%1 there were four scheduled flights each day. Both the presence of the post office and regular air service contributed to the formation and growth of the settlement.

The earliest formal political institution was the village council created in the early 1950s. It came to be considered a "traditional council" in the general context of the Indian Reorganization Act. The subsequent founding of a city council under state auspices and the formation of the Nunamiut Corporation council under the auspices of ANCSA led to an eclipse of the traditional council, but it remained intermittently active into the late 1970s. Complications associated with a federal grant combined with competition from the other councils (in terms of leadership, apparent community priorities, and so on) appear to have contributed to the at least temporary suspension of the traditional council. In 1988 this council was reactivated with a predominantly youthful membership. This group, which had held four meetings by the time of field research in March 1989, is apparently on the way to resolving the remaining difficulties with the federal grant.

The traditional council is struggling for renewed recognition and identity. It has yet to establish itself as a viable alternative to the other councils. At the time of field research, in March 1989, neither the city council nor the Nunamiut Corporation had yet consulted with the traditional council. Furthermore, the traditional council does not have an office, budget, or grant monies, and only recently obtained a post office box. To compound its difficulties, the traditional council has no formal recognition by the U.S. Park Service, state, or NSB. Indeed, several persons active in the affairs of the community consider the traditional council inactive at this point. At the time of field research (March 1989) no Traditional Council meetings had been held for several months. According to one individual attempting to reactivate the Traditional Council, one of the difficulties in getting-the body restarted is that "it is tough to get a budget through the BIA [Bureau of Indian Affairs]."

In addition to the Traditional Council, there is the North Slope Borough, which is the regional government established in 1972. The NSB is responsible for administering all public services on the North Slope and is the borough's major employer.

The City of Anaktuvuk Pass is governed by a city council with a mayor. Incorporated as a second class city under state law, the powers of the city are quite limited due to its relationship with the North Slope Borough. At the time of incorporation of the Borough, the City ceded the majority of its powers to the new regional government. In many ways, the City acts as a local extension of the Borough through administration of Borough programs, and acts as a conduit for local opinion and concerns to be communicated back to the Borough. There are, of course, issues on which the City and the Borough differ. According to the mayor, the priorities of the city council are obtaining more service vehicles and a new building for Search and Rescue. People have also expressed interest in having a day care center as well. The day care center is considered to be a project that would benefit everyone in the community because it is thought that it would improve job performance in a number of different areas. It is felt that a significant portion of the job absenteeism in the community is caused by a lack of babysitters.

Two other priorities of the City are improvement of water and sewage service in the village. Anaktuvuk Pass is the only community on the North Slope that draws its water supply from a well. Until recently, the needs of the village were supplied by two wells: a community well and a school well. As of the time of fieldwork (March 1989) the school well was no longer in operation. All of the water used in the community now comes from the remaining well, although individuals do cut ice for drinking water in the winter. There was some sentiment in the community to sink another well for the Washeteria building in the summer of 1988, but NSB advisors indicated that the water quality in this location would not be acceptable. First the community was informed that the water in this area was contaminated, and then this was downgraded to a lesser assertion that the water was not the best in the community. This came as quite a surprise to villagers in that the school well was in this same area, and samples were sent in regularly for analysis. According to an employee in the utilities department, the question in the village became "how could the water be OK for our kids to drink, but not OK to wash our shorts in?" In the end, the Washeteria building was supplied with piped water, which has indicated that piping water in the village can be done. According to utilities employees, "it is a high-tech pipe, but on a much smaller scale than in Barrow, and it could be done for the whole community." This possibility is something that the council would like to pursue in order to supply running water to the houses and other buildings in the community.

Sewage is a relatively large issue in the community as well. The present sewage lagoon serves only the school, the Washeteria, and the USDW building. According to a supervisor in the Municipal Services department, there have been studies indicating that about half of the village could go on septic, but the other half is unclear. The sewage lagoon now meets the needs of the facilities connected to it. While the sewage level rises in the winter, it evaporates in the summer.

According to the mayor, all of the other infrastructure and capital projects have been completed and are, for the most part, adequate for the needs of the community. According to several individuals active in local government, obtaining a senior center has never been a priority in the village because there are few elders in the village and "they are well cared for now." The Mayor's Job Program that funds the positions of the women who help clean the elders' homes is considered

a good one, and it is thought that this is the type of program that needs to be continued, and not a home or a center for them. In the past, some of the eiders were sent to a home in Fairbanks, "but they do not last long there -- there is nothing for them to live for there."

*2.* Overlain in Authority and Conflicts Among Institutions

The City of Anaktuvuk Pass, like the other outlying villages of the borough, not infrequently sees differences between local priorities and those of the North Slope Borough government. Within the village, there are at this point no difficulties between the Traditional Council and the City Council, insofar as the Traditional Council is inactive. As detailed in the discussion of the Nunamiut Corporation, there is a good deal of cooperation between the City and the Nunamiut Corporation, as they are virtually required to work together on a number of different projects that are run through the North Slope Borough and there is apparently little conflict between the institutions.

In Anaktuvuk Pass the locus of conflicts among institutions is the controversy over subsistence allowances in the National Park Service concerning the Gates of the Arctic National Park. Anaktuvuk Pass is one of the two main entry points to this vast park, and conflicts have arisen regarding use of ATVS, among other issues. The fact that the community is engulfed by the park is a pervasive fact of life in the community.

According to one of the long-term residents of the community, "the people really got sold a bill of goods" when the park was formed. According to widely-held local opinion, residents were assured that park status would protect the land for them and that they "would be able to do all of the things that they were able to do before the creation of the park. It turned into almost all of the things they were able to do before, and then most of the things they were able to do before . . ." Reportedly, when the park was originally discussed in the village, it was to be named Nunamiut National Park.

One of the disputes the village has with the National Park Service concerns the land that was formerly owned by the Arctic Slope Regional Corporation. Land for the park was selected by the ASRC near Anaktuvuk Pass with the understanding, by Anaktuvuk Pass residents at least, that the land would be protected for their use. As a result of this understanding, it was felt to be "no big deal" that because of acreage limitations set by ANCSA the village corporation was unable to select all of the land that they felt was important to protect and assure continued use and control of. The villagers assumed that the regional corporation was working in their interest much as their own village corporation would have. ASRC ended up trading some of the land in question for drilling rights in the Arctic National Wildlife Refuge (ANWR), and subsequently disputes over use of this land have arisen. A significant number residents of Anaktuvuk Pass feel betrayed by the ASRC over this issue, and do not feel that the National Park Service was entirely straightforward either. According to one official in the community, "Things were going pretty well until the ASRC and Barrow tried to throw their weight around." The NSB, ASRC, and Barrow are sometimes perceived as working together "under the table," opposed to the interests of the village. As one man put it, "somebody is kissing somebody." It is also considered difficult for Anaktuvuk Pass to be effectively represented in the NSB Assembly because of the domination of Barrow in that body.

On the whole, people in Anaktuvuk Pass appear to feel that things are now going well with the National Park Service after some rocky years. Agreements about land use have been reached. However, these agreements were not always easily reached from the perspective of the villagers. According to one village official, you "have to threaten blackmail to get things done. We threatened to put up big 'No Trespassing' signs around corporation land in the park, and that got their attention."

One major bone of contention between the residents of the community and the National Park Service is access to park lands by ATVS in the summertime. According to one resident, "The tundra damage study was a joke. One of the photos that appears in that study is of the ruts right by the cemetery. Is that really part of the park? But people Outside see that photo and think that is the way it is through the park." According to a resident former fish and game representative, as things stand now, people can go anywhere in the park in the wintertime. In the summer, "if you want to go in some areas, just let them [NPS] know. They're OK now."

Things reportedly have gotten better across the board with relations between the village and the park since the villagers are working with conservationists. It used to be that villagers were restricted to not taking ATVS more than fifty feet from any river, and such regulations were seen as unnecessarily (and unworkably) restrictive. Apparently there was a good deal of friction with the first park superintendent, and individuals in Anaktuvuk Pass attribute this to the fact that the commissioner was from out of state, and was not familiar with rural Alaska. According to residents' statements, this administrator was probably used to dealing with parks in the lower 48 that are facing problems associated with continual and growing encroachment, and was not familiar with parks that people are virtually living in, and making their livings off of them. When the Environmental Impact Statement (EIS) on the park came out, there was reportedly a good deal of community input and, according to the mayor, it was gone over "from front cover to back cover and from back cover to front cover." Differences were worked out with the National Park Service and agreement was reached.

According to National Park Service officials in Fairbanks, there is a draft land exchange agreement that has been negotiated to address ATV access, among other things, and while it has been agreed upon informally, it has not yet been formalized. One of the things that is delaying its formalization is the likelihood that a full EIS will need to be written. It was thought that there could be a legislative EIS, which would have made it a much shorter process, but as of the time of field research (March 1989) it looked like a full one would be required. An additional factor that will delay a formalized agreement is the fact that Congress has to approve "reauthorization" of wilderness lands in order for the agreement to hold. According to a senior NPS official in Fairbanks, the present difficulty that necessitated a new land use agreement is the status of the former ASRC lands which "the ASRC traded out from under Anaktuvuk." That is to say that Anaktuvuk Pass people did not participate in the process. These were lands that Anaktuvuk people used, and had assumed were protected. The land in question was traded for rights in ANWR, and what resulted from the trade was a situation where there were federal lands that Nunamiut had formerly used with virtually no restrictions.

The settlement involves giving permission to access park lands with ATVS in exchange for easements and surrender of development rights on substantial portions of village and regional Native lands. This negotiation involves both Nunamiut Corporation and ASRC owned lands.

At the time of field research, ATV access was being allowed during a Park Service study period. Villagers are of the opinion that ATVS do not cause substantial damage to the tundra, and during the study period the NPS granted permission to have ATV access, in effect "stepping back and saying OK, lets take a look at it." According to senior NPS officials, this research "period" is opened-ended and it is a very politically sensitive issue. Permission was renewed again for the summer of 1989, "but it is not known at what point the NPS will have to say 'this is too much damage.'" According to this same official, "We are seeing extensions of trail damage and the worsening of existing damage." NPS officials recognize the problem in defining damage. In the words of one senior official, "Of course the critical problem is how do you define damage? From the air, you can see even the snowmobile trails in changes in the vegetation in the summertime; from the ground you cannot see the trail. Is this damage? Clearly changes have taken place, but at what point do you call it damage? Snowmobiles are not really a problem right now, because virtually all of the time when they are used there is sufficient snow cover." ATVS present a much more difficult problem for all involved. The parties to the working agreement are the National Park Service, the ASRC, the City of Anaktuvuk Pass, and the Nunamiut Corporation. The agreement reached for the summer of 1989 is the same as it has been for the previous two summers. The agreement essentially provides for ATV access to 80,000 acres of former ASRC lands and 75,000 acres of park wilderness area.

Attitudes toward the park in general are no doubt also influenced by economics of the tourism associated with the park. It is widely held that the backpackers and tourists who come through the park contribute virtually nothing to the economy of the community. In a typical scenario, they get off of the plane, they may pitch a tent by the side of the strip the first night, and then they are off into the park. They do not stay in town, they do not create any jobs, and they do not buy things in the community. According to one village official: "I have never seen a backpacker spend $50 at the store."

According to one long-time non-Native resident of the community, the problems with the park now are not so much a problem of physical access as they are of attitudes and perception. According to this individual, the park has had a greater influence psychologically hemming people in than anything else. The bad part was that the National Park Service wanted to restrict things so close to the village. In the other valleys, it may have been an "out-of-sight, out-of-mind" situation, but the lands affected were areas of this pass in which the village is situated, lands that people can "see from their front windows." The situation in Anaktuvuk Pass is quite different from places such as Nuiqsut in terms of the legal status of land that is used. For Nuiqsut, it has been observed that villagers do not hunt in and around the Kuparuk oil field That is, people do not hunt where they explicitly are "allowed to," but avoid the area because there are other people there. In Anaktuvuk Pass, with an ethos of protecting important lands, "people will go there just because they are told that they cannot." Questions such as "we have people buried in the park -- are they part of the park too?" are on the minds of villagers. It is apparent through discussions with numerous individuals that the park hasn't made a change in people's access to desired areas, and that people still go where they want to go. In the winter, when people use the most land, there is no problem because the use of snowmachines is uncontested; they do not do any damage to the land. In the summer, there are only so many places that Argos can go; they can only go so far. Again according to several sources, what limits the range in the summer is the technology that is used and the terrain -- not really regulations. The residents of Anaktuvuk Pass had people telling them what they could and could not do on the land, and when. That is what did not sit well.

*3.* Government Institutions and ANCSA Corporations

In policy matters the Anaktuvuk Pass Traditional Council favors oil development in the Arctic National Wildlife Refuge. Among the council's explicit goals are to effect a transfer of Nunamiut Corporation lands to its control and to obtain a return from the Park Service of those lands within the Gates of the Arctic National Park that are associated with historic use and occupancy and cemetery sites. In sum, the newly refounded traditional council seeks to establish its identity as the village council in the context of the IRA and has explicit association with the goals of the IRA.

While working together on a number of issues, the Anaktuvuk Pass City Council and the Nunamiut Corporation are distinct entities with their own constituencies. The city council, at least in theory, is part of a political process that is open to all. The Nunamiut Corporation, on the other hand, is directed by its shareholders who were selected on the basis of residency and Native identity as of 1971. Indeed, the city council of Anaktuvuk Pass has had members who were originally from outside of the community. At the time of field research (March 1989) the mayor of the village was an individual originally from another North Slope village who moved to Anaktuvuk Pass as an adult. In the recent past, at least one non-Native has served on the city council as well.

According to one individual who has been active in the political processes of the community, the present working relationship between the corporation and the city council is a product of the not too distant past. According to this individual, who was in an official capacity at the time, the corporation and the council had not worked together for six years. Apparently at the initiation of one or more members of the city council, the two groups agreed that they had to work together and get their differences settled. According to individuals on both the city council and the corporation board, there is now a workable relationship between the two institutions.

At the time of field research in the community, there were three individuals who were serving on both the city council and the Nunamiut Corporation board of directors. This overlap is also credited with helping maintain a good working relationship between the institutions. It is not the case, however, that those individuals who seine on multiple committees will speak on behalf of one institution in the context of the other. It is reported to be the case that when there are matters that come before the city council that effect the corporation, for example, the people who are on the board of the corporation who are also council members will say "you'll have to take that before the corporation" and will not speak to it. In one sense these individuals are the corporation but it is also clearly the case that for a portion of the board to act on behalf of the entire board, which is itself acting on behalf of the entire corporation and its shareholders, would be a serious violation of the leadership by consensus principal that is so prominent on the North Slope in general, as well as requirements of Alaska corporate law.

B. Native Corporations

The local village corporation in Anaktuvuk Pass, established under ANCSA, is the Nunamiut Corporation. The Nunamiut Corporation owns the surface estate of 92,160 acres in the general vicinity of the village. Within the village, the corporation has focused its business activities on ownership of the local store and fuel distributorship. In the recent past, the corporation has been

heavily involved with the NSB Capital Improvements Program (CIP) projects. But as funding has declined, so has employment and revenues in the village. Housing constructed during this phase, and the employment brought by these and other construction projects, fueled the extremely high rate of growth seen in the community in the late 1970s. The Nunamiut Corporation was also involved with the installation of a cable TV system in the village. The general area of Anaktuvuk Pass was the site of exploratory oil drilling in 1977 and 1981, according to the North Slope Borough Planning Department, and although no commercial oil or gas discoveries were made, the area is still considered by some to have promise (NSB 198449). Outside of the community, the Nunamiut Corporation has been involved with the Pingo Corporation, and through that entity, oil development on the North Slope, primarily in the Prudhoe Bay area (NSB 1984).

During the field research (March 1989) the only joint venture the corporation was involved with was a fuel distributorship in the community. The fuel tanks are located south of the USDW building near the end of the airstrip away from the village. Of the tanks at this small tank farm, one is dedicated for the school, one for Municipal Services, two for gasoline, and the remainder of the tanks are for fuel oil. The tanks, along with a small pumphouse, are located in a fenced-in area. Another interest of the corporation is a construction camp style bunkhouse/hotel, called simply the "camp," located in the corporation building. It also features a cafe that is open to the public as well as the individuals who are staying in the camp. The primary operation of the local corporation is the community store.

The manager of the Nunamiut Corporation at the time of field research was a non-Inupiat. This individual did have kin ties to the community through the marriage of an offspring to an Inupiat resident, and in fact was the mother-in-law of one of the board members. The job of manager is reportedly difficult because there are problematic aspects built into it. In a community the size of Anaktuvuk Pass it is difficult to please everyone all of the time because people sense inequity and take business and employment decisions personally. People do not separate business aspects of multiplex relationships, and this lack of compartmentalization influences other social relationships. According to one long-time resident of the community who is not a shareholder in the corporation, "In the past it would seem that a new manager would come in, things would take a while to get running on a even keel, and then the manager would leave because they had reached the saturation point" of all of the interpersonal difficulties they ran into because of the job. There is some indication that the structural advantage of having an "outsider" make or carry out decisions in the corporation is explicitly recognized. That is to say, the difficulties of having a permanent, Inupiat resident of the community in a position that more or less demands independent decision-making, rather than consensus formation, and an eye to the economic "bottom line," rather than the social ties of village life, is well understood.

One Nunamiut Corporation board meeting was scheduled during the field research period. The researcher was invited to the meeting after he had asked a corporation official about the corporation's various activities. The official asked the researcher to address these questions to the board at the meeting because, in his words, "I don't like to be the guy who knows everything." This statement, particularly in the context, was taken to mean that this individual, although he was clearly knowledgeable about the workings of the corporation, felt uncomfortable speaking on behalf of the corporation and that it was inappropriate to do so. At the time of the scheduled meeting, however, a quorum could not be obtained and the meeting was cancelled. Once the meeting was cancelled, the researcher was invited to the official's home, and his help was freely offered. That

is to say, this individual was most willing to be helpful, and after the researcher made an honest attempt to address the board, when it turned out he could not do so for reasons beyond his control, the official in question was comfortable helping the researcher. This pattern has been noted by other researchers in the other North Slope villages. Initially, individuals in official positions are uncomfortable speaking on subjects that may be interpreted as their speaking on behalf of the entire institution, but after the entire institution (or its group of leaders) has been contacted, individuals are most willing to help on a personal basis.

The corporation leadership recognizes that underemployment in the village is problematic, but it also accepts that the corporation can supply only so many jobs and that its resources are rather limited At the time of field research there were four individuals employed at the store and five who worked out of the office, including those associated with the camp and fuel pumping. It is difficult to choose the level of employment -- there are those in the community who think that the corporation should supply more jobs, while some corporation leaders think that the level of employment, as set by the corporation manager, is too high. None of the officers on the corporation board are paid, and the corporation is not in a position to pay the president either.

## C. Social Services

One of most pressing social problems in the community of late concerns two deaths in the community, one of which was a suicide and the other of which was judged to be a case of manslaughter. The effects of the suicide were still very much being felt in the community at the time of field research in March 1989.

According to Public Safety personnel who are involved with the investigation of deaths other than those that are obviously due to natural causes, one of the more disturbing aspects of the suicides and suicide attempts in the community is that they involve young people, and they are often the brightest, and seemingly most promising, children. According to one person in Public Safety, "the students who are at risk are the brightest ones. . . There are the kids who just drift along, and they get by, but the ones who are the brightest and the most sensitive, they are the ones who see the future, see down the road, and they are the ones who go into depression . . . if they feel there is nothing for them here, and they can't make it Outside either . . ." It is recognized that there is increased risk for others in the community after a suicide which stem from glorification of the suicide, eulogizing the victim, copycat behavior, grief, guilt, and depression.

There is some expressed sentiment in the community for a teen center, and programming to accompany the center directed at teens. There is nothing in the community specifically for teens, no place where they can get together outside of their homes and this is considered problematic by some community residents.

D. Health

1. Organization and Scope of Operations

During the 1970s the health of the Anaktuvuk Pass people was served by three different individuals: a doctor, a public health nurse, and a health aide. By this time in Anaktuvuk Pass, unlike at least some of the other North Slope communities such as Point Hope, the role of the traditional healer had been phased out. The doctor came twice a year from the Public Health Service hospital in Tanana, 200 miles south of Anaktuvuk Pass. He or she gave cursory examinations to all the children and anyone else desiring consultation or treatment. The public health nurse came to the village only one to three times per year but spent a longer period of time with the people in the village than the doctor did. The public health nurse administered vaccines and made home visits to recommend improvements in household sanitation and other public health matters. The health aide was (and still is) a permanent resident of Anaktuvuk Pass who functioned as an intermediary between the absent doctor and the sick patient. Typically the health aide discussed the patient's symptoms over the phone with the doctor and then administered medicine according to the doctor's recommendations (Cline 1975:45).

In 1984, a new health clinic was opened in Anaktuvuk Pass, operated by the NSB. It is 4,400 square feet in area and includes four exam rooms, a lab, a film processing room, office space, toilet facilities, and general storage areas (NSB 1984:69). According to an NSB doctor, this facility is supremely modem and equipped, but the organization of the regional bureaucracy that runs it is organization is not. According to this physician, the disorganization of the health services bureaucracy discourages medical doctors from remaining on the North Slope for more than a year or two. The high turn-over rate of physicians is not to the resident's advantage.

At the time of field research in March 1989, the elected Health Board consisted of four women, although men also ran in the most recent election. The three major responsibilities of the board are to raise money for health-related needs of the villagers, to allocate these monies, and to resolve complaints about local health services. Following field research, a new non-profit corporation was formed to take over the take over the functions of the old Health Board.

The primary money-making activities of the Health Board are bingo games and "pull tabs," a lottery type of game played with paper gaming tokens sold at bingo sessions. A recent licensing problem with the state about bingo games was being resolved in March 1989. In the previous year the pull tabs and bingo games had grossed about $150,000, of which $32,000 was profit. Villagers may borrow this money or receive grants from the Health Board to attend funerals at distant villages for members of their immediate families, to seek medical aid in Fairbanks or Anchorage, and defray hostel or hotel expenses while obtaining health care away from the village. Health-related complaints by villagers, the board's third major charge, are always attempted to be resolved on an informal basis. If this proves to be impossible, the board meets to hear a formal complaint and then takes corrective action.

The Emergency Medical System of the village is geared toward getting patients who have serious medical problems out of the village in an expeditious reamer. The idea upon which the system is structured is to have a quick response time ("get there fast") and to get them to a hospital in a

timely manner ("get them out fast"). People in the village vary in their assessment of the level of care available in the village. While some consider the Community Health Aides adequately trained for their task, others feel that more highly trained personnel are truly needed in the community. One of the difficulties in providing service in a community as small and isolated as Anaktuvuk Pass is that the cost of health care provision per person is very high.

*2.* Health Problems

Based on field interviews, it is safe to say that most villagers would agree that three major health problems prevail: alcohol abuse, illegal drug use, and attempted suicide, although not necessarily in that order. Data that exist for some other villages on health concerns do not exist for Anaktuvuk Pass. Dann & Associates, Inc. (1987) recently complied a survey to assist the Inupiat Health Board in establishing priorities and in assessing health needs for the North Slope. Anaktuvuk Pass, however, was not among the villages surveyed.

At the time of the field study, March 1989, suicide was the foremost health/social service problem in the minds of village residents because of one recent death and a minimum of eight unsuccessful recent attempts. The persons involved all were youthful Inupiat (high school students or young adults) with male-female cases nearly equal. It appears that alcohol or drug use was involved, directly or indirectly, in most, if not all, cases. "Indirect" involvement, in this instance, means that use of alcohol or drugs by persons close to the individual attempting suicide influenced the attempt. Varied explanations are offered by villagers about why there have been so many attempts recently. Included are low personal esteem, weak family ties, the cold weather coupled with a lack of social activities, and drug or alcohol abuse per se.

Alcohol abuse, according to an older male resident, did not become a social problem until after passage of ANCSA, when construction jobs that paid well became available locally and other jobs were created by oil-related activities. Consumption is said to have been about equal for males and females. As habitual drunkenness became increasingly prevalent, it was accompanied by social deviance. Consequently, following enabling legislation by the state, the village voted to become dry. Alcohol consumption declined dramatically immediately afterward, but reportedly it is again on the increase. Local bootleggers import intoxicants, and a bottle of hard liquor sells for $100 or as much as $200. To eliminate the flow, villagers have discussed baggage inspection for in-coming passengers, but no move has been made in this direction. In the only other effort to stem consumption, a program administered by local health aides provides a drug to depress the desire for alcohol.

The information about illegal drug use is uneven but reasonably clear. Marijuana is smoked by villagers, with some younger ones smoking it repeatedly throughout the day. Cocaine is available locally, and the same appears to true for "crack" (an especially potent derivative of cocaine), although the level of usage does not appear to be great for either drug.

## E. Religion

### 1. History of Churches

In the late 1800s and early 1900s competition existed between different Protestant sects for the opportunity to convert the Native Alaskans. Eventuality, the Anglicans, Presbyterians, Episcopalians, and Quakers agreed to missionize in different parts of Alaska. The Presbyterians, who worked at Pt. Barrow and several Arctic coast settlements, and the Quakers, who established a mission in Kotzebue Sound and claimed the Kobuk River, were the two groups whose influence most profoundly affected the Nunamiut. The Presbyterian missionaries met with initial difficulties, but after 1910 the mission grew as material benefits began to accrue for the Pt. Barrow Inupiat. Because the Nunamiut maintained close ties with the Pt. Barrow Inupiat, they were influenced by those Presbyterian ideas.

Quaker ideas reached the Nunamiut from the West. Some of the Quaker practices, such as washing the hands and face before eating and not working on Sunday, that reached the Nunamiut were eventually passed to the Pt. Barrow Inupiat.

The first Presbyterian church in Anaktuvuk Pass was built of logs as a cooperative effort by villagers, who hauled in logs from the treeline to the south by dog team in 1958. This was done upon the advice of a Presbyterian missionary from Barrow. Construction and subsequent operation of the church was done without the benefit of a permanent minister living in the community. If a baptism or a wedding was to take place, the minister from Barrow would come to Anaktuvuk Pass (Cline 1975:35). The original structure is still standing in the village, although it is boarded up and no longer used.

There are two theories about why the missionizing program in the North Slope was so successful. The first theory is based on the Native prophecy of oivaksat which predicted the coming of strangers. The theory suggests that the acceptance of Christianity was facilitated by its having been prophesied in some form and thus easily incorporated into local beliefs. However, there is disagreement among Inupiat about the relationship between oivaksat and Christianity. According to Gubser (1965:18), "Some informants saw little if any relationship between the concept of oivaksat and Christianity. Others suggested that, after Christianity had become the dominant religious influence, oivaksat was used as a rationalization to support the feeling that the prophecy of the arrival and success of Christianity among Eskimos was essentially an Eskimo concept."

### 2. Contemporary Churches

The Presbyterian church in Anaktuvuk Pass was considered a mission of the Barrow church until 1%5. At that time it became independent and elected its own elders who conducted services. Three services were held per week -- two on Sunday and one on Wednesday evenings. Services were conducted in Inupiaq with one of the elected elders leading. In the mid-1970s Sunday school sessions were held for school-aged children using mimeographed lesson plans mailed by a missionary woman to the Sunday school teachers. Cline noted in the late 1960s that:

> The attitude toward the church is generally positive; in fact the church was ranked by villagers as being more important than the school. One notices, however, that in the adult population the influence of the church doctrine overtly appears to be less strong among the younger people. This is reflected in church attendance patterns with the middle-aged and older people attending the most frequently. These same people are more frequently elected to the Board of Elders (1975:40).

In the early 1980s services moved from the old church to a larger, pre-fabricated wooden building constructed adjacent to the original church. Ideally Sunday 'roofing and evening services are conducted, and a Wednesday evening service is held as in the past. All are suspended during the summer months. Occasionally social events are held in the church. An ongoing Sunday school has been unsuccessful, despite intermittent efforts. Pastors and lay pastors still minister to the needs of the Anaktuvuk Pass congregation on an intermittent basis. An Inupiat man from Barrow who is a Presbyterian pastor married a woman from Anaktuvuk Pass. He was the nearest approach to a resident pastor, but after living in the village intermittently, he and his wife moved to Fairbanks a few years ago. In sum, there have been no long-term resident clergy in the village, nor do the people anticipate that any will locate there. The church is a wooden building of "log cabin" style construction, and is furnished inside with folding chairs. A hand-sewn banner on the interior reads 'Chapel in the Mountains, Anaktuvuk Pass Presbyterian Church."

Church affairs currently are managed by six elected elders, all of whom are women, and their emphasis in services is on Christian morality. There are 75 members of the church from a total Inupiat population of about 230. On a typical Sunday about 15 people, most of whom are women, attend a service. When a visiting pastor held a service one time, attendance was greater than 25 persons. One individual who was intimately associated with the church stated that attendance began to drop when television reception expanded in 1978-1979. This person also felt that a lack of church vitality resulted from low male participation as well as the absence of a resident pastor.

## F. Infrastructure

### 1. Utilities

The most current information in the literature is that compiled by the NSB Planning Department and Alaska Consultants in 1984 for the Capital Improvements Program. The information on utilities that follows is summarized from that document.

Unlike any other village on North Nope, Anaktuvuk Pass obtains its water supply from wells. The original community well was drilled in 1974 -- the drilling was by the U.S. Public Health Service; the pumphouse was provided to the village by the borough under the NSB Capital Improvements Program. Water from the community well is treated and delivered to structures in the village via truck. A second well was later added that supplied the school and an adjacent construction camp directly with untreated water (NSB 198460); this well was no longer in service as of March 1989.

Prior to the construction of the school in 1979, all sewage disposal was confined to individual or common pits near the site of origin; coupled with the construction of the new school complex was the construction of a new sewage lagoon and a sewer line connecting the school and adjacent construction camp. Honeybuckets are used in the remaining structures in the village, and these are disposed of in the solid waste disposal site adjacent to the sewage lagoon. The collection of these wastes in plastic bags is recognized as a significant problem on a borough-wide basis, as these bags are non-biodegradable and as a result cannot be deposited in the sewage lagoon (NSB 1984). The community landfill is considered a problem as it is in all other villages on the North Slope. Two fenced areas within the landfill are designated for garbage and trash, while a third area is designated for human waste, which is directly deposited in its honeybucket liners. The present landfill site is the second one in the community; an earlier site was located on the far side of the airstrip away from the village and this was considered a safety hazard, as people would cross the runway on snowmachines and ATVS to reach the dump. One Municipal Services employee noted that a flood control project diverted the river that runs through the community to the extent that it now runs through a portion of the old dump site, and that this should be cause for concern about water quality. This individual expressed the opinion that fish downstream were affected, but how widespread this view is is unknown.

The Washeteria building, which contains community laundry facilities, showers, flush toilets, and a sauna, is the newest public building in the community. Built in 1988, it is well used. It is not open on weekends due, according to staff, to staffing considerations.

Electric power generation, as in all of the other villages of the Slope with the exception of Barrow, is 100% diesel-generated. The present power plant was installed in 1980 and upgraded with additional generators in 1981. This plant replaced a much smaller system installed by the Borough in 1977 and an even earlier system installed by the State to supply its school. Both of the old generator structures are now used only as storage facilities (NSB 1984:63).

The Arctic Slope Telephone Association Co-op, Inc. provides village residents with individual local dial telephone service. This system is linked to long distance circuits via satellite. Until quite recently, communication between Anaktuvuk Pass and the outside world was limited to a single village telephone. The Borough has also constructed a telecommunications center in Anaktuvuk Pass similar to other villages in the region (NSB 1984:68). This center provides the ability to make conference calls to other villages for such things as classes and governmental meetings, among other uses. Cable television has been available in the community for several years.

The Anaktuvuk Pass airport, while the responsibility of the state, was" upgraded in 1980 by the North Slope Borough. The runway was extended to a length of 5,000 feet, runway lighting was provided, and an airport terminal building was constructed. In its present configuration, the runway is capable of handling fully loaded C-130 Hercules aircraft. This is very significant due to the fact that, unlike the coastal villages in the region, Anaktuvuk Pass is totally dependent on air transportation for the delivery of fuel oil and general supplies. A new apron area was added in 1988 between the USDW building and the fuel storage area at the southwest edge of the airstrip. It is composed of crushed gravel, and is also to be the area to which the terminal will be relocated from its present site at the northwest comer of the runway. This move has been planned for some

time due to the proximity of the present terminal to the airstrip itself, but to date no action has been take on the relocation.

Infrastructural needs, as defined by the city council as of March 1989, are discussed in the section on government above. These included desired improvements in the water system, the sewage system (that is, construction of a sewage treatment system that would serve the entire village), and construction of a daycare center. As noted elsewhere, residents also feel that there is need for more housing in the village.

*2.* Transportation

Transportation to Anaktuvuk Pass, in a very real sense, has "always" been by air. The contemporary community was founded where it is, in part, due to the fact that it is a favorable location for an airstrip, and it is the same location that the first airplane landing in the area was made by Sig Wein in 1944. In 1989, the community hosted a "Sig Wein Day" to honor the pioneer aviator who figured in the early history of the modern community. The present airstrip is a busy one, with a minimum of four flights to the community per day in the winter time, and more in the summer with the seasonal increase in tourists. One resident recounted that during the summer of 1988, he counted seven aircraft on the apron at one time. At the time of field research, Frontier and Wright air carriers were serving the community with a morning and afternoon flight each, Monday through Friday, and MarkAir was in the process of establishing regular service to the community. Flights on the weekend were available at a minimum of once per day. The number of flights is not attributable to commercial opportunities, rather, the mail contract service is what makes the number of flights into the community possible. According to airline personnel, mail contract moneys are divided between carriers that service the community on a regular, scheduled basis. For at least one of the airlines, it is this contract money alone that makes it possible for the airline to seine Anaktuvuk Pass. Several cargo carriers also fly into the village, but these flights are on a sporadic basis and depend directly upon demand.

There has never been overland commercial or governmental transportation of goods into Anaktuvuk Pass. One "Cat Train" did pass through the community during the "construction" of the "Hickle Highway." This "highway" was put through when it was thought that a pipeline would follow a route through Anaktuvuk Pass. The pipeline eventually was constructed in the next major pass, which brings it within approximately 50 miles of the community. The "highway" was used for the one Cat Train, and never thereafter. According to local accounts, what really caused the shift in the planned location of the pipeline was the fact that about the same time the Cat Train went through the community, there were military training maneuvers in the area and the troops used the Cat trail (Hickle Highway) in their movements. When people saw all of the outsiders in the area, they realized what it would be like if the pipeline and a road were put through the village. This prompted an outcry about the changes that would be brought about by all of the outsiders and how a way of life in an Eskimo village would be destroyed. This was, again according to local sources, what caused the moving of the pipeline plans to its present location. All supplies, including large construction materials and heavy machinery, are brought into the community via air. Large machinery was broken down into component parts for shipping, and building materials were brought in in planeload batches.

There is no commercial or governmental ground transportation within the community of Anaktuvuk Pass, with the exception of the school bus. Unlike several of the other communities, the community does not have a general service bus, nor does it have a senior citizen bus. Bus shelters for the school children were obtained but have not been used to date and remain in storage.

3. Recreational Facilities

Current recreation facilities are found at the school building and the community hall which was built in 1982. The community hall's multi-purpose room is used for bingo, dances, games, and meetings. At the time of field research in March 1989, there were no bingo games being held in the community. Bingo reportedly brought in substantial income to various service organizations in the community, but in the recent past there have been some licensing difficulties. One man joked that not having his wife play bingo has "resulted in a substantial jump in [his] earnings," and while another man stated that "people learned that you don't win at bingo," it is clear that bingo is a form of recreation that was popular and is missed in the village. It will most likely start up once again as soon as regulatory or legal difficulties are resolved.

The school is used when more room than is available at the community hall is needed, such as at some holiday feasts. The school also has a small outdoor play area. In October 1982, two privately owned recreation facilities were established. One was a small pool hall and the other was a video arcade (ACI 1983:60). There is also an outdoor basketball court in the community that was constructed in the summer of 1988. This court is located on the north side of the village, diagonally across the bridge from the clinic, and near the newer housing development. This basketball court was used a lot in its inaugural summer season. In recent years, the popularity of computer games as recreational outlets has grown. During field research, "Nintendo" games were widely popular among young people in the village. School sports, as in other villages on the North Slope, are popular recreational events in the community. High school basketball games in particular are well attended.

Open recreation nights at the school gym draw quite a number of participants. Each night a couple of hours are reserved for kids, followed by adults. As in other North Slope villages, basketball is the game of choice. There are loosely composed teams of adult men who compete on recreation nights and who compete in tournaments in other villages. It is not unusual on open recreation nights to have women congregate in the lobby area of the school just outside of the gym, and there is a student store, run by the student corporation, that sells fast food and snacks in the lobby. The school is open to the public every night except Sunday. The school also has a small swimming pool, which was closed because of widespread influenza in the community at the time of field research, but which has been open for recreation at times in the past. In many ways the school is the community center for Anaktuvuk Pass. It is the public place that is open and active six nights a week, where one can go for active recreation, conversation, or just to "hang out."

There is some sentiment in the village that there needs to be more recreational opportunities for teenagers, that some teen facility is needed. According to one village leader, "they need something to do other than basketball. They need a pool table, ping pong, things like that." There is a student radio station at the school, and according to the school principal, it and the small "studio" associated with it is the only place in the community that is just for teenagers. The room that

serves as the studio is off the main lobby/hallway area of the school, and it is run by the students. A signal is broadcast that can be picked up in the community, and it serves as a social place as well, a place for teenagers to go.

There are also recreational opportunities in the village that are not associated directly with village infrastructure. These include both episodic and more continual activities. One seasonal recreational event in the community is a dogsled race. Each year, Anaktuvuk Pass is host to a leg of the "Coldfoot Classic" race. Although no Anaktuvuk mushers participate (as noted elsewhere, there is only one dog team remaining in the village), it is a much anticipated event. At the time of field research there were plans for a dance and a live band to accompany other race festivities. At the previous year's dance, it is reported that young and old alike danced. There is some "Eskimo dancing" at community festivities as well. Apparently at least informal training of the very young is still taking place.

Although subsistence activities themselves are not considered recreational, the "recreational" aspects of subsistence activities are well noted in the village. While subsistence is strongly associated with culturally significant values (i.e., is closely associated with the definition and maintenance of a Nunamiut/Inupiat ethnic identity, and is not considered merely "sport"), individuals note the pleasurable aspects of subsistence. Whether hunting caribou or wolf, or ice fishing, individuals noted how good it was to "get out of town" on these pursuits. For those who balance full-time employment with weekend hunting, the hunt, in addition to a number of other meanings it holds and functions it serves, provides an escape from the everyday pressures in the village.

G. Fire Protection

A trained and organized firefighting service in Anaktuvuk Pass was not provided until the early 1980s. Presently fire protection in Anaktuvuk Pass, like other villages on the North Slope, is provided under the auspices of the NSB Fire Department. The 'local fire department._ is a component of the parent NSB Fire Department and is staffed by volunteers. The fire station is a 4,680 square foot facility that was completed in 1983. It is equipped with two firefighting vehicles and an ambulance (ACI 1983:47; NSB 198466). The two firefighting vehicles consist of a pumper and a tanker truck.

According to the head of Search and Rescue, who in the past has served as the fire chief for the community, there are 40-50 volunteers for both the Fire Department and Search and Rescue, and that in Anaktuvuk the organizations are really one and the same. The intertwinement of the two organizations can be seen symbolically in the emblem of the departments. The main body of the emblem features large lettering stating "Anaktuvuk Pass Vol. Fire Dept." around a bighorn sheep caricature driving a snowmachine in the mountains, a clear reference to search and rescue work. Additionally, a banner attached to the bottom of the emblem reads "Search & Rescue."

Both organizations reportedly draw their members from old and young alike, and they are popular membership groups. In describing the two organizations, one informant explained, "The distinction is that if you are the fire chief, then you are responsible for all of the gear and the facility; you are only responsible for the SAR gear if you are the SAR leader." It would seem that there are at least some day-today distinctions between the organizations, because one of the priorities of the

present SAR leader is to get a separate building for the SAR organization. Being responsible for the fire gear also means being responsible to "Barrow" (the Borough) because it is the parent department that in the end is responsible for the gear and the facility.

At the time of field research (March 1989) the Fire Department was relatively inactive. The Fire Department and Search and Rescue are scheduled to have one meeting per month. Meetings are consecutive on the same evening, but there had not been a meeting of either organization for several previous months. Neither team schedules meetings during the summer season. According to the resident Public Safety Officer, the Anaktuvuk Pass Fire Department has not had a call in the past two years. According to the former fire chief, there was one structural fire in the past year (1988-1989), and there was only smoke damage from that, but the fire department took care of it. An older resident of the community reported that within recent memory there have been two or three homes that the Fire Department has saved that would have otherwise burned down. According to the SAR team leader, while people are often inactive when it comes to meetings, "what is important is when they are needed for searches [and fire calls], that is when everyone shows Up."

## H. Search and Rescue

Traditionally, search and rescue (SAR) efforts in Anaktuvuk Pass were conducted on a voluntary and informal basis. Before the Division of Search and Rescue was established through the NSB in 1979, the local Public Safety Officer assisted in the coordination of search and rescue efforts through use of radio equipment. The Division of Search and Rescue was created in Barrow both to assist the Alaska Department of Public Safety and to provide administrative, training, and financial support to the volunteer Search and Rescue teams in the other villages of the North Slope (ACI 1983:50). Local Search and Rescue equipment consists of five snowmachines and two Argo ATVS. Volunteers also use their own machines in searches.

Operationally, Search and Rescue is divided into approximately five field teams. When SAR is activated, a first team will go out and report back in to the village via radio. The search will call upon more teams until as many as necessary are deployed. When necessary, members will be placed in radio relay positions so contact with field teams in the mountains and passes can be maintained.

According to the resident Public Safety Officer, there has not been a Search and Rescue call for a local resident in trouble for the last two years (1987-1989). "Guys here do not get in trouble to the point where they need Search and Rescue. They hunt in groups so that if they do get in trouble, it is not all that serious." It is also this PSOS feeling that there are few calls for locals because it "is a lot easier to keep from getting lost here than it is on the coast [in the coastal villages of the North Slope]. On the coast there is a whole lot of tundra that looks the same; here the people know the landmarks very well. The SAR missions that there are, and there were about three last year [1988-1989] are when outsiders crash aircraft, or when tourists get into trouble in the park. Most of the tourists are very well prepared, but occasionally someone gets lost, or there is a cold spell that sets in." According to the leader of Search and Rescue, tourists in the park are not really an SAR problem. "They are well prepared when they come here, they usually check in with the PSO and let them know where they are going and when they expect to be back. If they are overdue, then something will be started, but that doesn't happen very often."

All official searches for which volunteers are to be reimbursed have to go through the Public Safety office in the community. The resident PSO is the liaison to the State Troopers, and it is their agency, the State of Alaska Department of Public Safety, that issues a control number for the search, the use of which authorizes expenditures. Unlike the situation in Point Hope, the Anaktuvuk Pass PSO does not get involved with pre-search snowmachine inspections and the like, but does handle the associated paperwork. According to local Public Safety records (and PSO recall) there have been two official searches in the past two years (1987-1989). This total does not include Medivacs, where SAR is involved, but involved only to the extent of putting someone on a plane. This total also does not include informal searches, where the search subject is in a relatively well-defined location near the village, nor does it include intra-village searches, such as the one observed during field research in March 1989 when a child was overdue returning home and SAR helped by contacting different residents in whose homes the child might be and by searching the area within the community with the ambulance.

One of the two official searches was for a National Park Service helicopter crash. According to the PSO, there was a pilot and four Park Service people out flying ridges, doing vegetation studies, and the aircraft lost power and crashed. "All of the people ended up OK, but it was miraculous. One guy had a broken back, and the two women had bums. The chopper tumbled down the mountain side, but a pilot of one of the regular flights [scheduled flights into Anaktuvuk Pass from Fairbanks] was flying one valley off of the usual route saw the smoke almost immediately after it went down. That was a lucky thing because the ELT [Emergency Locator Transmitter] was destroyed in the crash." The plane's pilot radioed to Anaktuvuk Pass, Public Safety called Bettles to look for another helicopter to use for a rescue, and "there was one just sitting on the ground there. It was in the air almost immediately, and the people were medevaced out of there and were in a hospital in Fairbanks within one and a half hours after they went down."

According to the resident PSO, the other official search was a result of two German tourists, "one of whom was not in as good a shape as he thought. They were hiking around one of the lakes, and then were going to hike back into town. The one guy simply exhausted himself on the tundra and was incapable of moving further." The other hiker walked into Anaktuvuk Pass and notified Public Safety. Although the local Search and Rescue was mobilized, aerial rescue resources from outside of the community were called in to complete the mission. There is one individual who owns and keeps a plane in the community, and this plane is used in local searches, but this individual travels out of the community often, particularly during the summer.

Within fifty miles of the village there are five or six structures that are sometimes used as emergency shelters. These are old cabins and are in various states of disrepair. They are not intentionally provisioned, but they do provide some shelter in an emergency.

The longest search out of the community in recent memory, according to the leader of Search and Rescue, lasted for three days. In that case, the search subject's snowmachine broke down while he was hunting for wolves. It happened near the Trans-Alaska Pipeline, approximately sixty miles from the village. He was reportedly difficult to track because he was hunting back and forth across valleys and left tracks that were difficult to interpret.

The area of Search and Rescue operations varies seasonally. During the winter, there is a much larger radius, as there is more mobility with snowmachines and people hunt and trap and travel much farther away from the village. In the summer, Argos are used but they are limited in the terrain they can cover, and both subsistence activities and searches are more confined. In addition, Argos are less dependable than snowmachines so summer searches after those stranded with a broken down Argo are possible. Terrain also influences effective search areas in another way. To the south of the community, the mountains provide much more distinctive landmarks than the foothills and the plain to the north. On a recent winter search, a SAR volunteer left a snowmachine on a hilltop, and rode with another person, planning to retrieve his machine later. According to the leader of SAR, it is still sitting out there, a brand new machine, as the individual was unable to locate it again.

Search and Rescue used to raise funds through bingo, and according to the leader of the organization, could get a thousand dollars a night. These monies were used to fund people to go out for medical care, and pay their expenses in Fairbanks or wherever they needed it. Now the clinic board serves that function. In this same manner, money would be provided to "people who really needed it in the village. IRS didn't like it, but it was for medical expenses, like MediCare." There is no Mother's Club in the village to supplement SAR or the Health Board as is the case in some of the other North Slope villages.

L Public Safety

Police protection in Anaktuvuk Pass was provided by the City of Anaktuvuk Pass, with periodic assistance from the Alaska State Trooper stationed in Barrow, prior to 1976. This situation was unsatisfactory since service was inconsistent and the legal status of the officers was in question. However, when police power was transferred to the newly created NSB Department of Public Safety in 1976, a trained officer was stationed permanently in the village. This was increased to two officers in 1979, cut back to one again in 1982 because of Borough budget cutbacks, and then increased again to two officers in 1983 (ACI 1983:43).

The current Public Safety building in the community was built in 1979 (NSB 1984:66). It is a 1,200 square foot structure and includes two holding cells. The facility is staffed by two resident NSB Public Safety Officers. Officers rotate through the village as they do in other North Slope communities -- one year in Barrow followed by two years in a village, and then the pattern repeats. This ideal pattern is seldom, if ever, met. One of the PSOS in the community at the time of field research (March 1989) had been the single PSO in the community for "most of the last two years. One other guy was hired for here, and was here for all of two weeks. There are supposed to be two guys here all the time, but there have been very long stretches without." This is seen as a significant difficulty for the lone PSO. For example, this individual related that he hardly ever hunts, because he could not leave the village without a law enforcement resource. He noted that it was ironic that during the past two years he has hunted quite a bit outside the village, because when someone would come to relieve him for duty, that is where he would go. In Anaktuvuk Pass, however, "living in the midst of fine hunting," he was not able to take advantage of it.

According to a PSO relatively new to the village, "Anaktuvuk is small enough that you feel a part of the village. I help unload the planes, for example. People see that, see you pitching in . . . It

is OK [for PSOs] to hunt and fish here . . . the guy who is the [NSB] Fish and Game rep [representative] says that the land here is open to everyone, everyone is free to use it." A PSO with more time in the village, however, noted that he has never been "part of the village, and that is the biggest disappointment with this job.' He relates that he had not anticipated that when he moved to Anaktuvuk Pass. He feels that residents are friendly on the surface, but there is "a point that you never get past." He attributes this primarily to attitudes toward law enforcement and the role of the PSO in general, and secondarily to attitudes toward non-Inupiat individuals other than those who marry into the village or otherwise put down permanent roots. For example, he notes that non-permanent residents in the community associate primarily with other non-permanent residents and that people considered outsiders are seldom if ever invited into people's homes, and that, along with other attitudes, makes it difficult to form strong friendships with community residents.

The PSO who has been in Anaktuvuk Pass for a couple of years is unmarried and has no one living with him, which creates difficulties with assigning other officers to the community. According to several PSOs, other PSOs with wives do not want to be transferred to Anaktuvuk Pass (or other communities under similar circumstances), because the wives want another "PSO wife" in the village with whom they can socialize. One PSO noted that "what the wives don't realize is that there are always female teachers and teacher's wives in the villages [if they want to socialize with other "outsiders"], but they want another PSO wife." Another officer in another village attributed this to the unique demands and stresses of the job, which is also stressful for their wives -- the wives want at least one friend available with whom they have that in common.

Public Safety activity in the village varies seasonally, and is tied to, among other things, activity in the Gates of the Arctic National Park. According to one PSO, during the season (late June through early December) there are around fifteen people per day who come into the park through Anaktuvuk Pass. This influx influences the work load of the PSOs, because while it is not the case that there is an increase in crime, the tourists do utilize the PSOs by "stopping by the office, checking in, asking about routes and for suggestions. That takes up virtually all of the [PSO's] time." Most are well-prepared and do not have further need for Public Safety or Search and Rescue services. "They typically have spent a lot of money just to get here, and a few extra hundred [dollars] for good equipment is nothing. Probably half of the people who come here are not Americans - they are Europeans and Japanese, and most of the Europeans are Germans." The National Park Service, according to the PSO, had three or four personnel to help in the village in 1987, but sent none in 1988.

No statistics are kept in the Public Safety office in the village on the number of arrests made in the community, nor on the number of calls for assistance received. According to the PSO stationed for the longest period in the community, "Mostly the job is pretty boring. There are a lot of times when there is absolutely nothing going on; then there is a flurry of activity. There can be a month go by with nothing, or so it seems. Then there is some alcohol or drugs in the village . . . virtually 100% of the domestic violence, child abuse, and assaults in the village, and all other crime as well, is alcohol- and drug-related." According to this PSO, drugs account for a minuscule portion of the total, while alcohol accounts for the vast majority of serious public safety problems. Prices are high for bootlegged alcohol, and it is reported that a bottle of bourbon sells in the village for around $80, but sometimes it is up as high as $150. "It is just too much of a lure, that kind of money, so people will take the risk and sneak it in. When the booze comes into the

village it is usually because someone with the character to bring it in has worked long enough to earn enough money to go out and get it. When it comes in sometimes even people who are otherwise really good folks will get into it and there will be problems with violence."

The PSO attributed a lot of the problems with alcohol in the community to the typical consumption patterns. "One of the problems with drinking here is that there is no 'social' drinking. Whenever the booze comes in, it is consumed immediately. The [bottle] cap is thrown away [as soon as it is opened]." He related an incident where a woman had come in for a voluntary commitment for "detox" the previous day. To be voluntarily committed, an individual has to go through some paperwork that includes a questionnaire. One of the questions on the form is 'have you ever had a drink but not to get drunk?" (or similar wording) and her answer was no. "That is not uncommon. People here only drink to 'get high' as they put it. There is no moderation."

Although Anaktuvuk Pass is a "dry/dry" village, which means that it is both illegal to import and illegal to possess alcohol, according to the PSO it is very difficult to enforce the alcohol ban. There is no village on the North Slope that now searches luggage coming into the village as a matter of course, due to the fact that it is illegal to conduct such a search without a search warrant. According to the PSO there is one village in another part of Alaska that is doing that, but the only reason they are is that no one has challenged it yet. "It is very difficult to catch bootleggers here, difficult to establish legal 'probable cause' for a search warrant." The PSOS do often go out to meet the planes as a deterrent, but they report that the only bootleggers who get caught are the inept ones. If the luggage "sloshes" then there is a chance that a search warrant can be obtained.

According to the PSO who has been longest in the community, there are no significant problems in the community with breaking and entering, burglary, or vandalism, unlike some other North Slope communities. "It just does not happen like that here. In the past year [1988] there has not been a burglary. There is no problem of vandalism to speak of. The problems here are more of the type where the destruction is turned on the people, whether it is self-destruction, domestic violence, or child abuse, or whatever." There has been one homicide in the community recently that ended in a conviction for manslaughter. As noted elsewhere, there have also been successful and unsuccessful suicide attempts in the recent past. One of the PSOS attributed some of the problems with self-destruction in the village to changing needs of parenting skills -- people's lives have changed and the kids are growing up in quite a different environment from the one they grew up in, and as a result there are some difficulties created in the home environment.

Public Safety Officers are reportedly not utilized in any social service capacities other than as a referral agency. This vanes from some of the other villages on the Slope, and may be attributed in large measure to the fact that in Anaktuvuk Pass there has been only one officer for so long that he necessarily was limited to more or less strictly law enforcement-type duties. There is no formal involvement of Public Safety with the Fire Department, and involvement with Search and Rescue, as noted above, is restricted to communications and liaison work. Emergency Medical System involvement is limited to logistics and communication assistance as well. There is no National Guard detachment in Anaktuvuk Pass, so there is no involvement with Public Safety in that area either.

J. Schools

1. History

In the summer of 1943 to spring of 1945 some or all of the inland Inupiat families moved to the upper Kobuk River drainage, living for various periods in the local villages of Ambler, Shungirak, and Kobuk. According to Hall et al. (1985), at least one reason for this was so that the children could attend school. However, the first local schoolteacher spent a few months with families at Tulugak Lake during the summer of 1948, affording them their first classes in English. The classes were held in a tent for six weeks, and nearly all the people attended (Cline 1975:85). The school schedule was sporadic for the next ten years. Teachers came during the summer from Anchorage, and at least one came from Pt. Barrow, but the Nunamiut didn't know from one year to the next if school would be in session (Cline 1975).

The first teacher sent by the state came in the summer of 1959. There wasn't a school house so classes were held in the Presbyterian church. A new school was completed in the fall of 1%1 and a series of teachers came to Anaktuvuk Pass. The formation of the NSB in 1972 provided Anaktuvuk Pass with its own teachers and Native (regional) control of the school.

As noted in the discussion of infrastructure, the contemporary school at Anaktuvuk Pass is used as a community center in addition to its educational functions. Open six nights a week to the public, individuals can also purchases lunches at the school during the week. The student store at the school sells burgers, fries, pop, candy, and other foods on evenings when the school is open for public recreation. While making money for a student organization, this also serves the community.

2. Organization and Operations

As in other North Slope villages, educational services in Anaktuvuk Pass are provided by the North Slope Borough from Early Childhood Education (ECE) through the twelfth grade. The school complex is elaborate and includes not only classrooms and offices but a kitchen complex, swimming pool, gymnasium, and library in one building. The physical plant, especially the gymnasium, is used regularly, not only for sporting activities and meal service but for public meetings and numerous other social occasions not related directly to school activities. (The building is of the same design as the school at Nuiqsut.) Within certain limits the current principal has encouraged use of the building by the community in general.

Enrollment figures from the 1983-1984 school year show that enrollment, excluding ECE and kindergarten, was 45 students. Average daily membership for the same year, again excluding ECE and kindergarten students, was 49.1.

At the time of field research in March 1989, the teaching staff included the principal, four male and three female teachers, and a teacher's aide, all of whom were non-Native. In recent years there has been a low teacher turnover in the village. In March 1989, the teacher with the least tenure had been teaching at the school for at least three years. This compares favorably with NSB schools in general, where the teacher turnover rate is about 25% per year. One teacher attributed

the lack of turnover (which is also down on the Slope as a whole) to the fact that teaching jobs are now harder to come by in other areas of the state and Outside.

According to a couple of teachers who have been in the community for several years, Anaktuvuk Pass is a community where it is very easy for an outsider to fit in and "virtually all doors are open [although] there are people who don't want to realize this . . . this is a very friendly community." One teacher attributes the relatively low turnover in staff at the school to the fact that the teachers have been accepted into the community. "One of the things that keeps them [the teachers] healthy is the fact that the teachers here do not socialize with one another. They see each other at school all day, and at night they see other people." This has not always been the case and reportedly teachers are often not well prepared for the realities of village life, as they are never told what it will really be like. There is not only the issue of culture shock, there is the problem of living conditions -- "some of the people who have come are appalled at the idea of a honeybucket." The potential for isolation is reported to be difficult for some people too, "but that hasn't *been* a problem here lately. There have been *some* people who haven't made it to Thanksgiving in the past, and others who have stuck it out just for the paycheck but were miserable here."

One of the frustrations with the NSBSD for the long-time staff "is that the district sees the teachers as interchangeable, and this is not the case. There is a specific need here for a math teacher, and there has been for four years." There are also stated needs for other specialties. "The problem is that they expect you to do everything, and there are some people who are good at some subjects and not at others." One of the interests of the community is to have a vocational program at the school, but there is no one to teach it. One staff member reports that a past problem with the school district has been with the recruiting of teachers via an "old boy" network. It is "not so bad now," but the superintendent and staff recruit the teachers, and as in any bureaucracy, there are individuals who are recruited because of friendship networks.

In general, the curriculum conforms with the standard American educational norms. In addition, two programs are designed to accommodate locally perceived needs. One is the language transfer and maintenance program to teach Inupiaq. This especially is encouraged by the NSB school administration, but at Anaktuvuk Pass these efforts have proved relatively ineffective, possibly because of staffing problems. A second special program, the spring camp-out for high school students, is designed to teach students to live off the land and at the same time impart what it means to be Nunamiut. Of the ten high school students who were able to participate in the camp-out during the spring of 1989, six planned to attend. Extracurricular sports activities are popular, particularly basketball. In the evenings the school also operates a student radio station, "KAKP." While broadcasting locally, this entity is really more than a radio station. Rock music is played during the week and country and western music is played on the weekends. According to the school principal, "what is really special about this place [the radio station] is that it is the only place in town for the teenagers, and a place where they like to hang out." Decorated with pictures of rock groups, "it is really the only place for them to go that is just for teenagers."

According to the school principal at Anaktuvuk Pass, the major objective of the educational system is to raise the achievement levels of all students. In the recent past attendance was a major problem, but that has been resolved, at least to the satisfaction of the principal. The principal is not unsympathetic with the efforts by villagers to foster Inupiat traditions in the context of formal

education. She seeks to improvise and improve accommodations with Inupiat culture rather than actively preserving or preventing its ongoing nature.

*3.* Issues

A major educational issue, if not the most significant one, is: Can the system prepare students optimally for becoming socio-economically successful (competitive with Euro-Americans) and allow or encourage them at the same time to remain Inupiat? With a school system goal of raising achievement test scores to national levels and a village goal of retaining cultural traditions partially through formal education, an inherent incompatibility seems to emerge. It is compounded by non-Native educators' effective control of the village school. In theory, the School Advisory Council, which is reportedly quite active, could have a significant impact, but three of its seven current Anaktuvuk members are non-Natives who do not appear to focus heavily on Inupiat cultural considerations. Among the advisory board concerns are programs for vocational training (e.g., carpentry and home economics), which are apparently not viewed as meaningful preparation for the contemporary American work force and therefore are not favored by school administrators.

From the perspective of one of the school board members, what the school needs is a major emphasis on "getting back to the basics." This is in conflict with the NSBSD, "which seems to think that these kids should be doctors and lawyers and the like . . . Now the school here is heavily into computers and what the kids really need is an emphasis on reading and writing . . . It will be many years before . . . Inupiat homes here have personal computers, so it is not really a reasonable thing spend a disproportionate amount of time training them in."

The Inupiat program at the school in Anaktuvuk Pass consists of a language class and then a culture class or a class on ANCSA. It used to be that all of the students, ECE through high school, were taught Inupiaq. But recently there have not been enough older students who were interested in the language, so culture classes, which have consisted of making things, clothing or pieces of the technology, or classes on ANCSA, have been substituted. The language class is not a true conversational language class, but like programs in some of the other villages, consists primarily of word memorization and some phrases. As in other villages, there is strong pressure to hire a local individual as the instructor for the program, but there is no comprehensive training program for teaching skills for this individual.

Based on conversations with teachers and some of the people active in educational issues in the community, it would appear that one of the primary difficulties faced by the school is that the style of learning and teaching has changed in Anaktuvuk Pass (and other North Slope villages) in the last generation or two. The shift has been from an orientation favoring observational learning toward favoring active teaching. For example, adult women in the village used to learn to sew from their mothers, by means of watching their mothers and then trying themselves. Reportedly, the mother would not interfere, but would look at the item when it was done and then tell the child to do it over again if it were not right. Now when an adult woman, particularly an older woman, comes into the school to teach traditional sewing, there really is no active teaching -- the woman expects the children to learn like she did, just by watching and then doing, and the teacher not interfering at intermediate stages to provide instant feedback to the children. According to one of the teachers, "of course at the same time the kids are ruining off the ceiling because the

attention span isn't there. It used to work in the old days with all of the time that the kids spent with their parents and there was a chance at discipline, but now discipline is a big problem and the kids don't find that style of interaction interesting." One teacher noted that she found this style of teaching frustrating herself when she was trying to learn a local skill. She was sewing a ruff, and had a local resident show her how to do it. When she finished sewing it, and showed it to the woman, the woman cut it off and told her to do it again. To the learner's eye it initially looked just the same as the other woman had done, but the difference was that the woman stitched toward herself, and the learner stitched away. Stitching away from one's body wasn't right because that wasn't the way the local woman had learned to do it herself. Oswalt (1989 personal communication) notes that compared to skill-learning he observed in rural Alaska several decades ago, an artificial situation exists in the school where children learn complex traditional skills in one or two hour blocks of time. In the past it would take a number of years to learn to make a parka, or learn a similar complex task, as opposed to the hunting skills that take relatively little time to learn. Active teaching, that is correcting someone in the middle of a series of tasks, traditionally meant that you were in effect telling the person that they are stupid, that they cannot learn this skill. Oswalt reports that in Eskimo villages a few years back a common response to telling someone you did not know how to do something was "do it anyway." This response gives people a degree of latitude to try things and come up with their own solutions, but does not fit well with the learning context found in contemporary village schools.

According to teachers, there is now a push in the school district for "competency-based assessment" of students. There will be competency-based exams for students in the third grade in the near future, and some teachers feel that the district has underestimated what will happen when some students do not pass. One teacher expects that "students in the younger grades do great, but in the third and fourth grade when there is the shift from concrete to abstract thinking" the students probably won't do as well. "When the kids do not pass the teachers will be blamed," and this person anticipates that there will be the difficulties with teachers "teaching to the questions."

According to a long-time teacher at the school, "parents are interested in the student's progress at school, but there is a problem with knowing how to become involved. Parent-teacher nights haven't worked," but when the interaction was structured as a community function, things have worked out well. It is reported that a significant number of parents don't see themselves as directly involved in the school process, rather, it is perceived that that is the teacher's job. Another teacher noted that under present housing conditions, it is difficult for some students to find quiet time for homework. During the field research (March 1989) a 'report card night" was held at the school. The event was well attended, and it was apparent that every segment of the community was represented. Dinner was served from the school kitchen, and people for the most part ate on the school lunch tables in the gym, half of which normally doubles as the school cafeteria. One family seated themselves on the floor as is common at festivals in other North Slope communities. At one point, an estimated 150 people were in attendance. Following dinner, awards were given for school attendance. For children younger than high school age, two children missed one-half day and two missed no days during the first quarter. They received certificates for this and there was much in the way of recognition for their achievements.

For the high school students, there were awards for total points achieved through a formula combining absences, passing course work each week, and being on time for classes. A goal was set of 1,000 points, and although only four prizes where purchased for awards, there turned out to be

six students who qualified, so the prizes were given to the top four. Stereo cassette players were the prizes of choice. The students and the principal had a meeting at the start of the year in which they made clear what they could do for her -- don't miss school, be on time, and pass -- and what she could do for them. What the kids wanted was a trip, a cassette player, and tapes. For the quarter that ended with the dinner the reward would be the cassette player, the following quarter prizes would be the cassettes, and for the end of the year the principal announced she was arranging a trip to Santa Fe, New Mexico for those who qualify if the money is available, which is something she was working on, too.

According to a long-term resident of the community who has been active in school issues, one of the big problems with the education system in the village (and in other villages on the Slope as well) is that there is no disincentive for failing. "Not much [in the way of formal education] is needed to make it in the village . . . You don't need a degree to get a job . . . The people here live for the present, not for future goals . . . It is not like you can see someone with a nice house and a lot of things and see what goal orientation will get you."

According to school staff, there is only one person in the community (other than professionals hired in from the Outside) with an AA degree. In the last several years, everyone else who has left the community to pursue post-secondary education has returned to the village in only a short while. "The last thing the parents tell them as they are leaving is that if it is too hard, come back. Come back. And that is what they do." As noted in other sections, there is profound concern in the community over dysfunctional and self-destructive behavior on the part of some young people in the community, and some of the individuals who are considered at highest risk are among those considered the brightest and the most able.

## SECTION IV: CULTURAL ISSUES AND INFORMAL INSTITUTIONS

### A. Patterns of Change in Informal Institutions

While recognizing the importance of outsiders in cultural and social change in the Anaktuvuk Pass area, given-the nature of interaction of the Nunamiut with outsiders in this area, Oswalt (1989 personal communication) suggests that a period or era model of change in institutions is not the most appropriate one. This is due primarily to the overlap in periods and the inconsistency of interaction. It has been suggested that a satisfactory model of change in this area remains to be developed, but at a minimum it would include consideration of relative isolation and degree of interaction between the two groups. Additionally, upon examining different modes of interaction and change in the villages of the North Slope, it appears that the type of resource being exploited by the outsiders and the style or technology of exploitation needs to be taken into account as well. For example, the effects of commercial whaling on the North Slope depended in large part upon the particular resource that was being exploited (it overlapped with Inupiat resource use) and the style of exploitation, which dictated manpower needs, seasonality, spatial relations of crews and shore stations, and so on. This contrasts with the types of needs generated by exploitation of other resources, such as oil. Beyond resource differences there are, of course, differences in types of exploitation of the same resource. On the North Slope, for example, religious change varied from village to village by the particular religious sect that was active during the missionization period. Another dimension, of course, is timing, as the influence of any one particular force of change depends upon the context within which the change is occurring. For example, contemporary missionization efforts will have markedly different effects than missionization efforts that took place when the communities were relatively isolated from other forms of interaction with outsiders.

That the people of Anaktuvuk Pass recognize that there is change occurring rapidly is seen in local support for a museum which was recently built in the community. The museum, which details traditional Nunamiut life, was the number one community priority for public projects at the time of its construction. Housed in a log cabin-style building near the church overlooking the main portion of the village, the museum features displays of artifacts and photographs of professional quality. Included in the displays are a full-sized caribou skin tent, a mannikin in traditional clothing, traditional clothing and dog gear displays, maps and geological samples, drawings and plant samples, and a range of artifacts of both old and recent origin. The building also houses a library that contains copies of virtually all of the scientific works that have been carried out in Anaktuvuk Pass. Residents of the community are clearly aware of how quickly social and cultural change is taking place, and the museum is a clear attempt to both preserve knowledge of the past and to teach children about their cultural traditions.

Beyond, or more accurately in the midst of, larger scale changes in the village, smaller scale changes are taking place, with the formalization of previously informal institutions. To a considerable extent, much of this formalization is related to the institutions of the North Slope Borough, which have fostered the growth of analogous institutions at the local level as noted in the discussions of formal institutions. There are other instances, however, where changes within institutions are brought about by relations with state and/or federal authorities directly. Following is an example of how the formalization and regulation of previously informal institutions has served to complicate and ultimately hinder community benefits on the North Slope. Until 1988, the

Health Board and the local Search and Rescue organization held bingo sessions that included both standard bingo and "pull-tab" style games in order to raise money to fund their activities. The games were suspended that year, however, when one resident called Juneau to check on their license to hold bingo games. The authorities told her that Anaktuvuk Pass had no license to hold games, that they never had one, and that they must stop holding bingo sessions immediately. Further, the organizations involved in any future games were obligated to obtain a license and could do so only as a nonprofit corporation. Thus, Anaktuvuk Pass hired a lawyer in Fairbanks, at a cost of $2,000, to arrange the legal aspects for obtaining a permit. In addition, they were required to pay back taxes on the pull-tab games to the federal government. This is a problematic situation because apparently the records that were kept are not adequate to determine with accuracy the amount of money that was made on the games. The span of time involved offers additional complexity. Bingo games and pull-tabs reportedly began in Anaktuvuk Pass in 1974. As a result of Health Board complications, the Search and Rescue team decided not to try to obtain a license. Consequently, there are no bingo fundraisers in the village and there is no money to financially assist people in going to Fairbanks for medical reasons.

It should also be noted that formalization of institutions does not necessarily correspond with formalization of the functioning of those institutions. For example, within the Nunamiut Corporation, which is a formal institution by structure, the leadership style, as noted above, has retained a considerable degree of informality. In informal contexts within the village, decision-making within groups is based on consensus formation, and apparently the same holds true within formal organizations as well. For example, as noted above, one of the two primary officeholder of the Nunamiut Corporation was uncomfortable answering questions on behalf of the entire corporation and expressed this by saying, "I don't like to be the guy who knows everything.'

B. Subsistence

1. Organization of Subsistence Activities

The organization of subsistence activities among people of Anaktuvuk Pass is closely tied to the history of the migrations of the Nunamiut people as a whole. In the nineteenth century, there were many bands scattered throughout the Endicott Mountain valleys. The people lived and hunted according to seasonal rounds which depended on the availability of different animals, primarily caribou (Spearman 19824). In periods of abundance the Nunamiut went to the coast in late spring to trade their caribou and other items with the coastal people, the Tareumiut. They then returned inland for the summer and fall caribou hunting. After the fall hunt the band broke up into smaller family units until the next spring at which time they would reassemble for the big caribou hunts (Spearman 1982:7-10).

Life during the mid-twentieth century for the Nunamiut "has a unique history, one involving a lengthy series of tribulations and migrations, disasters and recoveries, and acculturative influences" (Burch 1976:65). The caribou decline in the early 1900s forced many of the Nunamiut to leave the inland area they had occupied for hundreds of years. Most crossed the Brooks Range and scattered along the previously uninhabited coast between Barrow in the west, and Banks Island (northern Canada) in the east (Burch 1976:64). During this period the people's subsistence efforts shifted from hunting primarily "caribou to fishing, whaling, and trading-with non-Natives. By the

1930s the caribou population had increased and the Nunamiut began to return to the Brooks Range so that once again their primary source of subsistence was caribou. However, the availability of non-Native foods in the Nunamiut diet increased as trading posts were established in various parts of the Brooks Range.

Traditional hunting and gathering remained the primary source of subsistence for the Nunamiut even after Anaktuvuk Pass was established as a permanent village. The event that changed this pattern was the discovery and exploration of petroleum in the North Slope. As discussed above, the economy of the Anaktuvuk Pass peoples changed drastically, including their subsistence practices. People were unable to hunt during the usual periods because of job constraints. However, caribou remained an important source of sustenance, both spiritually and physically. According to the Kruse et al. survey (1981:73), 25% of the people in Anaktuvuk Pass said they got "all or most" of their total household food from hunting and/or fishing. Thirty-two percent of those in the village reported getting "half," 32% reported getting "some," and 11% reported "none" of their total household food from hunting or fishing.

A singular hallmark of traditional Inupiat culture has been the aptness of its technological inventory for life in the far north, yet one of the most profound changes in Nunamiut culture has been its technological transformation. Modem artifacts such as skin garments, skin scrapers, ulus, and built-up sleds based on traditional models continue to be made and used, but the diminished importance of handcrafted artifacts in contemporary Anaktuvuk Pass is striking. A distinction should be drawn between working artifacts and "art" artifacts in this instance, as the making of skin masks, using materials obtained through subsistence pursuits, is common in the village. These masks were not used in traditional ceremonies or rituals, but rather had their origin in the creativity of two individuals planning to participate in a Christmas celebration and were created for amusement. What is being continued in Anaktuvuk Pass is a tradition of subsistence through the procurement of specific resources from the local environment (rather than the exclusive purchase of resources procured by other individuals or from other plain), but what has changed dramatically is the technology by which the resources are taken and the end uses to which they are put, exclusive of consumption. Dog teams and individual pack dogs, once emblematic of Nunamiut life, are no longer used by Nunamiut in Anaktuvuk Pass. The one team remaining in the village is owned by non-Native individuals. One member of the family who owned the next-to-last team reports with both adults of the family working, as the family grew through the birth of more children, the maintenance of a dog team was simply "too much."

In contrast, Western technology is pervasive in subsistence activities. By 1989, the time of field research for this project, the use of firearms, traps, telescopes, cloth tents, lanterns, and camp stoves was, of course, long-established. Coupled with all-terrain vehicles (ATVs), snowmobiles, and CB radios, they have resulted in profound changes in subsistence strategies. For several reasons, perhaps the most far-reaching of these developments was the introduction, in the 1960s, of snowmobiles for winter transportation and ATVS for summer transportation (Hall 1985:6,73). The eventual elimination of dog teams meant that the great number of caribou required to feed dogs no longer were required, nor was it necessary to devote time to dog team maintenance. Equally important, the effective daily hunting and trapping range was vastly increased. However, the purchase price and maintenance costs of snowmobiles and other non-locally produced items, such as gasoline-powered ice drills used for ice fishing, has required involvement in a wage labor economy that is in many respects diametrically opposed to the optimal scheduling of subsistence

pursuits. The compromises involved represent significant Nunamiut flexibility in combining traditional pursuits with contemporary wants and needs.

Snowmachines have dramatically increased effective winter subsistence range, particularly when one considers the need to integrate subsistence activities with employment. For example, during field research in March 1989, one individual who was employed full-time went out on a three-day hunting and trapping trip. This individual has a camp and traps approximately 120 miles away from the village in the mountains and a second camp approximately 40 miles from the village. With a snowmachine, the far camp is only a seven hour ride away from the village and this individual can successful pursue his subsistence goals while retaining employment. Contrary to some individual's statements in the community, hunters do sometimes go out alone, as observed during field research. In one instance, a man went out for caribou alone, his machine broke down, and he spent all night walking back to the village. This individual said the reason he goes out alone is that a "guy used to follow me, we would go out hunting together, but that guy moved to Barrow."

As noted in the discussion of the relation of the village to the National Park Service, subsistence is pursued within the Gates of the Arctic National Park more or less as people in the community would want it, due to the present agreement with the NPS. There are a few non-Natives in the village who have subsistence rights in the park as well as the Nunamiut residents of the community, because assignation of rights was based on residency at the time of the formation of the park, not on ethnicity.

The following table, Table 15-AKP, presents data on household characteristics by levels of subsistence participation. There are several associations noted on this table that are of interest to the discussion here. Among Inupiat households, those that are in both the "moderate" and "active" subsistence categories have an average income of approximately $37,000. Those households in the "minimal" category, however, have an average income of $24,000. That is to say, higher levels of income are correlated with higher levels of subsistence activity. For non-Inupiat residents the pattern is reversed -- those households in the "minimal" degree of subsistence participation category have a higher average household income than those in the "active" bracket ($53,846 compared to $32,500, respectively).

## 2. Inupiat Subsistence Ideology

There is a unique world view associated with the economic practicalities of subsistent hunting among the Anaktuvuk Pass people. This world view includes complex and minute knowledge about the environment (Hall 1985:1 1). The impact of imported foods, decreased time for subsistence activities, and restrictions on hunting territories has lead to concerns on the part of the people of Anaktuvuk Pass about a shortage of foods from their traditional diet.

Table **15-AKP**

**Anaktuvuk** Pass Household Characteristics - 1988
By Levels of Subsistence Participation

| | DEGREE OF SUBSISTENCE PARTICIPATION | | | |
|---|---|---|---|---|
| | MINIMAL | MODERATE | ACTIVE | ALL HHs |
| Average HH Income ($): | | | | |
| Inupiat HHs | $24,100 | $37,500 | $36,429 | |
| Non-Inupiat HHs | $53,846 | | $32,500 | |
| All HHs | $34,276 | $37,500 | $36,293 | $35,282 |
| Cases: | 38 | 4 | 29 | 71 |
| Average HH Size (# Persons per HH): | | | | |
| Inupiat HHs | 3.6 | 6.3 | 4.3 | |
| Non-Inupiat HHs | 1.6 | | 4.0 | |
| All HHs | 2.9 | 6.3 | 4.3 | 3.7 |
| Cases: | 38 | 4 | 30 | 72 |
| Average Meat &Fish Csmptn from Own HH Subsistence (%): | | | | |
| Inupiat HHs | 7.8% | 32.5% | 71.1% | |
| Non-Inupiat HHs | 4.6% | | 65.0% | |
| All HHs | 6.7% | 32.5% | 70.7% | 34.8% |
| Cases: | 2s | 4 | 30 | 72 |
| Average Meat & Fish Csmptn from Other HH Subsistence (%): | | | | |
| Inupiat HHs | 39.8% | 27.5% | 21.6% | |
| Non-Inupiat HHs | 6.3% | | 10.0% | |
| All HHs | 28.4% | 27.5% | 20.8% | 25.2% |
| | 38 | 4 | 30 | 72 |
| Average Meat & Fish Harvested and Given Away (%): | | | | |
| Inupiat HHs | 12.0% | 20.0% | 25.5% | |
| Non-Inupiat HHs | 1.0% | | 35.0% | |
| All HHs | 8.3% | 20.0% | 26.2% | 16.4% |
| Cases: | 38 | 4 | 30 | 72 |
| Average Proportion HH Income Spent in Village (%): | | | | |
| Inupiat HHs | 62.4% | 70.0% | 70.4% | |
| Non-Inupiat HHs | 20.8% | | 45.0% | |
| All HHs | 46.2% | 70.0% | 68.6% | 57.7% |
| Cases: | 38 | 4 | 29 | 71 |

Notes: Degree of subsistence participation measured on the basis of how much HH meat & fish consumption was from the HHs own subsistence activities; where
MINIMAL: Under 20% meat& fish from own HH subsistence
MODERATE: 20-40% meat & fish from own HH subsistence
ACTIVE Over 40% meat &fish from own HH subsistence.
Total cases (households) = 73.

Source: NSB Department of Planning end Community Services
Census of Population and Economy

The mayor of Anaktuvuk Pass wrote in reference to Native restriction of access to the Gates of the Arctic National Park, "Without access to the hunting areas outlined below, it will become necessary for us to purchase, when money is available, meat and foodstuff . . . and yet when we can get these foods-they do not satisfy our needs or cravings for our traditional foods" (Hugo et al. 198420, cited from Hall 1985:9). "This comment underscores the point that subsistence foods are more than just subsistence; they are, as the Anaktuvuk Pass city council wrote in 1979, '...soul food that not only feeds our bodies but nourishes the feelings we have of our meaning as Inupiat people'" (Jeffrey, letter to Cook, 3/15/1981, cited from Hall 1985:9).

While subsistence remains a strong ideological issue, the nature of subsistence in the village has changed even in the last several years. According to numerous individuals, people do not go out trapping for several days at a time like they used to even in the early 1980s. For most now, day trips are the standard. According to an individual who has lived in the community for over a decade, "the biggest change [in subsistence] over that time has been the length of time that people spend out." Another resident who has been in the village for just under a decade noted that over that span people "are not on the land as much as they used to be." The number of individuals involved apparently have also declined over this period as "it used to be the case that on Saturday mornings at 600 a.m. you would hear the snowmachines fire up, and they would be off for hunting or trapping or whatever. Used to have people go out . . . and picnic at 20 below. People just don't go out here like they used to." No firm data was collected to support this impression. Reportedly the adult men who do the most subsistence, and know the land the best, are employed for the most part, so hunting is now primarily on the weekends. According to one knowledgeable resident "really, it is not a weekend thing, it is Saturdays . . . people tend to go out for a long day on Saturday and then rest up on Sunday to go back to work on Monday." One man who is an active subsistence hunter indicated that working interfered with what he wanted to do in the way of subsistence. He wanted to hunt sheep, but "no sheep this year . . . haven't had the time, been working."

3. Issues

The impact on the traditional subsistence activities of the Inupiat of Anaktuvuk Pass due to leaves of absence for academic opportunities and wage labor jobs has been discussed in sections I.B.3 and IV.B.1 above. Under present NSB policy, two weeks of subsistence leave is granted for most jobs. One individual active in subsistence pursuits noted that this is not sufficient for most active people. He himself takes about three weeks off in the fall for the caribou harvest, and another two to three weeks for the wolf hunt and trapping. This time is in addition to weekend pursuits. The disparity between subsistence leave and subsistence activity for this individual is made up primarily through the taking of vacation time.

The effect of regional management on (i) the restriction of ATV travel to certain routes on certain lands; (ii) the potential creation of subsistence use areas within which the residents of Anaktuvuk Pass must confine their subsistence activities; and, (iii) the establishment of corridors for point-to-point snowmachine travel has been great (Hall 1985:81). According to Hall, access to food resources as a limiting factor in subsistence activities (as opposed to depletion of food resources) is new to the residents of Anaktuvuk Pass. Restrictions and regional management of the local resources has not yet been accepted by the Nunamiut "partially because they do not understand the

necessity, but mostly because it runs completely contrary to the philosophy held by hunting and gathering peoples and thus they believe that it threatens their survival as subsistence hunters" (Hall 1985:81). Field research (in March 1989) indicated that hunters from Anaktuvuk Pass are utilizing the land in pretty much the fashion they would desire, though no residents desire the NPS having the potential to restrict and regulate hunting and other subsistence activities in the future.

Gubser prognosticated in 1%5 that, "should many white men begin to take large quantities of meat, caribou hides, and furs out of the country, there is no doubt that strong sentiments of territoriality would be aroused" (Gubser 1965:166). Since then, stiff competition for caribou and severe restrictions on the use of traditional hunting grounds have been placed on the Nunamiut, but despite the restrictions and the wage labor jobs, subsistence hunting and trapping continue to be important as an evening and weekend activity restricted to within relatively close range of the village (Hall 1985:71). In fact, working for wages has not reduced the number of hunting and fishing activities that individuals on the North Slope take part in (Kruse et al. 1981:13), although individuals feel that while the same types of activities are taking place, it is much less intensive than in even the recent past.

C. Traditional Sharing and Kinship Behaviors

1. Kinship Organization

The most comprehensive account of recent kinship organization in Anaktuvuk Pass is by Gubser (1%5). The following characterization of kinship in the community draws from this account. Unfortunately, this information may be dated, as it was collected nearly 30 years ago. Without extensive field research, it is unclear how much kinship relations have changed.

Every married adult is a member of two families -- his family of orientation and his family of procreation (Gubser 1965:139). Consanguineal ties are strong among the Nunamiut and in many ways ego is beholden primarily to his family of orientation; first his parents and siblings and then his spouse (Gubser 1965:140).

In the early 1%0s, complete support and cooperation was expected from a man to his spouse's parents. This was especially true if a new couple moved into the wife's parent's house, which was usually the case. The son-in-law would occasionally present gifts of food or clothing to his in-laws if they lived in another structure nearby. Although the Nunamiut, according to Gubser, distinguish carefully between consanguineal and affinal relatives, flexibility in kinship relations was the guiding principle. "In blood feuds, severe legal disputes, and malicious gossip, this distinction between consanguineal and affinal relatives becomes sharply defined, but in other matters such as economic support, moderation, and the expression of affection, once a relationship is established, either by blood, or by marriage, many of the same obligations ensue, particularly when residence and locality bring people together" (Gubser 1965:15-7). As a general rule, geographical location often dictates the practicalities of kinship obligations (Gubser 1965:139).

In Gubser's time, economic rights, obligations, and customary behavior by an individual to his sibling's in-laws occurred only insofar as that individual is aiding his own kin. "Just as ego has greater obligation to his lineal relatives and siblings than to his collateral relatives, so is he

expected to offer more aid and feel closer attachment to the spouses of his lineal relatives and siblings than to the spouses of more distant relatives" (Gubser 1965:165).

Sibling in-laws of the same sex were often very close and cooperated economically, especially the women. Although one was expected to be pleasant and hospitable to the spouses of one's more distant relatives, he would not likely go out of his way to cooperate with them just because of the relationship. The important point about ties to in-laws is that they provided potential relationships in economic matters (Gubser 1%5).

An interesting point is made by Gubser concerning the circumstances under which people feel allegiance to members of their household. The general rule is that, in the course of ordinary interaction, a person's membership in a household does not force him to respond only as a part of that social group. The household does form an alliance, however, on an occasion of gossip or attack against another member. The household also acts as a unit when trading with members of households in other communities (Gubser 1965:130). This was the case in 1960-1%1 when Gubser did his fieldwork. A comprehensive ethnography has not been conducted since then so it is impossible to be sure the same rules hold.

Another aspect of external relations of a household in Gubser's time was the formation of a household cluster, which has largely replaced the extended family. A cluster was usually composed of two or three households in which closely related people lived. Clusters usually formed along matrilineal lines. If this was impossible, a young couple starting a home would move near the husband's parents. If neither set of parents were living, the most common solution was to move near a sibling (Gubser 1965:131). Household clusters cooperated and share economically.

According to Gubser (1965:143), "what is important to a Nunamiut is not so much the abstract idea of a term of consanguineal relationship or the usual limits of the kindred, but rather those members of his kindred whom he knows personally as a result of proximity, those he has met on his travels, and those whom he has heard about from his own relatives." It is with such people that a Nunamiut would willingly share food and other resources.

Data from the field indicate that the people of Anaktuvuk Pass use at least three different definitional criteria for determining position of Nunamiut long-term residents within the social organization of the community. There is importance attached to sequential primacy and relative prominence; that is, there is significance attached to how long one has had relatives in Anaktuvuk Pass, and the role one's relatives played in the early community of Anaktuvuk Pass. An example of organization based on order of arrival and prominence was provided in the field. One informant's father came to the proto-community in 1949 and was the first "mayor" [leader] of Anaktuvuk. This informant feels that his family is not receiving its just recognition given how much his relatives did for the community in its early settlement days. A third criterion is based on the particular geographic area (such as a drainage basin or lake) one's kin group was from prior to their settlement in Anaktuvuk Pass. For example, one may hear it said that the members of one family are "Chandler Lake people," while the members of another family are "really Canadians" (even though in this instance the family has lived in Anaktuvuk since the early days of the community). There would appear to be importance attached to having kinship "roots" in the areas around the community, particularly in the instance of where one's relatives used resources from and lived in areas that are still utilized by contemporary community members for subsistence purposes.

2. Formal and Informal Sharing

Formal and informal sharing in Anaktuvuk Pass within kin groups was traditionally very important when the people were migratory hunters and gatherers. The band, which "was composed of several households, the members of which resided together in a recognized hunting territory and traveled and camped as a group on trading expeditions to other regions," cooperated during spring and fall in hunting caribou (Gubser 1965:165). In the summer and winter, bands dispersed into household units. Households, which were composed of several extended families, would not necessarily join the same band each season but when an independent household did join a band, it ceased to exist as a distinct entity (Gubser 1965:166).

The household is still a fundamental social group in the village of Anaktuvuk Pass. "A majority of Eskimo households, in all villages, reported receiving some of their wild game and fish from other households in 1977, and half of Eskimo households reported they had given or loaned money or equipment for hunting and fishing to others" (Kruse et al. 1981:71). Specifically, the responses to the question, "Did you or any members of your household get any Eskimo foods from others?" ranged from most, with 4%, to none, with 39%. Twenty-five percent said half and 32% said some of the members of his/her household received Inupiat foods from others (Kruse et al. 1981:73).

Information on formal and informal sharing among the people of Anaktuvuk Pass with other communities is discussed in the literature only in relation to the large trade faire which took place annually each late spring before the onset of sedentism (Spearman 19825). These trade fairs allowed the Nunamiut to trade goods with the coastal Inupiat, and reactivate kin ties (Spearman 1982).

Formal and informal sharing among the people of Anaktuvuk Pass within kin groups, within the community, and between communities as it occurs today, outside the context of migratory hunting and gathering, has not been covered in the present literature, nor has extensive field research been done on this topic in recent years. During field research in March 1989, the mayor of the village related that "at the right time of year, we send a planeload of caribou to Kaktovik, and they send a planeload of muktuk here. That is real good for both villages . . . people like it a lot." It was also noted during field research that frozen fish are brought back from other communities and distributed within the community in a pattern similar to that observed in other villages. For example, a relative of a number of people from Anaktuvuk Pass passed away in the village of Kiana. A number of relatives from Anaktuvuk Pass flew to Kiana for the funeral service. On the return to the village, one older man brought back a large sack of fish he had obtained in that community, and some of these were observed to have been given to others in the community. In Point Hope, this same pattern held - when people traveled to Kotzebue, for example, frozen fish were often brought back and given to relatives, and in one known instance when the high school volleyball team from Nuiqsut came to Point Hope, a sack of frozen fish was sent from one relative in Nuiqsut to another in Point Hope via the team charter.

Foods are also redistributed by means of the feasts associated with the major holidays, such as Thanksgiving and Christmas. The larger of these are held in the school. Smaller feasts, such as those given when a church official is visiting the community, are typically held in the community building. Like other villages, at the feasts in Anaktuvuk Pass, not all food present is consumed.

It is also a context within which subsistence (and other) foodstuffs are redistributed, and individuals take home items that are not consumed. One long-time resident of the community also noted the important redistributive nature of the summer poker game. Lasting from the spring until the late fall, "toward the end of the season it is sometimes played in really nasty weather." While not played every night, it "is played several nights a week all summer long." With "very high stakes, a lot of money changes hands," and a significant amount of money is paid to people who sell some of the food and drinks they bring.

One resident who has lived in Anaktuvuk Pass for approximately ten years has noted that over that period there has been a significant change in informal but widespread sharing within the village. "Things have changed some . . . it used to be that the village celebrated everyone's birthday. A call would go out on the CB to come over to someone's house for a party." Part of this may be attributable to the fact that fewer people now use CBs with the coming of telephones, so it is less easy to contact a broad number of people, and part may be attributable as well to the reported decline in visiting overall with the advent of television in the village.

### *3.* Ideology of Kinship and Sharing

The relationship between "traditional" and "modem" patterns of kinship ideology and sharing is not specifically addressed in the literature as no comprehensive ethnography has been written on the people of Anaktuvuk Pass since Gubser's 1960-1%1 research. It is unlikely, however, that the ideology of kinship and sharing has changed much from what is described above despite the changes in technology, sedentism, and decreased periods of travel.

### 4. Issues

The discussion on the course and direction of change in Anaktuvuk Pass, factors influencing change, and normative versus pragmatic values and effect on behavior will primarily be addressed at the regional level. However, as discussed elsewhere, the major factors influencing change in social organization over the past forty years are related to the changes in the types of interaction of the extended family and Anaktuvuk Pass's emergence as a permanent community with a substantial wage labor force.

## D. Attitudes Toward Development

The Inupiat of Anaktuvuk Pass appear to look on the potential for oil development in ANWR with favor because it would have no direct, local impact. One village official jokingly stated that he hopes "oil will be discovered real near here! We'd all be rich then!"

Anaktuvuk Pass finds itself in quite a different position from some of the other villages on the Slope with respect to resource utilization around the community, and the direct role of the federal government in the regulation of that utilization. Indeed, Anaktuvuk Pass desires to access natural resources more extensively than it appears the federal government would like, as seen in the relation of the village to the National Park service over land use issues in the Gates of the Arctic

National Park. In other villages, such as Point Lay, residents feel that the federal government, in this case in the form of the Minerals Management Service, are more anxious to put resources into production than the villagers are comfortable with. In Anaktuvuk Pass, the federal government is seen as being far too restrictive with resources the villagers consider rightfully theirs; in some of the other villages, residents feel that the federal government is being far too liberal in the attitudes toward the use of resources near their villages. The difference in these cases, of course, is that in the case of Anaktuvuk Pass the resource utilization issue revolves around non-commercial use of nearby resources by residents; in Point Lay the utilization issues revolve around commercial use of nearby resources by non-residents.

## E. Attitudes Toward Local Control of Schools

Attitudes toward local control of the school have been discussed under the education section of the treatment of formal institutions. It is noteworthy to add that the community felt strongly enough about retaining knowledge of local traditions and lifeways that it strongly supported the construction and operation of a museum in the community. The museum and attached library is seen as an important source of local information in the education of children in Nunamiut traditions. It was also noted elsewhere that there are mixed opinions in the community on the efficacy of local schools versus sending students to schools outside the community, but the majority of popular opinion is clearly for the retention of education in the community.

## F. Secularization

### 1. Public Celebrations

Public celebrations are not discussed in the context of religion or secularization. The mentioning of public celebrations and feasts in the literature describes only the annual trade fairs which occurred before Anaktuvuk Pass was established as a permanent village (Spearman 1985:7).

Data exist concerning the history of missionaries in northern Alaska but its impact on the secularization of life for the people of Anaktuvuk Pass is not specifically addressed. The role of the church in Anaktuvuk Pass in public celebrations has not been documented.

### 2. Role of Church in Everyday Life

Based on the small number of people who regularly attend church (15 on Sundays unless a pastor is in town from Barrow, when the count is about 2S), it is apparent that the role of the church in contemporary life is small. As noted in the discussion of the church as a formal institution, those active in the church do not represent a broad cross-section of the community.

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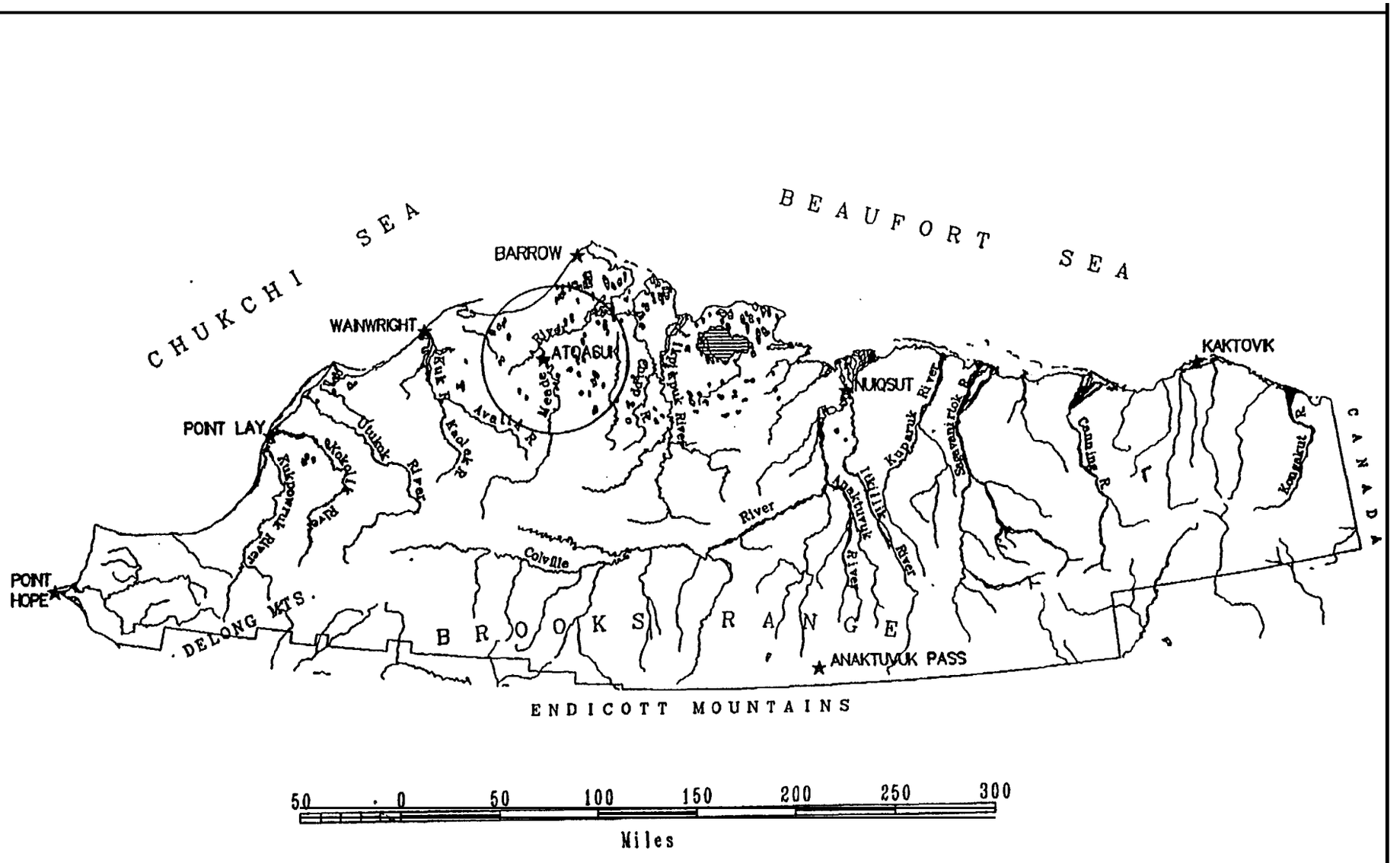
# ATQASUK

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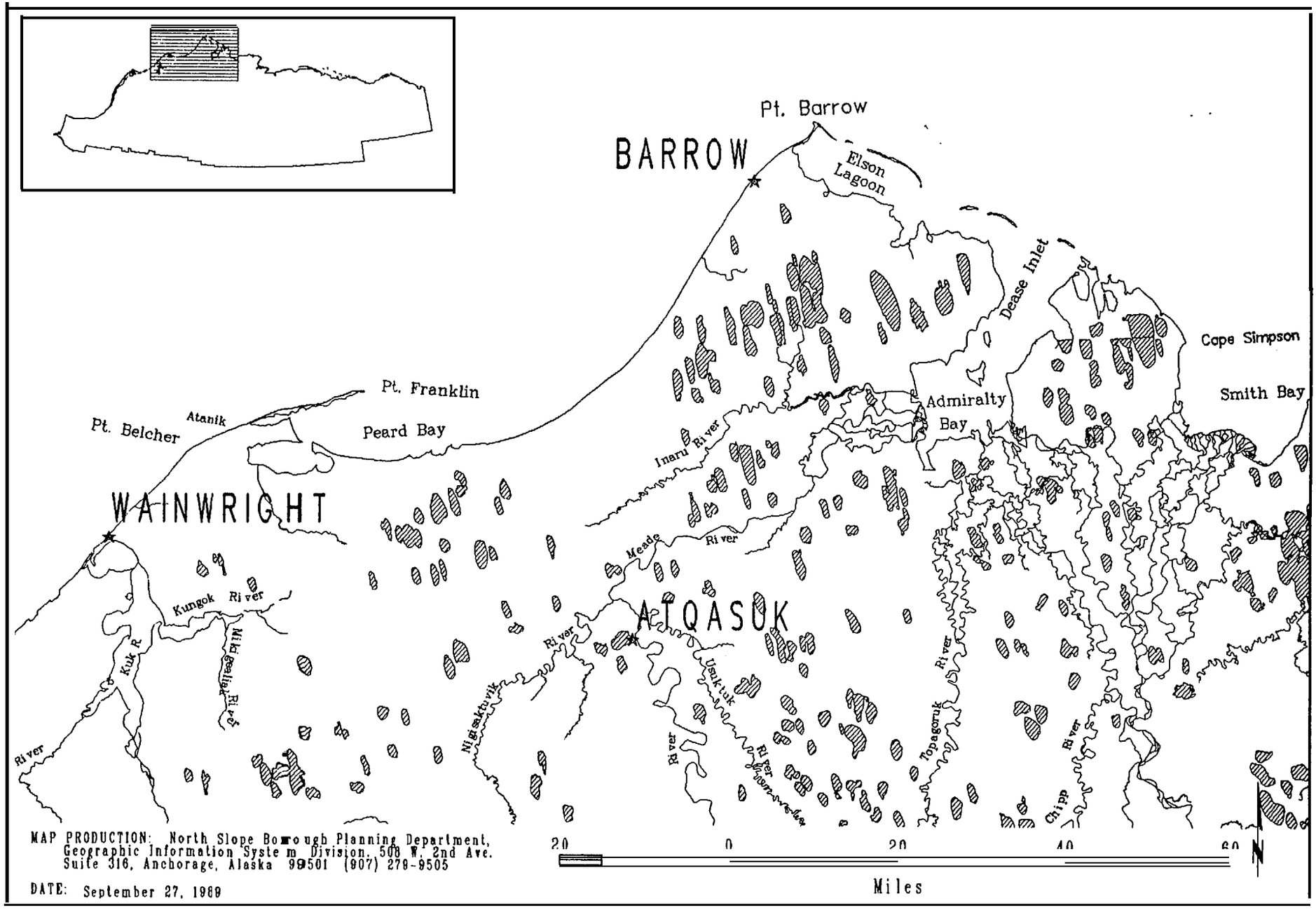
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# ATQASUK, ALASKA

# ATQASUK


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# ATQASUK

The community of Atqasuk has been treated differently from the other villages of the North Slope for the purposes of this report. Rather than provide a profile of the village in the same format as the other villages, data collection for Atqasuk focused on the relationship of the community to Barrow. This is because Atqasuk has a more direct relationship with Barrow than any other village on the North Slope. Located less than sixty miles apart, Atqasuk and Barrow are closer to each other than are any other Inupiat communities on the North Slope. This physical proximity has facilitated social interactions between residents of the two villages. Individuals have relatives in both communities so they move back and forth between the communities, their subsistence ranges overlap, and so on.

## SECTION I: POPULATION

### A. Population Background

Although the interior of northern Alaska was inhabited in earlier periods, the inland caribou-hunting people who became known as Nunamiut are a recent population, as compared to the coastal Inupiat (Oswalt 1%7). Archeological evidence indicates that these groups moved into the unoccupied Brooks Range and Colville River basin from the Noatak and Kobuk River region sometime after A.D. 1400. The increasing utilization of dog teams after 1600 by north Alaskan Eskimos has been suggested as the major catalyst behind the exploitation of this interior region. "By the end of the sixteenth century the western part of the interior was relatively heavily populated as evidenced by a number of lakeside villages of well-built, deep semisubterranean, rectangular houses with long entrance passages" (Hall 1984:339).

Following Burch, Hall (1984) takes the position that distinct societies were present by the 1850s. "Though considerable fluidity in terms of social units and territorial utilization has pertained throughout the period the interior has been occupied, by 1850 several distinct demes or societies had been formed, characterized by high levels of endogamy, identification with a particular territory that was occupied by the members as [sic] least during the fall (and usually the winter) of every year, a distinctive yearly cycle, and a distinctive dialect" (Hall 1984:339). Most of Hall's subsequent discussion is a description of traditional life of the mountain Nunamiut (Anaktuvuk Pass people), based primarily on ethnographic information. This group, which had left the area and migrated to the coast (Barrow) by 1920, returned to their traditional lifestyle in the mountain area 20 years later with improved technology and an altered economy. According to this author, three riverine groups were the other "most important" Nunamiut societies and lived in larger, more permanent villages with semisubterranean sod houses; a Meade and Ikpikpuk Rivers group was one of the three. Unlike their mountain counterparts, members of the riverine groups usually spent the fall and winter inland and the summer on the coast, trading with their coastal partners (Hall 1984344).

A different view of Nunamiut territorial groupings is suggested by Gubser (1965:337-43) in his study of the caribou hunters of Anaktuvuk Pass. In his discussion of the early historic settlements of inland Eskimo, he reports that the population and settlement pattern fluctuated significantly according to prevailing ecological conditions. As a consequence, groups and territories were not

constant and fixed through time. In his reconstruction of Nunamiut society during the late 1800s and early 1900s, the Nunamiut were organized into bands of 50-150 people and were composed of four major groups, associated temporary groups, and several other small bands. The major groups fluctuated substantially in size and habitation areas, depending on the availability of resources. Any of these major groupings "could be represented by only one or two bands (in which everyone had all the meat, fat, and skins he needed) or, for a short time, by four or five bands (in which case the decimation of caribou resulted ultimately in a reduction of the human population)" (Gubser 1965:340).

Oswalt also remarks on the importance of ecological fluctuations in the dynamics of Nunamiut settlement patterns. In inland areas, "slight changes in ecological patterning, such as the development of a shallow off-shore area or a decline in caribou numbers, could be disastrous and lead to the coalescence of a people or to their extinction." Saying that the inland Eskimo caribou hunters "lived on the margins of survival and failed repeatedly," and citing archeological evidence from the Brooks Range, he suggests this was a long-term pattern extending over the last 10,000 years: whenever inland caribou hunters disappeared, their area was sooner or later occupied by a new group of caribou hunters who moved in from the coast (Oswalt 1967242-43, 252).

Gubser (1965:337-44) reconstructed the locations of major settlements and smaller groups, including temporary bands, in northern Alaska for the historic period between 18S0 and 1920. Temporary bands formed when one of the major groupings expanded and some families moved to another river or valley for a period of time. Settlers along the Meade River (listed as Koluguragmiut) and the Ikpikpugmiut are both identified as small bands not associated with one of the major groups. Moreover, these groups, in contrast to other inland populations, were comprised of "primarily Point Barrow Eskimos who had moved inland for a short time to hunt and trap" (Gubser 1965:343). This is an important point that will be discussed more fully below.

It is possible that Gubser used Lt. P.H. Ray as his source for this information regarding the historical inhabitants of the Meade River area, since Ray provides the first written observations based on his journey inland along the river in 18S2. This record indicates that the stability of social life among the Meade River Nunamiut was sensitive to environmental conditions and that the area was then in use by the coastal Inupiat from Barrow. Ray was told that the original inhabitants of the upper Meade River had migrated out three generations previously, and that the area was now used by hunters from Nuvuk and Utqiagvik ("Uglaamie") who came there to hunt caribou and fish for whitefish through the ice with gill nets during February and March. Prior to this prehistoric migration, the area was inhabited by people who lived by fishing and hunting caribou, and did not travel to the coast, but when the fish and deer disappeared, and it grew very cold, the people were forced to move away by the cold and starvation. Some of these people went to the Colville, and others joined coastal bands. On his trip, Ray followed the Meade River towards the south, and it is interesting to note that he had difficulty with his guides who were from Barrow. He was forced to return after two days of travel beyond Atqasuk because he could not convince the men to go into country they were unfamiliar with.

Ray camped on the Meade River near the present site of Atqasuk, possibly at Tigalook. He reckoned his position was on the Meade four miles upriver from the confluence with the Usuktuk River. The location of this camp several miles above the Usuktuk River, opposite an area of sod

house ruins, suggests the party was encamped at Tigalook. His report included the following account:

> I found an Uglaamie native herein camp; he was engaged in fishing, and told us his nets were set just opposite to the camp. We obtained from him some fine whitefish; having no rifle he had been unable to take any deer. I ascended the bluffs on the right bank, which were here fifty feet high. On them found the ruins of several winter huts, built entirely of turf; the natives say that three generations ago all this region was inhabited by a people that lived by fishing and hunting reindeer, and did not come to the coast, but that the deer and fish grew scarce and there came a very cold season and the people nearly all died from cold and starvation; the few that survived went away to the Colville or joined the little bands on the ' coast, so that now this whole region is not inhabited and is never visited except by the hunters *from* Nuwuk and Uglaamie, who come here for deer during the months of February and March; each year a few fish are also taken with gill-nets in the deep holes along Meade River, the fish being here confined by the river freezing solid on the bars; all movement of water on the water-shed is suspended during the winter, there being no rainfall or melting of snow from October to May, and springs are unknown (Ray 1988 [1885]:lxxvii).

This camp was two days journey, 90 miles in all, from the station in Browerville.

After one more day's travel upriver, he reached a camp which was being used as a deer hunting camp by a man he had supplied with a rifle and ammunition to hunt deer for the station. (Ray wrote, "Found he had a fine supply on hand, and he very proudly showed us ten as our share" -- note use of the share concept). It is interesting to note also that Ray needed to enlist another guide before he could continue on his trip, because the Inupiaq who had brought him from Browerville refused to go further inland; he had never been beyond this camp. Ray found a man willing to take him further, but at the end of the next day's travel, he, too, refused to go on, informing Ray "that he did not wish to go further south; that he was unacquainted with the country, never having been so far in the interior before." Ray noted, "Beyond this he peopled the country with imaginary enemies. Nothing I could offer would induce him to go further" (Ray 1988[1885]:lxxviii). Ray was forced to turn back. As he traveled up the Meade River to the south, Ray and his Inupiaq companion were approaching the habitation of the Upper Colville Nunamiut, the Kangianigmiut. Apparently, his guides had never visited this area nor were they willing to risk an encounter with the Nunamiut inhabitants, which suggests that they had reached the limit of the geographical area in use by the Utqiagvingmiut in the early 1880s.

It is worthwhile to point out the observations of Ray and Murdoch that the Inupiat had changed very little from their indigenous state at the time of their visit (1881 -18S3), as compared to subsequent decades (see Gubser 1965:10). Since the 1850s, whaling ships had brought trade in

guns, ammunition, tools, some food items, liquor, lumber from wrecked ships, and gonorrhea and other diseases to the Inupiat at Barrow. "Murdoch felt that the guns, food, and-tools were of positive benefit to the Eskimos and that liquor, diseases, and sexual relations [with whalers] were harmful" (ibid:10). However, with the development of more intensive, shore-based whaling enterprises, the effects of contact increased substantially after 1885. Charles Brewer had introduced major and lasting changes in aboriginal whaling techniques and institutions by the late 1880s, and further social and economic changes were encouraged by the commercial whalers in the 1890s. The massive killing of whales, seals, walrus, and caribou resulted in long-lasting population reductions by the late 1890s. Continuing epidemics since shortly before the turn of the century afflicted both coastal populations and inland groups who would come to Barrow temporarily. Finally, there were the effects of alcohol that became more pervasive after the Inupiat learned to make home brew by 1890.

The use of the Meade River intensified with the movements of Nunamiut and other groups to the coastal areas which occurred after 1885, including the villages at Barrow and camps on the northern coast, in response to (1) declining caribou and sea mammal populations (from natural causes and commercial whaling pressure), (2) increasing dependence on European items of trade, (3) social and economic changes in Barrow which altered traditional trading relationships and availability of needed coastal goods, (4) population decimation from introduced diseases, and after 1908, (5) opportunities for trapping along the northern coast. The introduction of reindeer herding around 1900, and of trapping in 1908, promoted new uses of areas near Barrow, particularly along the northern coast and in lower Meade River. Excellent graze for reindeer was located in the inland area on the lower Meade River, and some camping places on the Meade River which had been used for hunting caribou and fishing under the ice became trapping camps at which people maintained sod houses.

A reported consequence of this period of rapid and intense change was the disappearance of the original population at Utqiagvik and the formation of a community comprised of diverse groups from inland, and coastal communities to the south. According to Charles Brewer, "the original Barrow population, which comprised the Barrow community when he first went there, about 1890, had almost all died in the course of various epidemics, and that the population of the early 1930s was almost completely inland Eskimo who had come from the interior -- from the drainage of the Colville, and other rivers to the east." The same assertion about the Barrow people was made by Diamond Jenness after his work in the region from 1913-1916 (Oswalt 1%%234-35). However, the interior was not the only source of immigration. There is little consideration given to the community at Nuvuk which did not amalgamate completely with Barrow until after 1940. In addition, there are the Barrow families whose ancestors originally migrated from the south, from the Wainwright, Point Lay, and Point Hope areas, and from as far away as Shismaref and the Diomedes. Similarly, the Kobuk, Noatak, and Selawik communities were another source of immigration during this period. All of these groups intermixed at Utqiagvik, Nuvuk, and temporary camps at Pigniq, and some settled along the Meade River. This transformation was defined in terms of language change by Barrow elders, who say that the language is no longer one dialect; all different dialects are spoken in Barrow, as in the villages. "Barrow is like the United Nations because people from all different places gather here" (Kisautaq 1981:121).

The history of the Meade River area in the late nineteenth and early twentieth centuries is closely tied to that of the twin immunities at Barrow and to the movements of Nunamiut and other

groups who were being disturbed by the changes in Barrow. Nunamiut groups from the Colville River and its tributaries, and the Brooks Range, traveled to Barrow more frequently than in the past, as their traditional trade was disrupted and they sought to participate more directly in whaling and the new trading opportunities. The Meade River delta would have been used more heavily by these groups than areas further upriver, as they moved back and forth along the northern coast and settled in closer proximity to the Barrow communities. Other immigrants to the Barrow area from riverine areas south of the Brooks Range would be motivated to continue their practices of inland caribou hunting and fishing on the Meade River. Compared to the pattern of temporary winter use observed by Ray in 1882, the Meade River probably had more sustained settlement after the period of rapid change began in Barrow after 1885.

The sudden collapse of the whaling industry, and the shift to intensive trapping of furbearers in 1908, brought more intensive use of inland areas particularly along rivers flowing into the north coast east of Barrow. Families left Barrow and joined relatives who were already out on the land. Barrow and Atqasuk elders have described their early memories of going inland to live on the Meade River in sod houses in this time period, living alongside (and learning from) their grandparents. They reported that families spread out eastward along the coast from Barrow and trapped fox, occasionally hunted polar bear, and lived at good fishing places along the rivers. Although some people remained in the Meade River delta on a year-round basis, the more typical practice was to return to Barrow in the spring for whaling and trade, and again in the fall. Sometimes families traveled to Barrow for Thanksgiving and Christmas celebrations. On the other hand, some Barrow families spent their summers on the Meade River, catching and drying fish for use during the winter in Barrow.

For the people living along the Meade River, participation in whaling at Barrow was essential for living inland during the winter months. In addition to the enjoyment of festivals, it was crucial to acquire the blubber and seal oil which was used to ward off starvation during severe conditions inland. As with the traditional Nunamiut societies, blubber and seal oil was a necessity for their survival since it was used for food, heat, and light. These resources were particularly important when the adult men would sometimes go off hunting or trapping for long periods and their timely return was not always predictable. Although families usually stored a supply of food resources and had willows to bum for fuel, blubber and oil were critical food resources when the cold was severe and food was scarce. This situation was alleviated somewhat in about 1915, when the Inupiat learned that the "black stones" on the Meade and Colville Rivers could be burned for heat.

One later resident of Atqasuk spent part of his youth in a family camp at Payugvik on the Meade River delta, and provides a description of the annual round in about 1910. According to this gentleman, several sites on the delta -- historically a hunting area for caribou -- served as base camps for winter hunting and have consistently been productive fishing places in summer and fall.

Traveling from Barrow, families commonly entered the area by the winter trail that terminates on the Inaru River a short distance from Iviksuk (identified in the Atqasuk Traditional Land Use Inventory [TLUI] as site #35). From here, individual families branched out, building sod houses at favorite hunting and fishing areas around the delta at Payugvik (TLUI #35), Nauyalik (TLUI #41), Pulayaaq (TLUI #36), as well as Iviksuk itself (see sites evaluated). Fall fishing with nets under the ice provided a steady supply of food for scattered small family groups. This freed hunters from the immediate need to supply food for their families. They could range out on long

caribou hunting expeditions as far away as the Brooks Range, leaving the old people and small children behind on the delta, reasonably well-assured that the good fishing, the fuel supply of dwarf willows, and the seal oil and blubber they had brought from the coast would keep those left behind from starving. A similar pattern was followed by the Kuukpigmiut on the lower Colville River in another prolific fishing area.

While some people stayed on the delta permanently, it was common practice to return to Barrow for spring whaling around mid-April. Some people would summer on the Meade River delta, build up a supply of fish in their ice cellars and storage pits, and then sled their catch back to the coast on the winter trail as needed in the fall and winter (Schneider et al. 198042-43).

In the early 1900s, there was no hesitation on the part of families to go all the way to the mountains to hunt caribou. This differs from the practice of a generation earlier, when (as reported in the statements by Ray above), adults from Barrow were unfamiliar with areas near the mountains and refused to proceed far into the interior. As more people moved into Barrow from the outlying areas in the 1880s and 1890s, there was an amalgamation of groupings, possibly a sharing of knowledge, and the fears associated with more distant "enemies" declined. It also suggests that use of the interior in the Barrow-Atqasuk area was more frequent and expanded in range. By the time that the routines of reindeer herding and trapping were adopted, Barrowites moved freely over large tracts of inland areas.

Members of another family talked about living along the Meade River as children. Walter Akpik and his older sister, Nannie Woods, spoke to an Elders Conference about growing up there at Meade River, when they were "little ones" living with their grandparents (Kisautaq 1981:106-110, 112-13, 189-91, 258-59, 380). The roots of this family are in the Kobuk area. Their grandfather (Qakiq) is descended from Selawik people, and his wife (Anugauraq) came from the Kobuk area; they came to live in Barrow. It may be that they felt more comfortable living inland, fishing and hunting caribou, which is more like their homeland than the sea mammal and sea ice hunting of Barrow. Walter's comments are interesting, concerning his sense that he came from a different area: "But I have always been made to feel very comfortable among the people of Barrow. Among the people of Barrow I have always been made to feel comfortable. Although I am of a different place the people of Barrow have always caused me to feel as comfortable as I want among them" (Kisautaq 1981:109). He also remembers how his father-in-law "really endeavored" to educate him about the dangers of the ice, when he started to spend more time on the coast after he was married.

Walter Akpik is considered a very knowledgeable individual about the land and subsistence practices along the Meade River, as a result of his childhood experiences and his extensive use of the area. He and his sister also lived in Barrow with their parents. Nannie recalled moving out east from Barrow in 1921 or 1922 with her parents "when they were still whole," towards Barter Island, and living in a different place each winter. Presumably her parents trapped throughout the winters, and utilized the trading posts which were established at different locations along the coast in those years. Later she lived with her family (when she was married) at the Colville River (Nigliq), when her husband wanted to settle down, after most of the residents had vacated that site. Members of the Akpik and Kippi families were among the first to relocate to the new village of Atqasuk when it was resettled in 1977-1978.

Settlement along the Meade River probably dropped after the fur markets collapsed during the depression. One could argue that the decline in the fur business in the 1930s increased the emigration of Barrow families into the Meade River area, just as it apparently motivated several Nunamiut families to return to the Brooks Range in 1938 and 1939 (Gubser 1965:24). But the habitation of the Meade River communities appears to have been highest during the good trapping years, between 1910 and the early 1930s, as indicated by the number of sod house ruins and descriptions of the inhabitants by Barrow elders (this information is summarized below). However, families continued to live in Meade River villages throughout the 1930s. In 1939, while enumerating for the U.S. Census, Waldo Bodfish traveled to at least three small settlements on the Meade (Schneider et al. 1980). The 1939 population figure for Meade River was 78, representing the dispersed houses and camps situated along the Meade River. There was no mention of Meade River, Tigalook, Tikikluk, Old Atqasuk, or Atqasuk in earlier census years.

A coal mine on the Meade River, near the present village of Atqasuk, supplied fuel to the households and hospital in Barrow for about 20 years, from the mid-forties to the mid-sixties. This commercial mine was developed and operated by a white man who obtained start-up capital from the BIA. Widespread use of coal started in Barrow when people began "picking up jobs" in the community as the development of the Naval Arctic Research Laboratory (NARL) and other facilities brought new wage-paying opportunities to the town. One elder said, for example, that he was able to purchase coal after he took a job at the hospital. Once townspeople began making money, they could buy coal from the mine operator who transported the coal to Barrow using "Cat trains" across the snow (Libbey 1982113-16). Some Barrow residents were employed at the mine, or worked on the Cat trains. However, the success of the operation depended on larger institutional buyers of coal, and" the mine ran into financial difficulties when the institutions, such as the hospital, purchased their own coal supply because the Cat train deliveries were not always dependable. The dates of operation are estimated from 1944 to 1964, to within a year or so of when Barrowites were successful in lobbying the federal government to provide gas to their homes from the Barrow gas fields.

In the 1950s and 1960s, the census data apply to the community associated with the coal mine at Tigalook. There was a post office established here during this period. Shortly after the mine closed in the mid-1960s, the village was vacated. As described below, a new village was developed at a site nearby the older settlements commencing in 1977.

The lower Meade River and delta was the primary inland resource area in the Barrow-Atqasuk area, and it continues to be used intensively by current Barrow residents. Clusters of fixed hunting and fishing camps maintained by Barrowites are located on the Meade and Inaru Rivers in this area (see Worl and Smythe 1986:165). The following discussion of historical sites on the Meade River is a summary of the site-specific work presented in the report entitled The Barrow-Atqasuk Report: A Study of Land Use Values Through Time (Schneider et al. 1980).

Information on historical use, the names of individuals and families associated with the sites, as well as patterns of current use involving Atqasuk and Barrow residents as recorded in 1978, is presented. As will be noted in the site descriptions, Atqasuk residents are the primary users of about half a dozen sites on the upper river; the larger and more productive downriver and delta sites are used almost exclusively by Barrowites.

*Tigalook (Tikigluk, Tikikluk)*

The site is located approximately one mile upstream from the present village of Atqasuk at the mouth of a small stream that enters the Meade River. Tigalook is a deepwater fishing site where people set gill nets in summer and early fall and jig through the ice in winter. Sod houses were here to be used for fishing, caribou hunting, and trapping. From here, people made trading tripes to Barrow. One later Atqasuk resident who worked on the collection of the 1940 census recalls that there were three or four houses at Tigalook when he went through. An ice cellar exists at this site which is still used today by a resident of Atqasuk. A cemetery with 14 graves continues to be used by Atqasuk residents. The house belonging to the family that operated the coal mine employing local residents to transport coal to Barrow with Cat trains from about 1944-1964 still stands as a prominent landmark. A NARL camp and airstrip is located nearby.

Remains of sod houses from historic and possibly prehistoric periods are present. It is likely that this is the site visited by Ray in 1882, which had been inhabited by people until the early 1800s (see above).

*Panikpatchiak*

The site is located on the Meade River a few miles downstream from the present village of Atqasuk. It is important to Atqasuk residents, who gill net and jig through the ice in fall and winter months for grayling, ling cod, and whitefish. They also camp here in summer for the good fishing. At least one family from Barrow travels here by plane or snowmachine for winter fishing each year. The site is named for an old woman who lived in Barrow many years ago. According to the story, there was a food shortage in the fall one year, and she left Barrow walking inland with her fishnet. When she reached this site, she built a snow house and set her net through the ice. She survived on the fish she caught, and the site was given her name.

*Isuqtuum Paanga*

This site is located further downriver, at the junction of the Isuktuk and Meade Rivers. It is well-known to Atqasuk residents as an excellent fishing, camping, and hunting site. There is good summer gill net fishing in the shallow, clear waters of the lower Isuktuk, as well as in the Meade River. Two nets were observed placed in the Meade River in the summer of 1978. Winter jigging through the ice in the deeper Meade River is considered excellent. Low-lying flats are used for camping and in the summer and fall, and for spring goose hunting. A nearby point is advantageous when hunting caribou and other game in the area. There are old ruins and a grave of a little girl present at the site.

*Nigisaqtugvik*

Not far below Isuqtuum Paanga, this site lies on the north bank at the mouth of the Nigisaktuvik River, where it enters the Meade River. It is a spring goose hunting and year-round caribou hunting location. Fishing -- jigging for grayling through the ice just after freeze-up, and through

the winter -- is good along the north bank of the Meade River. High cut banks and sand dunes provide good lookouts for spotting game. The site name means "where you go to eat hearty." The area was also used for ground squirrel and fox trapping. The remains of sod houses that belonged to two known families are found north of the Nigisaktuvik River. Ice cellars are located at the river mouth. The general area was used by the reindeer herders for grazing.

### *Nasiqsrugviich*

The site is located on the Meade River about four miles below the Nigisaktuvik River on a steep, sandy-cut bank. The significance of the site is as a lookout spot for hunters. The name means "where you look out for food," and is similar to a word for a game lookout.

### *Qaglugruaq (Qaglakruaq)*

This site is also on the Meade River, about seven miles downstream from the Nigisaktuvik River, where a stream enters the Meade, creating a deepwater place along the cut bank The place is noted for good fishing in summer and winter. It is also an excellent location for spring goose hunting, with the bluffs providing a natural blind. Caribou hunting is productive here. It is used as a camp, and pellets of coal are found along the river.

The site was occupied at different times since the 1920s by one elder of Atqasuk. Three houses and two families were located at this site according to the 1940 census. Another elder had been using the site since 1934, when he first built winter houses. He reported uncovering old bones about a foot under the ground while digging to construct the houses, indicating extensive prehistoric use.

### *Niksilik*

Located about three miles below Qaglugruaq, this site lies at the mouth of a small stream that enters the Meade River. Niksilik is a fishing place where people jigged for grayling through the ice early in the fall.

### *Uatuq (Watuq)*

Uatuq is located at the mouth of a small stream that enters the Meade River through a cut bank approximately five miles downstream from Qaglugruaq. It is used by both Barrow and Atqasuk residents for spring goose hunting, caribou hunting year round, and ice (gill net) fishing.

### *Aatut*

The site is located on the Meade River approximately nine miles below Qaglugruaq. It is a major fishing site used jointly by people from Barrow and Atqasuk. Barrow residents fly in here in fall and winter for fishing, landing on the beach. Fishing in nearby lakes is also noted. Caribou hunting and spring fox trapping is considered good here, and the site is frequently used for spring goose hunting. There could be "lots of people camped here for fall fishing at freeze-up." Another productive fishing and caribou hunting location was identified about a mile downriver from this site, where a small stream enters the Meade. An ice cellar belonging to one family is located at this site. Extensive archeological evidence indicates historic and prehistoric significance; the 21 major archeological features include many sod houses.

### *Qayaaq (Kayaaq)*

This site is located about three miles below Aatut on the Meade River. The area is used extensively by Barrow hunters who come here by snowmachine. Across the river is a well-known caribou hunting area, particularly in the fall, and a winter fishing place (jigging for grayling). Walter Akpik recalled that he used to stop here to catch fish for his dogs when he traveled the river.

The site itself, which consists of a sand dune visible for a considerable distance, is used as a landmark and game lookout. It was named after Anne Kayaaq. She was traveling with a group of people from a camp on the Isuktuk River, on their way to Barrow to participate in the Christmas celebration and go to the store. Anne Kayaaq, a young woman at the time, was running ahead of her dog team with her head down because there was a storm with whiteout conditions. She did not see her approach to the hill and, when she finally looked up, she had to stop suddenly to avoid bumping into the bluff. Her team and the others in the group were also forced to stop suddenly. When the entire party realized what had happened, they had a laugh and commemorated the spot with her name.

### *Atoruk*

This site is situated about three miles downriver from Qayaaq, at the mouth of a small creek. It is a winter fishing spot, resembling Aatut further upriver.

### *Kinnaq*

The site lies at the mouth of the Kinnaq River, where it enters the Meade about four miles above the junction of the Meade and Okpiksak Rivers. The mouth of the Kinnaq River is considered a good fishing spot during freeze-up, but it is too shallow for winter fishing.

*Uqpiksuu*

Uqpiksuu is located at the mouth of the Okpiksak River, where it enters the Meade. The Okpiksak River drains a large lake region that is the spawning area for many fish species as well as a duck and goose nesting area. Formerly, inhabitants of the area traveled up the Okpiksak River to this region. The site also includes a large growth of willow, which provided a useful source of fuel and shelter materials, and much drift willow is brought down and deposited here from the Okpiksak River drainage during spring break-up. "Uqpik" means "willow." There are archeological features of prehistoric and historic significance.

Currently, this area is used heavily by Barrow residents, who fly hereby air taxi to the sandy beach on the Meade River. Subsistence activities include summer, fall, and winter fishing for whitefish, grayling, and ling cod; year-round caribou hunting; and spring waterfowl hunting. It was also described historically as a productive fox trapping and furbearer hunting area in late winter and spring (see below). The Okpiksak River has many good fishing places, the sandy beach attracts caribou in summer, and flat areas nearby attract waterfowl in the spring. The Uqpiksuu Summer Camp is situated here, providing environmental and survival education to the youth of Barrow. The camp is operated as a summer youth program of the NSB Department of Health and Social Services. Activities such as fishing, hunting, food preservation, games, and supervised exploration provide group experiences out on the land for Barrow youth. Two buildings for the camp were sledded here from Barrow.

Phoebe Kippi recalls that she lived here in winter and summer with her parents in their sod house, when she was young (in 1938 or 1948). They jigged for fish as well as set gill nets under the ice, and cut ice blocks to store the fish on the river. In summer, they dried fish and stored them in seal pokes. Phoebe's father ran traplines for white fox in the area. They cut willows and tied them together for burning, to provide heat. Walter Akpik had a fish camp here, where he caught fish for his family and his dogs in the summer. He, too, spent some winters trapping white fox along the Okpiksak drainage.

Earlier, the area around Uqpiksuu was used by reindeer herders, and it is recalled that Alalok and his family lived here. Roxy Ekowanna, a Barrow elder and former reindeer herder who passed away in 1986, said his parents used the Okpiksak River as a travel route to the mountains in summertime, where there was good fishing and caribou hunting. On the way, they would stop where the river goes through the lakes. They returned in the fall when the daylight hours became shorter.

About a mile upstream from the site on the Meade River, there is a plywood cabin which is used in spring for waterfowl hunting and in summer and fall for fishing at Uqpiksuu.

*Qaviarat (Qaviora)*

This place is located on both banks of the Meade River two miles below Uqpiksuu, where two streams enter the larger river. Mainly used by Barrow residents in the present, the site is a popular deepwater fishing spot in winter and summer. It is also used for caribou and goose hunting, and formerly for fox trapping and furbearer hunting. There are numerous house pits and

ice cellars; one of the ice cellars has been recently refurbished for current use. On the opposite bank is the modem camping site, by a sandbar used by small planes. In 1978, two people from Barrow were fishing for whitefish from a permanent tent camp, at which they were drying their fish. A short distance downstream is a cabin with equipment for jigging fish and trapping furbearers. In front of the cabin, at the mouth of a small stream, there are signs of long-time use as a spring waterfowl and caribou hunting campsite.

The old sod house ruins are associated with three known families. From this point, the river is very shallow and difficult to navigate by motor boat, indicating the limits that modem boaters from Barrow can travel up the Meade.

### *Uigiak*

The site is located 2.5 miles downriver from Qaviora on a bend in the Meade River where a channel of the Akqte River enters from the west. Uigak is a deepwater fishing site, used for fishing in the summer and winter. Sod house ruins with storage pits and historic implements, including an Eskimo oil lamp fashioned from a tin can, were present on the site. The sod house ruins were attributed to the families of Kalayauk, Qunusig, and Alivruna. A short distance upriver is the mouth of a channel of the Atqte River, which is dry in summer. In the early summer when the channel is reported to be navigable, hunters moved through Uigiak on their way to and from the Inaru River through this waterway. Today, few follow this route in this season, but it remains important for winter travelers. A recent camping area and storage pit was located downstream on the Meade, with weasel tracks.

### *Kalayauk (Kaleak)*

This site is located 3.5 miles below Uigiak. Presently, it is by and large a place used by Barrow residents in the spring for goose and eider duck hunting, both in the Meade River and in the lakes which lie a short distance behind the river. Other subsistence activities include caribou and furbearer hunting. The river is too shallow for productive fishing. A well-used camping place was observed at the lakes, and a willow duck blind was situated on the bank of the Meade.

Phoebe Kippi said that her father used to hunt goose at this place when he was living at Barrow (possibly prior to 1921). The place is named after her uncle, Leo Kaleak, who used the site for hunting goose in 1933 or 1934.

*Payugvik (Payukvik)*

The site is located on the bank of another channel of the Akqte River, where it joins the Meade River. The Atqte waterway is an intermittently flowing channel of the Meade River that connects with the Inaru River. Payugvik is a major historic and current fishing and waterfowl hunting site important in the Barrow subsistence cycle. There are fish camps, caches of fishing gear and camping equipment, and a plywood cabin hauled from Barrow belonging to Robert Aiken (observed in 1978). A large sandbar is available for landing small planes, and the water is good. There are numerous sod house ruins located here. Travelers to Barrow followed the Inaru River to its source, crossed several lakes to another stream (the Sinaru River) which took them to the coast, and then trekked north to Barrow. Today, as in the past, the trail between Barrow and Atqasuk passes close by this site, and travelers often stop here to rest or partake in subsistence activities before continuing on their way.

The archeological features include 25 sod house ruins of prehistoric and early historic structural types, and 14 storage pits for meat and fish. Elderly discussants remembered many of the families that lived here. Horace Ahsogeak lived here when he was a boy in 1909-1910. He noted that areas of the site had older structures which had been abandoned by this time. He thought one of the older structures, estimated to be over 110 years old, was large enough to have been a karigi. Seven families were living in sod houses at Payuguvik while he lived here, which he apparently remembers because it was in that year that they all moved into Barrow for a part of the year (to Pignig, the Shooting Station). His grandfather, Kulugruak or Kunugaruk, had built a sod house and lived here with his family (Atuaqutaq, Kaleak, Siakuk, and Kuuguk), along with other families.

One older set of ruins reportedly belongs to Bert Panigeo. There are two sod house ruins that belonged to Qinaktak and his wife Kugsraaq (adopted parents of Vincent Nageak) and Tuvaatchialuq and his wife Agnik (parents of Kenneth, Dora Roland, Greta Akpik, and Jane Patkotak). Qinataq was from the Noatak area. Tuvaatchialuq is probably the same person as Tovaak (Walter Akpik's father-in-law), who reportedly fished here from January through April and trapped white fox in the area. Tovaak's parents also lived at this site, indicating prior roots for this family. These two families had sod and framewood houses suitable for year-round use, but they wintered in other locations where there was abundant food sources, such as the Tupaagruk River area. These families went to Barrow for the whaling season and in the early fall.

The good fishing attracted people in the summer and winter. Ahsogeak reported that he traveled upriver to the site with his family by dogsled before freeze-up, and stayed through the winter. They also hunted for caribou, which he recalled were unavailable in this area in 1909-1910 (they were further inland -- this shortage possibly motivated the group to move to Pigniq in the spring of that year). Besides fishing, the major activity was trapping fox, and occasional polar bear hunting along the sea ice on the north coast. Families traveled along the coast "trapping any place" during this period.

> Then after the trapping was over - up to whaling, whaling time -- going up by dog team to Barrow. Everybody at whaling time goes to Barrow with a dog team . . . in the spring. Trapping and whaling - April 15 trapping is over and after that [they] go up and do

> whaling. Try to catch some blubber. No man is going to live without blubber, eat some blubber all the time. Get . ..2. 1.5 pokes of seal or whale oil and there's no danger for starving, no starving to death if you have the whale (Schneider et al. 1980:143-44).

Ahsogeak remembered when they started to use the "black rock" that was available to them on the Meade River. Coal was adopted as a source of heat for the family in about 1915, he said, after an Inupiaq learned from observing a sailor on a whaling ship that coal was useable as a fuel. Prior to this time, heat was provided by whale blubber, or by heating stones on the cooking fire outside the house and then bringing the hot stones inside. Coal was also available up the Colville River, and his family also stayed up there with his father (probably trapping and fishing as described on the Meade).

There were people living here in 1939 when Waldo Bodfish passed through making the census count for the Meade River area, suggesting the recent period of residence extended at least from 1909 to 1940.

*Iviksuk*

This place is situated on the Inaru River close to the Meade River delta. It is widely recognized in Barrow as the place of their first ice fishing in the early fall. Just after the ice has formed on the river, large numbers of Barrowites come here to jig through the ice, and secondarily to hunt caribou. Sometimes as many as 20 tents are observed along the river at this time. Caches near the site contain camping, trapping, and fishing equipment.

The site is close to Barrow, 1.5 hours by snowmachine or 20 minutes by air taxi. The fishing is enhanced here because two small streams flow into the Inaru River at the site, providing good fishing in summer, fall, and winter. Summer fishing produces primarily whitefish (broad and humpback), least cisco, and grayling, with some ling cod, Arctic char, and pink salmon. Late fall/early winter provides grayling and least cisco with some whitefish. Whitefish, grayling, and ling cod are moderate to low in winter. There is both jigging and gill net fishing through the ice. The area also has excellent year-round caribou hunting, spring waterfowl hunting, and winter and spring furbearer hunting and trapping.

The archeological components of the site are extensive, including 20 sod house ruins and several meat pits and ice cellars. Old sod house ruins used to belong to Keevik, Okpeaha, Uniiyaq, and Nasukpaurak. The old cabin on the river belongs to Ina Kalayauk. Historically, the site was used by reindeer herders from Barrow, Kanigak location. Horace Ahsogeak recalls that Harry Brewer was fishing here in 1909-1910, when he (Ahsogeak) lived at Payugvik. Phoebe Kippi said that her family used to fish here, and trap for white fox in the fall, when she was a girl. The history of this site is also identified with Phoebe's parents, Owen Keevik and Fannie Ketdick, and her uncle Robert Kaleak and his wife, Aina. People living here often went back and forth to Barrow to participate in whaling and other activities. The site is a recognized stop on the trail from Barrow to Atqasuk today, as it was in the past.

*Pulayaaq*

The site is located on the Meade River delta, on the northernmost channel, about a half-mile above the junction of the Meade and Inaru Rivers, and below Iviksuk. The delta is "almost exclusively the dominion of Barrow residents" at the present time (1978). This is a good fishing place for whitefish, grayling, ling cod, Arctic char, and some pink salmon, as well as two fish species not found upriver from Payugvik: Arctic cisco and sculpins. It is also a good caribou hunting site because the caribou gather along the coast in summer seeking relief from insects. The numerous stream charnels, low marshy tundra, and abundant lakes attract waterfowl and hunters in spring and summer. Furbearers, particularly white fox, are abundant during late winter and spring. These resources mean that use of this location is nearly year-round, and the easy boat travel from Barrow makes it attractive for summer camping trips. Whitlam Adams erected a cabin here in 1978.

There are extensive archeological features at this site, including 26 sod house ruins as well as meat caches, sod quarries, and a burial site. Pulayaaq is noted for ghosts and some people are reportedly afraid to camp here. The former residents used driftwood from the coast for framing their houses and made their hallways with ice. The families of Oyuturaq, Tobuk, Amokak, Oyayuk, and Anayeraloq are remembered as having houses here. Five house ruins belonged to the families of Ingatchugaaq and his wife Illuguaq, Long John Anutigrauaq (Sielak's adopted father) and his wife Agnavinna, Numnik and Quupak, Uttuayuk and Maligialuk, and also Nasunuluk and his wife Tuugluk, who wintered here. Some wintered here permanently, according to the Traditional Land Use Inventory (TLUI) report.

These families went to Barrow to trade, to celebrate Thanksgiving and Christmas, and during whaling and whaling festivals. They also had burials in Barrow. Apparently this site was used heavily during the trapping era, when the inhabitants trapped foxes (main trading item) along the Meade River. It is also known for good caribou hunting, and goose hunting in the spring.

*Pulayatchiaq*

Also located along the north channel of the Meade River on the delta, this site is "not far" downriver from Pulayaaq. Lake Sirgavik is close by. Similar to Pulayaaq in resources, the site may be in use at any time of year, and it is associated with Barrow residents. It has particularly high use in fall when fish are abundant in both the main river and nearby channel. Arctic cisco and sculpins are caught regularly here, and char and pink salmon harvests are more dependable in late summer and fall than further upstream. The site is also popular in spring when waterfowl pass through in large numbers, and for fox trapping in late winter. A recent tent camp and two cabins were present in 1978. The remains of seven sod houses with associated storage pits and sod quarries denote previous habitation.

*Nauyalik*

The site is located on the southernmost channel in the Meade River delta, and is surrounded by an extensive stream and lake system. It is a good fishing and caribou hunting spot currently used by Barrow residents. Access to the site is available by boat or small plane. Whitefish, grayling, and a few pink salmon are caught here. Other well-established subsistence practices include spring goose hunting, summer and fall caribou hunting, and furbearer hunting and trapping in late winter and spring.

A Barrow family has developed an extensive camp here including two wall tents, an airstrip, CB antenna, and fish drying racks. This family, older residents of the Barrow community, prefer to spend the spring, summer, and fall months at this camp (Worl and Smythe, unpublished Barrow fieldnotes). In 1978, the family was fishing with five nets, and sold their dried fish in Barrow through family members. The fish were transported to Barrow by returning charter aircraft bringing supplies and family members to the camp. This practice was continuing in 1985. David Brewer is also reported to fish and hunt here on some occasions.

Historical use of the site is indicated by the remains of eight sod houses, associated with meat storage pits and sod quarries, one tent ring, two ice cellars, and the grave of Ayagruk. Compared to other sites on the delta, this one was never inhabited by many people, although it was known as a fishing campsite and fox trapping location. The area was used by at least one family as early as 1909. Later, Andrew Oenga and his wife fished here. Phoebe Kippi related that she stayed here one year in the late fall, "many years ago," and many people were camped here net fishing for whitefish through the newly formed ice. She reported they were catching lots of fish. More recently, one elder, who has an ice cellar in the area, and another couple fished here during the summer.

B. The Development of the Present Village of Atqasuk

Formerly a small, traditional settlement situated inland on the Meade River, which later was the location of a coal mine that provided fuel to Barrow households, Atqasuk was vacated during the early 1960s as residents moved into the growing community at Barrow. After the passage of ANCSA, and formation of ASRC and the North Slope Borough, the communities of Atqasuk, Nuiqsut, and Point Lay were resettled by former residents and their descendants, and by others in search of employment opportunities newly available in the resettled communities. Atqasuk was the last of the three to be developed in this pattern, the first homes were constructed on the new townsite in 1977.

The present village of Atqasuk is located on the upper Meade River about 60 miles inland from Barrow, to the south and east. The community was the last of three communities that were reestablished by local residents, with the institutional sponsorship of ASRC and the NSB, in the 1970s. The present village is situated in an area that has been used by Barrow residents throughout the historic period for fishing, caribou hunting, and hunting or trapping furbearers. Former prehistoric and historic settlements and camps are situated on the Meade River close to Atqasuk, including Tigalook, "Old Atqasuk," and others described above.

The resettlement of Atqasuk commenced in the mid-1970s, when a few families erected tents at the present site and occupied old houses at Tigalook. In 1977, the NSB began constructing houses and other community facilities in the village, and there was an estimated population of 86. The resettlement was sponsored and encouraged by the ASRC, the NSB, and the Atqasuk village corporation. Unlike the other two resettled villages in the region, Nuiqsut and Point Lay, the village layout and initial development was managed by the NSB rather than ASRC (Alaska Consultants et al. 1984405). A school was built in the community in 1977, and the village corporation received an interim conveyance of 68,652 acres in 1978 (Schneider et al. 198026).

The population figures for Atqasuk give the impression of a relatively stable population between 1939 and 1980, with accelerated population growth after 1980. Residents tend to share this perception with the claim that this period has been one of very rapid change and population fluctuation. Table 1-ATQ below summarizes the population history of the community between 1939 and 1983.

Table 1-ATQ

Atqasuk Population History

| | | | |
|---|---|---|---|
| 1939 | 78 | Meade River Area | {U.S. census) |
| 1950 | 49 | Tikikluk Village | (Us. census) |
| 1960 | 30 | Meade River | (Us. census) |
| 1970 | -- | -- | (no entry) |
| 1977 | 86 | Atqasuk | (NSB Population Estimate) |
| 1980 | 108 | Atqasuk | (Alaska Consultants Survey results) |
| 1980 | 107 | Atqasuk | (Us. census) |
| 1982 | 210 | Atqasuk | (Ak Consultants Household Enumeration) |
| 1983 | 231 | Atqasuk | (Ak Consultants Household Enumeration) |
| 1988 | 219 | Atqasuk | (NSB Census) |

There were 14 houses in Atqasuk and two teacher apartments in the school in 1978. Community facilities included a school with a community hall inside, a village corporation store (located in the president's kunnichuk), a power plant, heavy equipment and a maintenance shop, a dump, airstrip, two radios (belonging to Public Health Service and ASRC), and a radio telephone. Two of the occupied houses were located at Tigalook, and half a dozen permanent structures that were occupied seasonally at Old Atqasuk (Schneider et al. 198025). Two years later, there were 27 single family houses and 2 other residential structures (including one or two houses located in Tigalook) (Alaska Consultants, Inc., unpublished survey results). A summary of the houses that were constructed between 1950-1980 are shown in Table 2-ATQ below.

Table 2-ATQ

**House** Type by Construction Date and Builder

| Construction Date | Number | House **Type** | **Builder** |
|---|---|---|---|
| 1950 | 1 | SF | private (in **Tigalook)** |
| 1977 | 1 | SF | private |
| **1977** | 1 | Other | NSB |
| 1978 | 14 | SF | NSB |
| 1979 | 11 | SF | NSB |
| 1980 | 1 | Other | NSB |

(Source: Alaska Consultants, Inc. survey results)

What is striking about the above table is the fact that only one house has been built by a private party since 1950. This demonstrates the overwhelming influence of the NSB in funding housing improvements in the community.

According to Table 3-ATQ, the population rose 86 in 1978 to 108 in 1980 (Alaska Consultants, Inc. **1981:3).** Comparing these data with those from Table **4-ATQ,** it is apparent that the population stabilized at slightly more than double the 1980 figure within the next few years. NSB household enumerations **counted** 210 people in 1982, and 231 in 1983 (in July of both years) (Alaska Consultants et al. **1984:406-7).** The rate of increase in households was lower than that of the population between 1980 and 1983. The number of households increased **from** 24 to 43, or 79.1%, as **compared** to a 115.9% increase in population. This trend is reflected in average household densities, which increased from 4.5 persons per household in 1980 to 5.4 persons per household in 1983. For 1980, the average household density for Native households was 5.0, but comparable figures are not available in 1983 (analysis of Alaska Consultants, Inc. survey results).

Table 3-ATQ

Population Composition *
**Atqasuk** - May 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Under 5 years | 5 | 6 | 11 | 1 | 0 | 1 | 6 | 6 | 12 |
| 5-9 | 4 | 3 | 7 | 1 | 0 | 1 | 5 | 3 | 8 |
| 10-14 | 1 | 6 | 7 | 0 | 0 | 0 | 1 | 6 | 7 |
| 15-19 | 2 | 8 | 10 | 0 | 0 | 0 | 2 | 8 | 10 |
| 20-24 | 6 | 7 | 13 | 0 | 1 | 1 | 6 | 8 | 14 |
| 25-29 | 4 | 1 | 5 | 1 | 0 | 1 | 5 | 1 | 6 |
| 30-34 | 4 | 4 | 8 | 4 | 1 | 5 | 8 | 5 | 13 |
| 35-39 | 3 | 2 | 5 | 1 | 0 | 1 | 4 | 2 | 6 |
| 40-44 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 45-49 | 2 | 1 | 3 | 0 | 1 | 1 | 2 | 2 | 4 |
| 50-54 | 4 | 3 | 7 | 2 | 0 | 2 | 6 | 3 | 9 |
| 55-59 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 60-64 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 65-69 | 2 | 3 | 5 | 0 | 0 | 0 | 2 | 3 | 5 |
| 70-74 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 75 and over | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| TOTAL | 41 | 47 | 88 | 10 | 3 | 13 | 51 | 50 | 101 |
| Median Age | 28.2 | 21.2 | 23.0 | 31.0 | 31.5 | 31.5 | 302 | 217 | 24.8 |

• Figures exclude a total of 7 persons (4 Alaska Native males, 3 Alaska Native females) for whom no age information was provided. Thus, a total of 10S persons in Atqasuk was surveyed by Alaska Consultants, Inc.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **4-ATQ**

Changes in Household Size 1980-1983
Persons per Household

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number of Households 1980 | 1 | 9 | 8 | 0 | 1 | 4 | 5 | 3 | 2 | 3 | | 5 | 24 |
| Number of Households 1983 | | | | 4 | 5 | 1 | 0 | 9 | 7 | 1 | 1 | | 2 | 2 | 2 | 43 |

(Source Alaska Consultants, Inc. survey results)

Table 5-ATQ showa that the average size of the 24 households in Atqasuk in 1980 was 4.5 persons (Alaska Consultants, Inc. 1981:92-94). For Native households, the average density was 5.0 persons. By 1983, the average household size increased to 5.4 persons (43 households).

Table **5-ATQ**

Age of Head of Household for
Alaska Natives* **, Non-Natives***, and **All** Groups
**Ataqsuk,** June 1980

| Household size | 14-24 | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total |
| 1 person | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 persona | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 0 | 0 | 1 | 3 | 4 |
| 3 persons | 1 | 0 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 1 | 5 |
| 4 persons | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 1 | 3 |
| 5 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 6 persons | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 3 |
| 7 persons | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 4 |
| 8 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 persona | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1 | 0 | 1 | 2 | 2 | 4 | 3 | 1 | 4 | 6 | 2 | 8 | 5 | 0 | 5 | 17 | 5 | 22 |

" For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.
•• Figures exclude 2 heads of household (both Alaska Natives) for whom no age information was obtained.
••• Includes one unit used as group quarters.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

The type of household unit (single person, nuclear family, couple, or compound household) for Atqasuk in 1980 is shown below in Table 6-ATQ. At this time Atqasuk's population was 88% Native (95 individuals), and 12% non-Native (13 persons).

Table 6-ATQ

Atqasuk Household Composition -1980

| | |
|---|---|
| Non-Native, unrelated individuals | 3 |
| Non-Native, couple | 1 |
| Non-Native, nuclear family with children | 1 |
| Native, single person | 1 |
| Native, nuclear family with children | 5 |
| Native, compound household | 12 |
| Native, single household head with child | 1 |
| Total Households | 24 |

(Source: Alaska Consultants, Inc. survey results)

The available household information is much more substantial for 1980 than in subsequent years because the NSB sponsored a major household housing and employment survey in 1980 in all the villages, including Barrow. This data source provides much detailed information about Atqasuk, but it should be noted that the village had more than doubled in size in the next 2-3 years. The 1980 data is useful for showing initial population and employment trends in Atqasuk.

According to the available literature (principally Alaska Consultants et al. 1984), the new village of Atqasuk was initially settled by people from Barrow whose families were descended from or married to former residents of the inland area surrounding Atqasuk. Some of the older individuals grew up in camps on the land in this area, fishing, hunting, and trapping with their parents and grandparents. Also, some of the migrants to Atqasuk were descended from families who spent summers at fish camps along the Meade River. In 1980, Atqasuk residents were asked their prior place of residence, and of the 13 of 14 Native households which answered this question, all were from Barrow (Alaska Consultants et al. 1984). Fieldwork in 1983 provided additional information on the origins of Atqasuk families and their motivation for going to the new village:

- Over half of the people interviewed were born in the Atqasuk area, married to someone who was born there, or had traditionally spent their summers at fish camps in this area. According to local residents, the initial re-establishment of the village was undertaken almost entirely by people who had family ties to the area. Since then, in-migration of Inupiats [sic] to Atqasuk who were attracted here by employment opportunities rather than by family ties has also taken place.

- Two main reasons were given by Inupiat persons interviewed in 1983 for moving from Barrow to Atqasuk. The first was family ties to the Atqasuk area, while the

second was more related to a desire to get away from Barrow. Reasons given for the latter primarily related to social changes which have been occurring in the community, including a significant increase in the proportion of non-Natives and a resulting feeling of cultural alienation. The selection of Atqasuk, aside from family ties, appears to have been related to the high level of construction activity in the village and convenience to Barrow. As elsewhere in the North Slope Borough, the main reasons given by "whites" for moving to Atqasuk were related to opportunities for professional and financial rewards (Alaska Consultants et al. 1984:408).

The same reasons for migration to Atqasuk were stated by Schneider et al. (1980:25): the village "is largely comprised of individuals and families who once lived at Tikigluk (Tigalook) or old Atqasuk, settlements in the immediate vicinity of the new village, or persons wanting to move out of Barrow for social and cultural reasons." The desire to escape the growing ethnic differentiation in Barrow is also a motivation for migration frequently given by Nuiqsut residents. The preference for quieter, more homogeneous communities is a valued alternative to Barrow residence for inhabitants of most of the North Slope villages; this sentiment probably predated the recent expansion of Barrow's population. The importance of newly available opportunities for housing and employment should not be underestimated.

It is interesting to note that over half of the 12 households interviewed during the 1983 fieldwork reported that they maintained residences in Barrow (Alaska Consultants et al. 1984:414). Some of the Barrow residences are rented out, creating additional income for their owners; but more are occupied by family members left behind. The report suggested that the movement to Atqasuk resulted in the splitting of most family units: only one household out of the 12 respondents had moved to Atqasuk as a unit (Alaska Consultants et al. 1984:448). In some of these cases, the older adults (parents) had moved to Atqasuk while the adult children remained in Barrow. The reason for this behavior was that the young adults wished to remain in Barrow because there would be little for them to do in Atqasuk. In two cases, one spouse moved to Atqasuk while the other remained in Barrow, creating a situation involving "a great deal" of commuting between communities. Observations in Barrow affirm there is frequent movement back and forth between the two communities, with individuals and families often staying for several weeks or months in Barrow before returning to Atqasuk (Worl and Smythe, unpublished Barrow fieldnotes). This pattern appears unique to Atqasuk. Although it is not uncommon for visitors from other villages to stay with their family in Barrow for extended periods, Atqasuk residents seem to travel more frequently and to remain longer in Barrow. With such close proximity to Barrow, it is easy and convenient for Atqasuk residents to make the short trip. Also, the maintenance of residences in Barrow, which are often occupied by close family members, is conducive to this behavior. Temporary movements between Atqasuk and Barrow appear to be characteristic of social life in Atqasuk; even the village mayor moved to Barrow for a while in 1983 (Alaska Consultants et al. 1984:448). The implications of this behavior for community and family stability are potentially profound, but we do not have sufficient data to fully explore them.

## C. Formation of New Atqasuk

According to one of the village elders, the impetus to resettle Atqasuk came from Eben Hopson, first mayor of the NSB. Hopson approached this elder, who was a member of the family that had a sod house at Tigalook in earlier decades of this century, with the idea that Atqasuk should be built because "people lived there before, and they wanted them to go back there." There was a small community at Atqasuk during the coal mine days, and it was large enough to have a post office and BIA school for a few years. "They" probably refers to both the borough and regional corporation. ASRC was also involved in the initial stages; it was ASRC that encouraged and assisted with the formation of the village corporation several years before the new village was constructed. However, unlike Nuiqsut and Point Lay, it was the NSB that erected the first houses and community facilities. Perhaps that was because Atqasuk was resettled later than the other two villages.

According to the same elder, the site of the new village was selected at Hopson's request by the land manager of the village corporation at the time; this individual was also from a family who had a sod house in the area. The townsite is located between the Meade River and a large lake about a mile from the historical site of Atqasuk, which has been referred to in the literature as "Old Atqasuk." An Atqasuk elder stated that the village was located by the lake because the area was high and flat, in contrast to the area surrounding Old Atqasuk. Also, the lake served as a landing area for planes bringing in building material for the first houses. The construction of the first 13 houses began in 1977, and was completed in 1978. A small school and basic utilities, such as a power plant, were also erected.

A reconstruction of the original inhabitants of these houses indicates that they were of the families who resided at the coal mine community known as Meade River, at the historical site of Tigalook. The first households were headed by individuals who had themselves worked in the mine (with their parents), or were descended, or married to descendants, one generation removed from mine workers who lived here previously. Another individual, who built his own home in Atqasuk at this time, was married to a sister of an Inupiat school teacher at the Meade River mining community. All but one of the original households were living in Barrow prior to moving to Atqasuk; one household was from Wainwright.

Subsequent population growth has maintained a similar pattern, with most families tracing relationships one or two generations removed from people who lived (and worked) at the mining community. Presently, among the 44 residential households in the village, 36 or 82% have heads or spouses that either lived here or can trace lineal descent one or two generations removed from prior residents, during the coal mine period (the total number of households used here excludes NSB School District housing). Most of the remaining households have kinship relationships with individuals in the "core" houses. Nearly all of the individuals interviewed in the village could identify a relative, or one of their spouse's, who lived in the mining community many of the current residents remember living here, attending school, or moving into Barrow after the Meade River school closed.

Among the original residents were descendants of two families who had resided at the Old Atqasuk and Tigalook sites prior to the operation of the mine. AU but a few of the 44 current households are comprised of descendants of inland families, that is, descendants of persons who lived at least

seasonally in inland areas prior to the 1940s. A lot of these families moved into Barrow in the 1930s. One reason was to put their children in school; but they maintained their use of inland areas for trapping, hunting, and fishing. When the mine opened in the 1940s, it was a period of a general shift toward a more sedentary lifestyle and increasing employment, centered in Barrow. Workers for the coal mine were hired principally from Barrow families throughout the life of the operation (c. 1945-1%2).

A BIA school was operated at the mining community from 1951-1955. Atqasuk residents who were descended from miners reported that they moved back to Barrow when the BIA school closed. However, these families remained in a close association, and continued to use the Meade River area in summer and fall. "It was a favorite place of many of them. They came out here for several months in summer, camped, fished, picked berries, etc.; lived in tents. They were close for many years." The common history and continued association among these families is an important component of the social cohesion in the new village of Atqasuk, which is comprised principally of descendants of these families. At the same time, Atqasuk villagers maintain many relationships with their extended families in Barrow. The majority of current Atqasuk residents, although having ties to the area from the mining period, consider themselves to be from Barrow, and have active relationships with substantial family networks in that larger community.

D. Population Movements and Migration

There is a regular pattern of population movement into and out of the community which is due to the proximity of the village to Barrow and the close relationship of Atqasuk residents to people in Barrow. As described above, nearly all of the Atqasuk residents were formerly residents of Barrow, and all have family members who live there. These factors are conducive to frequent travel and movements between Atqasuk and Barrow, as has been reported in the literature. During winter months, when travel over the tundra by snowmachine is possible, there are frequent trips to Barrow and back. Villagers go for shopping at Stuaqpak and to visit friends and relatives. Most villagers have parents and siblings in Barrow.

In the winter of 19S8, there was an ice road between Barrow and Atqasuk which was used by people going back and forth between the two communities. Also, villagers used to take their vehicles on it for fun, according to one Barrowite. Since there are only three or four vehicles in Atqasuk, this road probably saw greater use from the Barrow side. One Atqasuk resident reportedly brought his car to Barrow by this road and left it there. The road was not a deliberate project by any agency; it was formed by the tracks left by a rollodon train which the borough used to transport fuel to Atqasuk. In 1989, the village mayor noted that Atqasuk residents will have to buy Barrow registration stickers for their snowmachines now, since the city of Barrow is requiring all snowmachines in Barrow to be registered

Another reason for travel to Barrow and other communities are meetings of boards and commissions. Atqasuk has its share of representatives on "a lot of regional organizations" who are involved in meetings and training sessions. For example, one resident serves on the NSB Health Board, ASRC Board, and works for a village organization. She goes to Barrow about twice a month, usually for meetings. She likes seining on regional boards; "it kind of makes up for living in a small

village." She likes living in Atqasuk, her boys live in the village and they have their own place. Her husband has found jobs in the community as well.

In the spring, there is participation in whaling which draws people to Barrow and, to a lesser extent, Wainwright; villagers also attend Nulakataq in both communities. Atqasuk villagers go to Barrow for the newly revived Messenger Feast in January. "It was a big deal last year [1988] and promises to get bigger." The annual October meeting of the Alaska Federation of Natives, and the need for Christmas shopping, takes people to Anchorage and Fairbanks in the fall and early winter. Finally, people are removed from Atqasuk to the jail in Barrow on a "more than occasional" basis.

There is regular interaction with households in Wainwright, but the frequency of interchange is much less than with Barrow. As mentioned above, there is one household that migrated to new Atqasuk from Wainwright. This one household, comprised of an older couple, actively maintains ties with members of that community. For example, in April 1989 they were in Wainwright for the spring harvest of smelt. Other Atqasuk households have links to Wainwright, but they are much less numerous than ties to Barrow. Some of the relationships are through kinship connections in Barrow households. For example, two individuals stated that they have opportunities to whale either in Barrow or Wainwright; when asked about the circumstances of their Wainwright opportunity, they explained that through relatives in Barrow, they also have kinship ties with a Wainwright whaling captain. In another example, a resident indicated that she makes an annual contribution to her cousin's whaling crew, and receives a share of the whale if he is successful. She considers herself to be from a Barrow family, however, and her parents and siblings live there.

It is more frequent for people to leave Atqasuk for a short period of time, than it is for outsiders to come into the village for short visits. This view is based on statements that people would leave Atqasuk for a specific purpose, such as to go to Barrow for shopping, or go to Barrow or Fairbanks for meetings. It seems that Atqasuk villagers more regularly had a reason to leave town for a short time, than they did to receive visitors from outside. One local discussant estimated that every person gets to Barrow four to six times a year, and to Anchorage or Fairbanks once or twice a year. Residents enjoy going to the larger cities, particularly for Christmas shopping.

Key informants commented that, while there was a definite pattern of population movement into Atqasuk, it was usually of a temporary duration. "We get a lot of movements in and out of the village, but not for very long." A significant constraint to long-term immigration is the shortage of available housing. "There are some houses that are overfilled, and we don't have any more houses to expand into. So this means that people moving here have to move in with others." Key informants estimated that while there are one or two houses with a single individual in residence, there are ten that have multiple families in residence. So the unavailability of housing units, and the lack of housing construction since 1982 or 1983, is a constraint to immigration. The housing issues are discussed more fully below.

There has been a decline in the number of people coming to Atqasuk in search of temporary employment opportunities. Residents reported that fewer people are coming to the village for jobs than two years ago (1987). They would come to Atqasuk and get jobs because the local villagers would not always stay on the job. At present, the corporation has joint ventures with any contractor that comes to town. Also, there are very few large projects which created opportunities for outsiders in the past. On the other hand, the slowdown has not resulted in a significant

population outflow. When asked if many people left town after the construction jobs began to slow, individual villagers responded that not many people left. Local leaders reported that the population has been stable for the last two years (1987-1989) or so. According to one estimate, "maybe one person left."

During various discussions, it was suggested to villagers that employment and subsistence were motivations for outsiders inning to the village for periods of time. A key informant offered another explanation about population movement into Atqasuk. The village includes people who are in Atqasuk to get away from abuse by their parents (principally Barrow people), and people who are in the community while they are in the middle of judicial processing -- before their trial or after their trial but before sentencing. A current example is the people here who were involved in a drug bust in Barrow in January 1989. According to one informant, "this explains a lot of the moving back and forth" between Barrow and Atqasuk.

There is a sizable influx of people from mid-September to the end of October; one person estimated "up to 100 people." They set up tents and camp, fishing through the ice for grayling and burbot. These people are from Barrow and Wainwright. People also come in the spring and summer for fishing, geese hunting, and camping out. Another regular set of visitors includes officials from the NSB, NSBSD, etc., who occasionally travel to Atqasuk for borough business. Also, since the Atqasuk Presbyterian church does not have a minister, church elders from Barrow come out to lead services. Usually it is one elder, the father of one of the villagers, who makes the visit.

## E. Present Population

Quite a bit of information on the demographic characteristics of Atqasuk are available from the NSB Census of Population and Economy, 1989. The current city population is approximately 219 individuals. Local residents indicate that the population has been stable for the past two years. As indicated on Table 7-ATQ, the sex ratio in both the Inupiat and non-Inupiat populations favors males. If one looks at the Inupiat component of the population by itself (rather than as a part of the general population as presented in Table 7-ATQ), the ratio of males to females is 54.7 to 45.3. This figure contrasts with those from Barrow where the sex ratio among Inupiat is closer to being equal. Among non-Inupiat the male to female ratio is 60 to 40. This figure is similar to the sex ratio in Barrow which is 57 to 43. The age distribution is very similar in Atqasuk and Barrow. Both the ethnic and age distribution of Atqasuk are illustrated graphically in Figure 1-ATQ. This same information plus the sex ratio of both ethnic groups is illustrated in Figure 2-ATQ.

Although the ethnic diversity of Atqasuk does not nearly match that of Barrow, the exact number of Filipino and other Alaska Native, is recorded in Table 8-ATQ and illustrated graphically in Figure 3-ATQ.

Table 7-ATQ

**Age, Sex,** and Race Composition - 19S8
**Atqasuk**

AGE, SEX, AND RACE COMPOSITION OF POPULATION -1988
**ATQASUK**

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | | | % |
|---|---|---|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | TOTAL |
| UNDER 4 | 10 | 11 | 21 | 1 | 1 | 2 | 11 | 12 | 23 | 11.4% |
| 4 - 8 | 17 | 10 | 27 | 2 | 1 | 3 | 19 | 11 | 30 | 14.9% |
| 9 - 15 | 11 | 12 | 23 | 1 | 0 | 1 | 12 | 12 | 24 | 11.9% |
| 16 - 17 | 5 | 2 | 7 | 0 | 0 | 0 | 5 | 2 | 7 | 3.5% |
| 18 - 25 | 17 | 13 | 30 | 1 | 0 | 1 | 18 | 13 | 31 | 15.4% |
| 26 - 39 | 16 | 17 | 33 | 3 | 3 | 6 | 19 | 20 | 39 | 19.4% |
| 40 - 59 | 18 | 12 | 30 | 4 | 3 | 7 | 22 | 15 | 37 | 18.4% |
| 60 - 65 | 4 | 2 | 6 | 0 | 0 | 0 | 4 | 2 | 6 | 3.0% |
| 66 + | 1 | 3 | 4 | 0 | 0 | 0 | 1 | 3 | 4 | 2.0% |
| TOTAL | 99 | 82 | 181 | 12 | 8 | 20 | 111 | 90 | 201 | 100.0% |
| % | 49.3% | 40.8% | 90.0% | 6.0% | 4.0% | 10.0% | 55.2% | 44.8% | 100.0% | |

NUMBER OF MISSING OBSERVATIONS 18

TOTAL POPULATION 219

| | AVERAGE AGE (years) |
|---|---|
| ENTIRE POPULATION | 24.8 |
| MALE | 24.6 |
| FEMALE | 252 |
| INUPIAT | 24.2 |
| NON-INUPIAT | 29.8 |

Source: NSB Census of Population and Economy, 1969.

Figure 1-ATQ

**Inupiat** and Total Population in 1988
**Atqasuk**

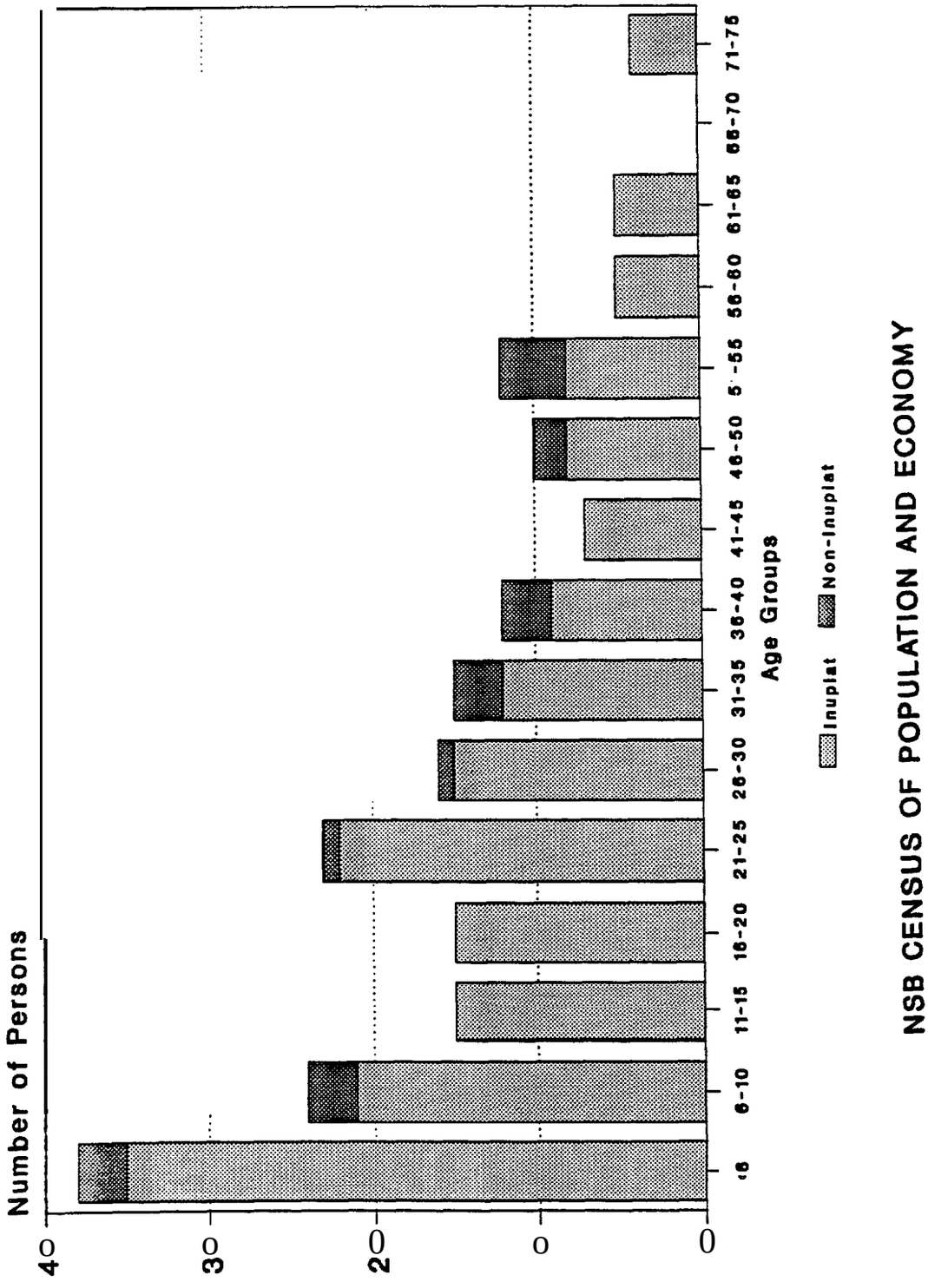


Figure 2-ATQ

**Atqasuk** Population Characteristics
1988

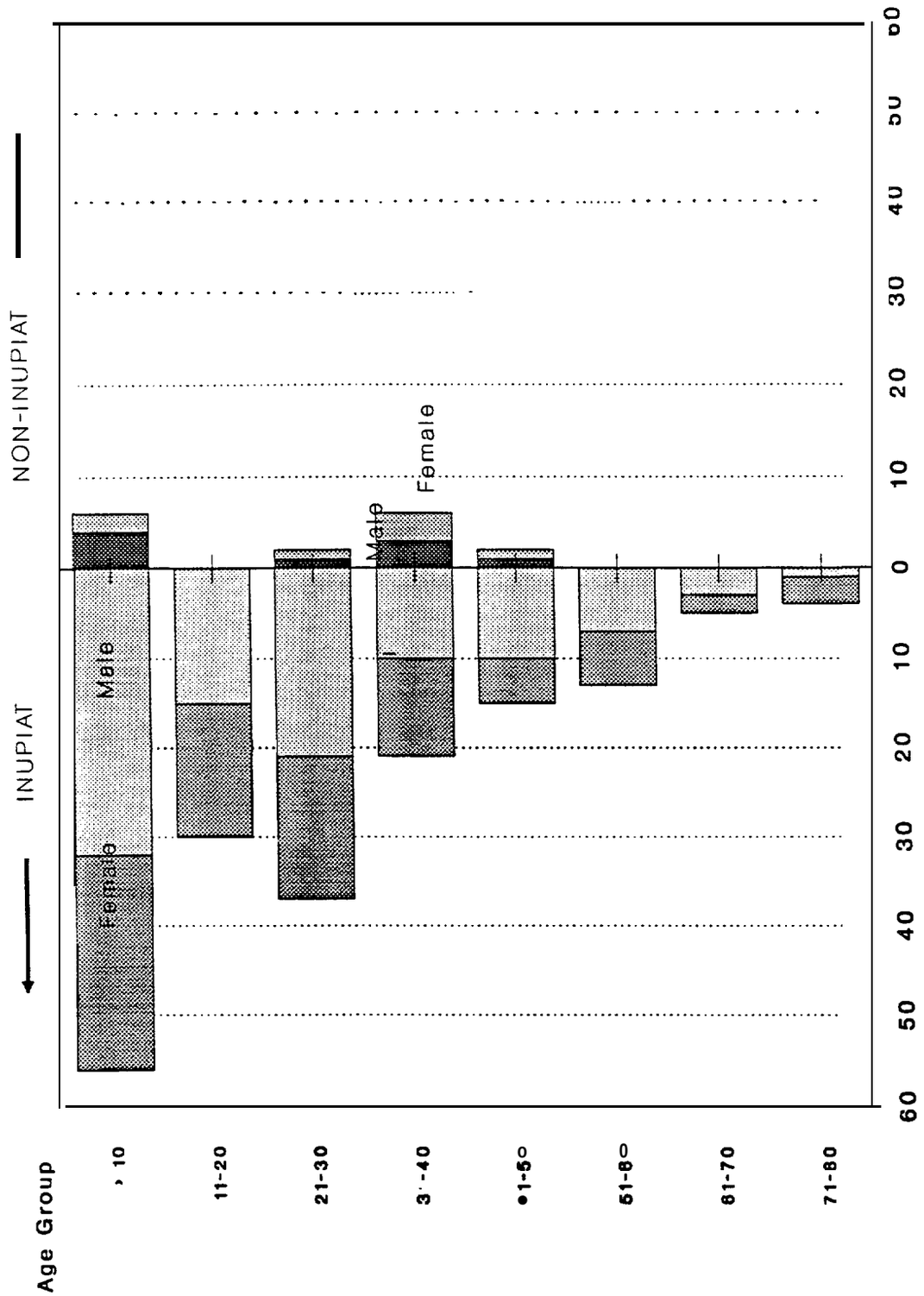


Table **8-ATQ**

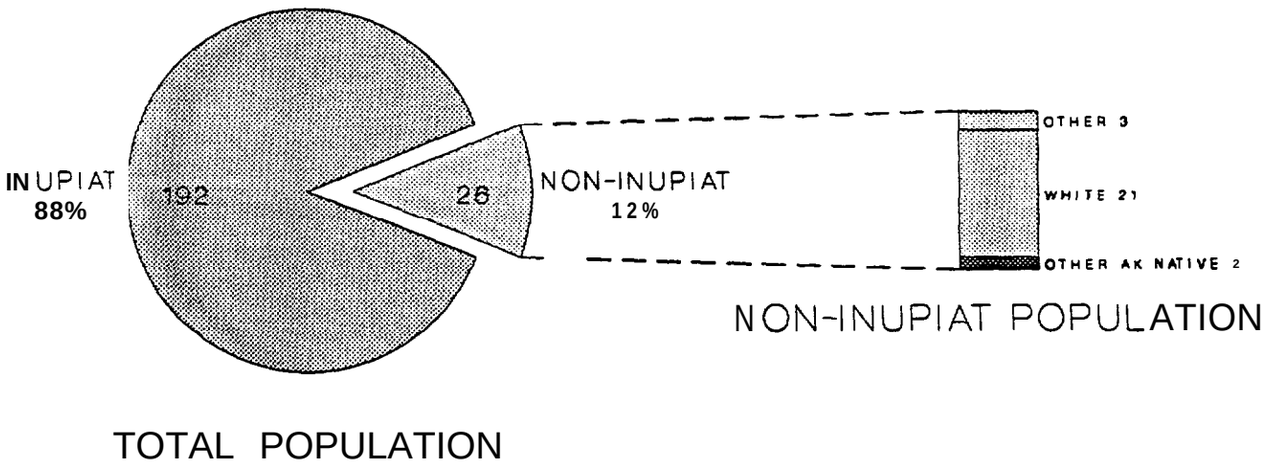
Ethnic Composition of Population -1988
**Atqasuk**

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 107 | 85 | 192 | 88.1% |
| OTHER AK NATIVE | 1 | 1 | 2 | 0.9% |
| WHITE | 13 | 8 | 21 | 9.6% |
| FILIPINO | 1 | 0 | 1 | 0.5% |
| NOT ASCERTAINED | 1 | 1 | 2 | 0.9% |
| TOTAL | 123 | 95 | 218 | 100.0% |
| % | 56.4% | 43.6% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | 1 | |
| TOTAL POPULATION | | | 219 | |

Source: NSB Census of Population snd Emmy, 1989.

Figure 3-ATQ

Ethnic Composition **Atqasuk** Population
**1988**




**NSB CENSUS OF POPULATION AND ECONOMY**

The most prominent characteristic of Table 9-ATQ, "Marital Status by Ethnicity - Atqasuk," is that the largest proportion of individuals in the community have never married. It appears that this is so because the total population from which these figures are derived include all age categories, even individuals less than 18 years old. If all individuals less than 18 years old are subtracted from the never married category, only 45 Inupiat (as opposed to 123) have never married out of a total population of 192. The same general pattern of marital status is evident in Barrow.

## F. Housing

Houses in Atqasuk were built in order of assigned block numbers. Block 1 contains eight homes, Block 2 contains eight homes, Block 3 contains the former school (now a four-plex) and six houses, Block 4 contains the church and seven homes, Block 5 contains eight houses, and Block 6 contains eight houses. Everyone who described the beginnings of the new village stated that there were thirteen original homes constructed in the first phase, in 1977-1978. The final houses were under construction at the end of 1981, indicating that the housing construction was completed by 1982. The exceptions are three homes built in the subdivision north of town, which were built by the school district.

Table **9-ATQ**

Marital Status by **Ethnicity**
**Atqasuk** -1988

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| NOW MARRIED | 30 | 26 | 56 | 4 | 4 | 8 | 64 | 51.6% |
| WIDOWED | | 5 | 5 | | | 0 | 5 | 4,0% |
| DIVORCED | 2 | 2 | 4 | 2 | 2 | 4 | 8 | 6.5% |
| SEPARATED | 1 | | 1 | 1 | | 1 | 2 | 1.6% |
| NEVER MARRIED | 28 | 16 | 44 | 1 | | 1 | 45 | 36.2% |
| TOTAL | 61 | 49 | 110 | 8 | 6 | 14 | 124 | 10U.O% |
| % | 49.2% | 39.5%'. | 88.7% | 6.5% | 4.8% | 11.3% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | 0 | |
| TOTAL POPULATION (age 16+) | | | | | | | 124 | |

**Note:** figures include persona age 16 and above.

**Source:** NSB Department of Planning and Community Services
Census of Population and Economy,1989

SECTION II: ECONOMY

## A. Overview

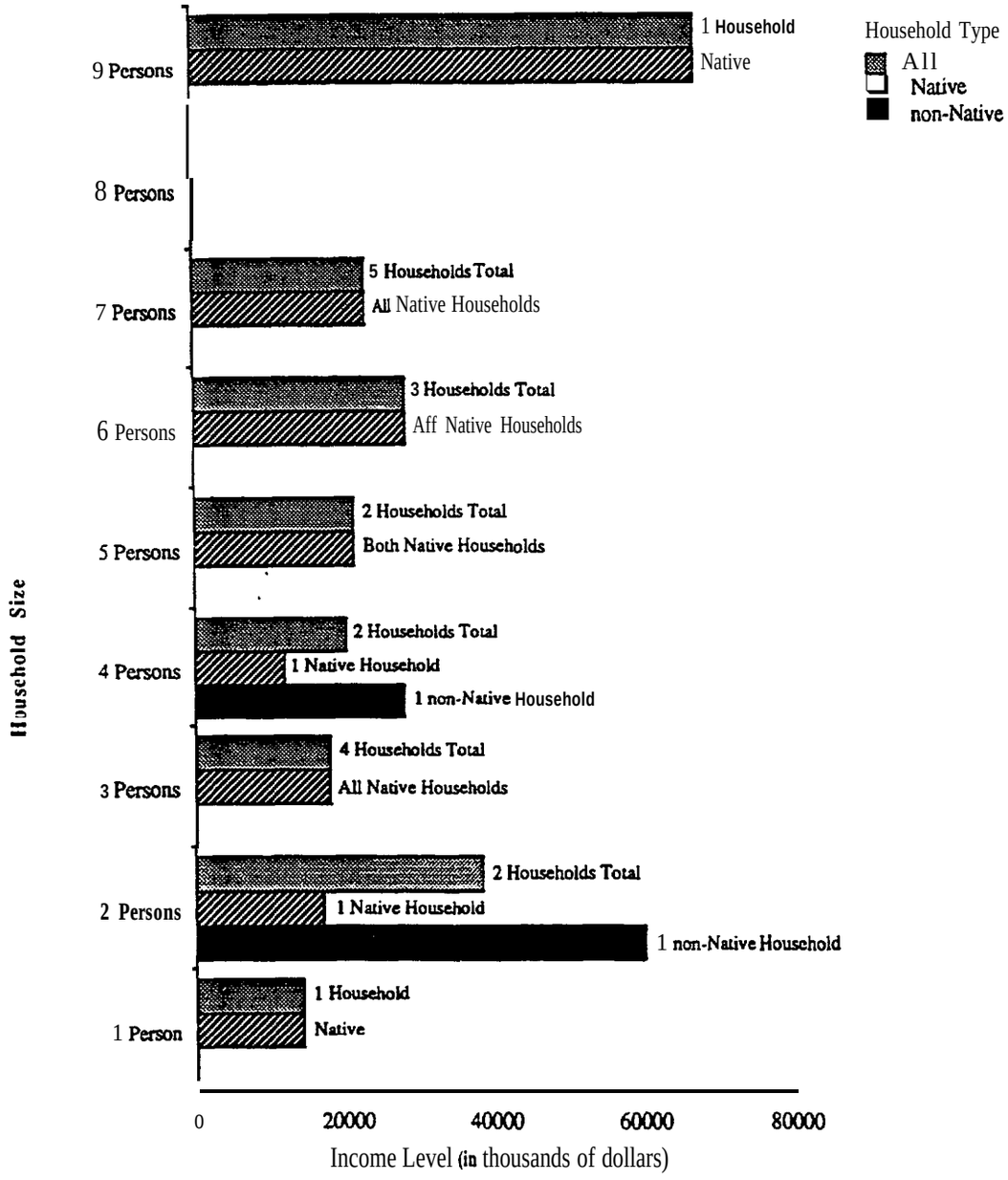
Income figures available in 1980 from the same NSB survey state that, for twenty households, the average income was $25,606. The distribution of household incomes in terms of household size and ethnicity is shown graphically in Figure 4-ATQ. There was a substantial difference between Native and non-Native household income, with an average of $23,563 for eighteen Native households and $44,000 for two non-Native households. This compares with an average household income of $31,378 in the NSB and $21,865 for Alaska Native households (U.S. Census, reported in Alaska Consultants et al. 1984:422). The average utility expenses for Atqasuk households in 1980 was $272 in summer and $468 in winter. Further, five households reported receiving employer/agency-assisted rent; all were non-Native (3 NSB, 2 NSBSD). Finally, the survey results stated that three Native households received Social Security/Public Assistance/.Pension Income, in addition to employment income.

In Atqasuk, most Inupiat households, 30 out of 36, earn $40,000 per year or less (please refer to Table 1O-ATQ). It is striking that there are no non-Inupiat in this income category. Of the eight non-Native households in Atqasuk, five earn between $40,000 and $60,000 per year and three earn $60,000 per year or more. In Barrow, household income among Inupiat is more evenly distributed than in Atqasuk. However, among non-Natives there is a concentration of high average incomes with only 5.7% of households having an annual income below $20,000 and 53.9% having incomes exceeding $60,000.

Detailed employment data are available in 1980 from the NSB Housing and Employment Survey carried out by Alaska Consultants, which can be compared with some aggregate information collected in 1982 (reported in Alaska Consultants et al. 1984). The composition of employment in Atqasuk for 1980 is shown in Table 11-ATQ. There were 27 unemployed Native residents (aged 16 and over) in 1980, of which 21 were female. This compares with 71 full-time equivalent (FTE) positions counted in 1982, as shown in Table 12-ATQ. Although the number of positions was much higher in 1982, the proportion of total employment accounted for by construction jobs was equal. In 1980, construction constituted 47.8% of total employment, compared with 47.9% in 1982. All of these data support the contention that the economy of Atqasuk is supported in large part by the NSB.

Figure **4-ATQ**

Average Household Income Distribution* **
Native*** **and** non-Native Households by Household Size
**Atqasuk,** May 19?30




Total Number of Households: 20
Mean Household Income:
All: $25,606
Native: $23,563
Non-Native $44,000

* Includes one unit used as group quarters.
• * Figures exclude 4 households (one Alaska Native and (3 non-Native) for whom no income information waa obtained.
• ** For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.

Source: Alaska Consultants, Inc., Norsh Slope Borough Housing Survey.
Prepared for the Nonfr S1opc Borough Public Worka Department. Anchorage, September 19S0.

Table 1O-ATQ

Household Income and Spending - 198S

**Atqasuk**

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS NON-INUPIAT | INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 14 | | 14 | 31.8% |
| $20,000 - $40,000 | 16 | | 16 | 36.4% |
| $40,000 - $60,000 | 4 | 5 | 9 | 20.5% |
| $60,000 & ABOVE | 2 | 3 | 5 | 11.4% |
| TOTAL | 36 | 8 | 44 | 100.0% |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 11 |
| TOTAL OCCUPIED HOUSEHOLDS | 55 |

| | FOR ALL VILLAGE HOUSEHOLDS MEDIAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $32,500 | $35,057 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 80.0% | 71.0% |
| MONTHLY HOUSING PAYMENT (2) | $100 | $185 |
| MONTHLY HEATING COSTS | $269 | $307 |
| MONTHLY ELECTRICITY COSTS | $61 | $107 |

Notes: (1) For food, dothing, snd other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

Table **11-ATQ**

Composition of Employment by Race and Sex * **
**Atqasuk,** May 1980

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Contract Construction | 0 | 0 | 0 | 5 | 0 | 5 | 5 | 0 | 5 |
| Transportation, Communication, and Public Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Trade | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| Finance, Insurance, and Real Eatate | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Services | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Government | | | | | | | | | |
| Federal | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local | 25 | 5 | 30 | 3 | 3 | 6 | 28 | 8 | 36 |
| Construction | (15) | ( 2) | (17) | ( 0) | ( 0) | ( 0) | (15) | ( 2) | (17) |
| Non-Construction | (lo) | (3) | (13) | (3) | (3) | (6) | (13) | (6) | (19) |
| TOTAL | 2 6 | 8 3 | 4 | 8 | 3 | 11 | 34 | 11 | 45 |

• Employment was not necessarily full-time or permanent. People were asked onfy to list their employer or major source of income.
•• Employment figures exclude 3 Alaska Natives (1 males and 2 females) who fisted various forms of assistance, primarily Social Security, as their major source of income. Employment figures also exclude 28 Alaska Natives (6 males and 22 females) aged 16 and *over* for whom no employment information waa provided or who claimed to be unemployed.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department, Anchorage, September 19S0.

Table 12-ATQ

1982 **Atqasuk Employment,** August Count (lWE)

| | |
|---|---|
| Construction | 34 |
| Trade (Corp. Store) | 2 |
| Finance (Village Corp.) | 2 |
| **Services** (AIC **constr.** camp) | 4 |
| Government **(NSB)** | 28 |
| Transportation (air taxi) | 1 |
| TOTAL | 71 |

(Source: Alaska Consultants et al. **1984:418-20)**

Average number of employed individuals in each household in 1980 was 1.9 persons. The following tables (Tables **13-ATQ** through **18-ATQ),** which were compiled from the 1980 **survey** results, present the distribution of employment by household size, or simply number of households (Table **19-ATQ).**

Table 13-ATQ

1980 **Atqasuk** Household Employment by Household Size

| | | Household Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Number | O | | | 1 | | | | | | | |
| of | 1 | 1 | 1 | 2 | 1 | 2 | 1 | | | | |
| Employed | 2 | | 3 | 1 | 2 | | 2 | 2 | | | |
| Persons | 3 | | | 1 | | | | 2 | | | |
| Per | 4 | | | | | | | 1 | | | |
| Household | 5 | | | | | | | | | 1 | |

Table 14-ATQ

1980 **Atqasuk** Household Employment by Household **Size,** Non-Native Households

| | Household Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Number of Employed Persons Per Household 0 | | | | | | | | | | |
| 1 | | | | | | | | | | |
| 2 | | 3 | | 1 | | | | | | |
| 3 | | | 1 | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |

Note: These households include 2 comprised of unrelated construction workers and 3 with NSB employment.

Table **15-ATQ**

19S0 Household Employment by Household **Size,** Construction Workers Excluded

| | Household Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Number of Employed Persons Per Household 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| 1 | | | 3 | 1 | 1 | 2 | | | | |
| 2 | | 2 | | 1 | | | 4 | | 1 | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |

Table **16-ATQ**

Size of Native Households Containing Construction Workers Exclusively

| | Household Size | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **# of Native Households** | 1 | 1 | | 1 | 1 | 1 | 1 | | | |

Table 17-ATQ

Number of Households Having Various Characteristics

| | |
|---|---|
| Number of Native households with construction workers | 11 |
| Number of Native households with construction workers exclusively | 6 |
| Number of Native households with both constr. and FT workers | 5 |
| Number of Native households with FT workers exclusively | 7* |
| Number of Native households with no employment | 1 |
| Number of non-Native households with FT employment exclusively | 3 |
| Number of non-Native households with constr. workers exclusively | 2 |

*Note: includes two temporary and seasonal positions

In addition to the type of employment available in Atqasuk in 1980, Alaska Consultants (1981:27) collected data on the composition of employment according to age, race, and sex. These data are shown in Table 18-ATQ. In terms of sex differences, there were about three times as many men in the work force as women. This trend held true for both Natives and non-Natives. However, the age distribution of employment was not consistent across ethnicities. While 5 out of 11 (45.5%) of employed non-Natives were between the ages of 30-34, only 5 out of 34 (14.7%) of employed Natives were between the ages of 30-34. The category with the largest number of employed Natives was the 20-24 year age bracket.

B. Characteristics of Households

To put the data above in a context, tables concerning household size, household income, and spending, and tables about the relationship between household size and levels of subsistence and subsistence sharing are included here. According to Table 19-ATQ the average household size among Inupiat in Atqasuk for 1989 is 4.4 persons. This contrasts with Barrow where the average household size among Inupiat is 3.9. The average household size among non-Inupiat is 2.2, slightly below that of Barrow which averages 2.5 persons for non-Inupiat households.

Table 20-ATQ, "Atqasuk Household Characteristics by Categories of Household Size," illustrates the relationship between household size and various household characteristics. The relationship between household size and income indicates that opposite trends are occurring between the Inupiat and non-Inupiat populations. While Inupiat households increase in size, their incomes decrease. But the incomes of non-Inupiat households appear to increase as the size of their households increases. In the section of the table that shows the average proportion of household income spent in the village based on household size, one sees that as Inupiat households increase in size, the amount of income that is spent in the village also increases. The opposite holds true for non-Inupiat households.

Table **18-ATQ**

Composition of Employment by **Age, Race,** and Sex •
**Atqasuk** - May 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 - 24 | 5 | 4 | 9 | 0 | 1 | 1 | 5 | 5 | 10 |
| 25-29 | 3 | 0 | 3 | 1 | 0 | 1 | 4 | 0 | 4 |
| 30-34 | 4 | 1 | 5 | 4 | 1 | 5 | 8 | 2 | 10 |
| 3s -39 | 3 | 1 | 4 | 1 | 0 | 1 | 4 | 1 | 5 |
| 40-44 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 45-49 | 2 | 1 | 3 | 0 | 1 | 1 | 2 | 2 | 4 |
| 50-54 | 4 | 1 | 5 | 2 | 0 | 2 | 6 | 1 | 7 |
| 55-59 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 60-64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| TOTAL | 26 | 8 | 34 | 8 | 3 | 11 | 34 | 11 | 45 |

• Employment waa not **necessarily** full-time or permanent. People were **asked** only to list their employer or major source of income.

**Source:** **Alaska Consultants,** Inc., North Slope Borough Housing Survey, prepared for the North **Slope** Borough, Public Worka Department. **Anchorage,** September 19S0.

**Table** 19-ATQ

Household Size -1988

**Atqasuk**

| NUMBER OF PERSONS | NUMBER OF HOUSEHOLDS: INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| 1 | 2 | 4 | 6 | 10.9% |
| 2 | 6 | 3 | 9 | 16.4% |
| 3 | 6 | 1 | 7 | 12.7% |
| 4 | 9 | 3 | 12 | 21.8% |
| 5 | 7 | | 7 | 12.7% |
| 6 | 10 | | 10 | 18.2% |
| 7 | 2 | | 2 | 3.6% |
| 8 | 1 | | 1 | 1.8% |
| 9 | 1 | | 1 | 1.8% |
| 10 | | | 0 | 0.0% |
| 11 | | | 0 | 0.0% |
| 12 | | | 0 | 0.0% |
| TOTAL OCCUPIED HOUSEHOLD | 44 | 11 | 55 | 100.0% |
| AVERAGE HOUSEHOLD SIZE | 4,4 | 22 | 4 | |

Source: NSB Census of Population and Economy, 1989.

## Table 20-ATQ

**Atqasuk** Household **Characteristics** -1988
By Categories **of** Household Size

| | HOUSEHOLD SIZE | | | |
|---|---|---|---|---|
| | SMALL | MEDIUM | LARGE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $28,500 | $27,500 | $20,000 | |
| Non-Inupiat HHs | $69,500 | $75,000 | | |
| All HHs | $42,167 | $33,200 | $20,000 | $35,057 |
| Cases: | 15 | 25 | 4 | 44 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 2.3 | 5.0 | 7.8 | |
| Non-Inupiat HHs | 1.7 | 4.0 | | |
| All HHs | 2.1 | 4.9 | 7.8 | 4.0 |
| Cases: | 21 | 29 | 4 | 54 |
| **Average Meat & Fish Csmptn from Own HH Subsistance (%):** | | | | |
| Inupiat HHs | 39.5% | 58.7% | 50.0% | |
| Non-Inupiat HHs | 37.0% | 6.7% | | |
| All HHs | 38.7% | 52.7% | 50.0% | 47.8% |
| Cases: | 15 | 26 | 4 | 45 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 16.0% | 14.4% | 10.0% | |
| Non-Inupiat HHs | 20.0% | 0.0% | | |
| All HHs | 17.3% | 12.8% | 10.0% | 14.0% |
| Cases: | 15 | 27 | 4 | 4s |
| **Average Meat & Fish** Harvested **and Given Away (%):** | | | | |
| Inupiat HHs | 16.0% | 11.4% | 16.3% | |
| Non-Inupiat HHs | 20.0% | 0.0% | | |
| All HHs | 17.3% | 10.2% | 16.3% | 13.0% |
| Cases: | 15 | 27 | 4 | 46 |
| Average **Proportion** HI-I **Income Spent in Village (%):** | | | | |
| Inupiat HHs | 71.0% | 82.2% | 87.5% | |
| Non-Inupiat HHs | 35.0% | 15.0% | | |
| All HHs | 59.0% | 75.0% | 87.5% | 71.0% |
| Cases: | 15 | 2s | 4 | 47 |

**Notes:** Household eize categories measured as **follows:**
**SMALL:** Under 4 **persons per** household
**MEDIUM: 4-6** persons per household
**STRONG:** 7 or more persons per household.
Total **cases** (households)= **55.**

**Source: NSB Department of Planning and Community Services**
**Census of Population and Economy**

Educational differences between the Inupiat and non-Inupiat populations are clearly shown by table 21-ATQ. There are one hundred Inupiat older than seventeen, of which forty-three (43%) have graduated from high school. Only two (2%) have been to college. Of the fourteen non-Inupiat older than seventeen, all have graduated from high school and twelve (86%) have been to college. It is important to note when analyzing trends by ethnicity that non-Inupiat in Atqasuk constitute only 9'% (20 out of 219) of the population. Of the total population, 58% is either still in school or has never graduated from high school. This excludes 13% who are not old enough to be in school or are not certain of their level of education. There is some indication from Table 21-ATQ that younger age groups of Inupiat in Atqasuk are completing high school at a higher rate than older groups did, but this trend is by no means certain. In any event, the educational difference between Inupiat and non-Inupiat is sharp and distinct. There are no uneducated non-Inupiat in Atqasuk. The non-Inupiat who live in Atqasuk are there for employment reasons, and their education is one of their qualifications for that employment. Inupiat may eventually fill these positions, but this is not likely to happen for some time in Atqasuk unless educated Inupiat move in from elsewhere. Inupiat from Atqasuk apparently are not drawn to education past high school.

C. 1989 Employment

Both the mayor and the corporation carry out employment functions in the community. The mayor happens to be the NSB Village Coordinator, and in this capacity serves as the employment agent for the borough, including regular borough jobs, positions funded through the Mayor's Job Program, and other programs. As mayor, he serves as spokesperson for the community to external government agencies and groups, and he is an advocate of local hire for positions that villagers can fill. "We get people coming in for jobs, but we want our local people to get jobs -- they are the ones who purchase fuel, who send their kids to school here."

The village corporation, largely through its subsidiary Atqasuk Construction, advocates a similar position. The construction arm seeks joint venture relationships with outside contractors, and in this capacity serves as an employment agent for the community. In a joint venture relationship, the corporation will hire local workers directly. The corporation takes the position that when a job requires skilled and unskilled labor, they will accept the temporary importation of certified tradesmen, such as plumbers or electricians, but the construction contractor is expected to hire helpers from the village. This is the arrangement with SKW/Eskimos, Inc., the company that during 1989 field research was building the Utilities and School District Warehouse (USDW).

Alternatively, contractors who are working in Atqasuk use the corporation to provide the names of potential laborers for current projects. In addition, the NSB works with the corporation in carrying out construction and rehabilitation programs. For example, the current housing improvement program, RELI, is treated as a joint venture between the NSB and the corporation's construction subsidiary. In this case, Atqasuk Construction hires the workers, but the money is coming from the borough.

Table **21-ATQ**

Highest **Level** of Education **Attained** by Age Group
**Inupiat Residents, Atqasuk** - 19SS

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | 4 | 17 | | 21 |
| 4 - 8 | | | | | | 27 | | | 27 |
| 9 - 15 | | | | | | 23 | | | 23 |
| 16 - 17 | | | | | 2 | 4 | | 1 | 7 |
| 18-25 | 1 | | | 14 | 13 | 1 | | | 29 |
| 26-39 | | | | 18 | 13 | | | 2 | 32 |
| 40 - 59 | 1 | | | 9 | 17 | | | 2 | 29 |
| 60 - 65 | | | | | 4 | | | 1 | 5 |
| 66 + | | | | | 3 | | | 1 | 4 |
| TOTAL | 2 | 0 | 0 | 41 | 52 | 59 | 17 | 7 | 178 |
| % | 1.1% | 0.0% | 0.0% | 23.0% | 29.2% | 33.1% | 9.6% | 3.9% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 21

TOTAL Population (Inupiat) 199

Source: NSB Department of Planning and Community Services
Census d Population and Economy, 19S9.

Table 21-ATQ (continued)

Highest **Level** of Education Attained by Age Group
**Non-Inupiat Residents, Atqasuk** -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STIU IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | | 2 | | 2 |
| 4 - 8 | | | | | | 3 | | | 3 |
| 9-15 | | | | | | 1 | | | 1 |
| 16-17 | | | | | | | | | 0 |
| 18-25 | | | | 1 | | | | | 1 |
| 26 - 39 | 2 | 3 | | 1 | | | | | 6 |
| 40 - 59 | 7 | | | | | | | | 7 |
| 60-65 | | | | | | | | | 0 |
| 66 + | | | | | | | | | 0 |
| TOTAL | 9 | 3 | 0 | 2 | 0 | 4 | 2 | 0 | 20 |
| % | 45.0% | 15.0% | 0.0% | 10.0% | 0.0% | 20.0% | 10.0% | 0.0% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 0

TOTAL Population (Non-Inupiat) 20

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1969.

Table 22-ATQ

Occupation Composition of Employment by Sex and **Ethnicity**
**Atqasuk** -1988

| OCCUPATION GROUPS | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| EXEC. ADMIN. MGR. | 4 | 2 | 6 | 2 | | 2 | 8 | 9.3% |
| PROFESSIONAL | | | 0 | | | 0 | 0 | 0.0% |
| TEACHER | | 1 | 1 | 2 | 5 | 7 | 8 | 9.3% |
| TEACHER AIDE | 1 | 1 | 2 | | 1 | 1 | 3 | 3.5% |
| TECHNICIAN | | 3 | 3 | | | 0 | 3 | 3.5% |
| ADMIN. SUPPORT | 3 | 6 | 9 | | | 0 | 9 | 10.5% |
| SERVICE | 4 | 5 | 9 | 1 | | 1 | 10 | 11.6% |
| OPERATOR/MECHANIC | 12 | | 12 | | | 0 | 12 | 14.0% |
| PILOT | | | 0 | | | 0 | 0 | 0.0% |
| LABORER | 10 | 10 | 20 | | | 0 | 20 | 23.3% |
| CRAFTSMAN | 12 | | 12 | 1 | | 1 | 13 | 15.1% |
| ARTISAN | | | 0 | | | 0 | 0 | 0.0% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| TRAPPER/HUNTER | | | 0 | | | 0 | 0 | 0.0% |
| OTHER | | | 0 | | | 0 | 0 | 0.0% |
| TOTAL EMPLOYED | 46 | 28 | 74 | 6 | 6 | 12 | 86 | 100.0% |
| % OF TOTAL | 53.5% | 32.6% | 86.0% | | 7.0% | 14.0% | 100.0% | |
| LABOR FORCE | 49 | 29 | 78 | 6 | 6 | 12 | 90 | |
| % OF TOTAL | 54.4% | 32.2% | 86.7% | 6.7% | 6.7% | 13.3% | 100.0% | |
| TOTAL UNEMPLOYED | 3 | 1 | 4 | 0 | 0 | 0 | 4 | |
| UNEMPLOYMENT RATE | 6.1% | 3.4% | 5.1% | 0.0% | 0.0% | 0.0% | 4.4% | |
| TOTAL UNDER-EMPLOYED | 16 | 9 | 25 | | | 0 | 25 | |
| UNDER-EMPLOYMENT RATE | 32.7% | 31.0% | 32.1% | 0.0% | 0.0% | 0.0% | 27.8% | |

Notes: (I) Total employed includes pan-time, temporary, as wall as full-time employment.
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate= persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Both the city and the corporation reported similar issues with these arrangements. Two basic problems have been encountered. Sometimes the contractors say they do not need to hire helpers or laborers, and local hire will not be available, on specific projects. Secondly, local people are not always dependable when they do obtain positions on construction projects. While some individuals will report regularly to work for the life of the project, the more common pattern is for workers to begin missing workdays, weeks, or entire pay periods after one or two paychecks have been received. Local residents reported that these individuals will often use their newly squired cash to leave Atqasuk for Barrow or Fairbanks, only to return later when their money is low. Observations and key informant conversations suggest that this problem is a recurring issue for local construction hire in the community.

Despite the problems that face employers of Inupiat, it is clear that Inupiat are working. Seventy-five employed Inupiat out of a total labor force of 90 means that 83% of Inupiat able to work are working (Table 23-ATQ, "Industry Composition of Employment by Sex and Ethnicity," shows what kinds of industry Inupiat and non-Inupiat are employed in). This figure is close to the Inupiat proportional representation in the total population (90%). Figure 5-ATQ also shows that the village population more than doubled from 108 in 1980 to 219 in 1989. The labor force (employed and unemployed persons age 16 to 64 that were willing and eligible to work) also expanded, though not as rapidly, from 54 to 90 persons.

Total village employment increased from 45 to 86 persons between 1980 and 1988. This employment increase was sufficient to outpace labor force expansion. As a result, the rate of unemployment (the number of persons unemployed divided by the labor force) in Atqasuk fell from 17 to 4% between 1980 and 1988.

This shift toward full employment is explained in part by a significant increase in direct NSB government employment. Between 1980 and 1988, NSB government employment increased threefold - from 19 to 63 persons. These figures understate NSB government contributions to village employment because they do not include employment expansion in the private sector brought about by NSB-funded projects and programs. Private sector employment and indirect NSB government employment are depicted in the bar labeled "Total Employment" on Table 23-ATQ.

While the rate of overall unemployment declined markedly over recent years, a fairly high level of underemployment (28%) was observed in 1988. "Underemployment" refers to the count of persons that worked part of the year but would have worked more if additional jobs had been available.

In sum, the data for 1980 and 1988 indicate good news. Although the underemployment rate was high in 1988, nearly everyone that wanted to work was able to do so for at least part of the year. This suggests that in 1988 jobs were widely distributed across the village labor force.

D. Projection to 1994

Figure 4-ATQ shows projected levels of population, labor force, and employment in 1994. The assumptions used to make these projections are:

- Village population would grow at an average annual rate of l% per year;
- Village labor force would change according to natural shifts in the age distribution of village population;
- The rate of village unemployment would be held at 5%; and
- The ratio of NSB government employment to total village employment in 1988 would prevail in 1994.

Application of these assumptions leads to increases across the board. Village population would increase to 232 in 1994. The village labor force would grow at a faster rate than the population and increase from 90 to 102. In order to hold unemployment to 5%, total employment would increase from 86 to 97. NSB government employment required to support this level of total employment would increase by eight, from 63 to 71 persons.

Labor force expansion is the critical element in this projection. The number of young persons entering the labor force will more than offset retirees and other labor force departures over the next six years. Village total employment must increase to support this labor force. This, in turn, would require the NSB government to step up local employment opportunities either directly, or through programs that enhance private sector development.

Table **23-ATQ**

Industry Composition of Employment by Sex and **Ethnicity**
**Atqasuk** -1988

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % OF |
|---|---|---|---|---|---|---|---|---|
| INDUSTRY GROUP | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| **PRIVATE SECTOR** | | | | | | | | |
| FISHERIES | | | 0 | | | 0 | 0 | |
| MINING | | | 0 | | | 0 | 0 | |
| CONSTRUCTION | | | 0 | | | 0 | 0 | |
| TRANSP/COMM/PUBLIC UTIL | | | 0 | | | 0 | 0 | |
| TRADE | | 1 | 1 | | | 0 | 1 | |
| FINANCE/INSUR/REAL EST | | | 0 | | | 0 | 0 | |
| BUSINESS/REPAIR SERV | 2 | | 2 | | | 0 | 2 | |
| ENTERTMT/REC/TOURIST SERV | | | 0 | | | 0 | 0 | |
| HEALTH, SOCIAL, & EDUC SERV | | | 0 | | | 0 | 0 | |
| SELF-EMPLOYED | | | 0 | | | 0 | 0 | |
| NATIVE CORP & AFFILIATE | 7 | 7 | 14 | 1 | | 1 | 15 | |
| OTHER | | | 0 | | | 0 | 0 | |
| SUBTOTAL | 9 | 8 | 17 | 1 | 0 | 1 | 18 | 20.7% |
| **NSB GOVERNMENT** | | | | | | | | |
| HEALTH | | 2 | 2 | | | 0 | 2 | |
| PUBLIC SAFETY | | | 0 | 1 | | 1 | 1 | |
| MUNICIPAL SERV | 14 | 1 | 15 | | | 0 | 15 | |
| FIRE DEPT | | | 0 | | | 0 | 0 | |
| SEARCH & RESCUE | | | 0 | | | 0 | 0 | |
| HOUSING | 7 | 2 | 9 | 1 | | 1 | 10 | |
| WILDLIFE MGT | | | 0 | | | 0 | 0 | |
| RELI & MJP | 9 | 7 | 16 | | | 0 | 16 | |
| LAW OFFICE | | | 0 | | | 0 | 0 | |
| ADMIN & FINANCE | | | 0 | | | 0 | 0 | |
| PLANNING | | | 0 | | | 0 | 0 | |
| INDUSTRIAL DEVELOPMENT | | | 0 | | | 0 | 0 | |
| HIGHER EDUCATION CENTER | | | 0 | | | 0 | 0 | |
| MAYOR'S OFFICE & ASSEMBLY | | | 0 | | | 0 | 0 | |
| OTHER NSB | 1 | 1 | 2 | | | 0 | 2 | |
| SUBTOTAL | 31 | 13 | 44 | 2 | 0 | 2 | 46 | 52.9% |
| NSB SCHOOL DISTRICT | 4 | 4 | 8 | 3 | 6 | 9 | 17 | 19.5% |
| NSB SUBTOTAL | 35 | 17 | 52 | 5 | 6 | 11 | 63 | 72.4% |
| OTHER LOCAL GOV'T | 2 | 3 | 5 | | | 0 | 5 | 5.7% |
| STATE GOV'T | | | 0 | | | 0 | 0 | 0.0% |
| FEDERAL GOV'T | 1 | | 1 | | | 0 | 1 | 1.1% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| SUBTOTAL ALL GOV'T | 38 | 20 | 58 | 5. | 6 | 11 | 69 | 79,3% |
| GRAND TOTAL | 47 | 28 | 75 | 6 | 6 | 12 | 87 | 100.0% |
| % OF TOTAL | 54.0% | 32.2% | 86.2% | 6.9% | 6.9% | 13.8% | 100.0% | |

Notes:
(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989.

Figure 5-ATQ

Population Labor **Force,** and Employment
**Atqasuk:** 1980, **1988,** and 1994 (Projected)

**SECTION III:** FORMAL INSTITUTIONS

A. Overview

Several new institutions have been formed in the community since 1978. The City of Atqasuk was formally incorporated as a second class city in October 1982 (U.S. Census, reported in Alaska Consultants et al. 1984:430). A 2% sales tax was approved by city residents at the time it was incorporated. Atqasuk has a seven member city council, a mayor and vice-mayor. Due to its relation with the North Slope Borough, recreation is the major municipal power of the city, but the council also serves to represent the community to outside interests, including the NSB. In this role, the council "represents local desires for community improvements to the North Slope Borough" (Alaska Consultants et al. 1984431). It has also served as the vehicle for expressing the community's desire for sustained employment opportunities for villagers to the NSB (Worl and Smythe: unpublished Barrow fieldnotes). As a representative to the NSB concerning village priorities and as an agent for expressing community concerns over employment, the Atqasuk City Council resembles the city councils in other North Slope villages (Smythe and Worl 1985).

Atqasuk had a traditional council prior to the formation of the city. In its first election, Atqasuk placed four of the seven traditional council members on the new city council, and two others elected to the city council were former traditional council members (Alaska Consultants et al. 1984431). This action indicates there was a high degree of continuity between the traditional council and the newly established city council. According to this report, the traditional council was inactive in 1983, but this situation may have changed in the intervening years.

The North Slope Borough has been represented in the community by a liaison officer. Under Mayor George Ahmoagak, this position received new impetus (Worl and Smythe, unpublished Barrow field observations). A NSBSD local Advisory Committee also functions in Atqasuk, as in other North Slope villages, serving to represent the wishes of the community to the NSB School Board. A volunteer Fire Department and Search and Rescue organization is managed by the NSB. A new program, the. Mayor's Job Program, has brought employment to Atqasuk in the form of intermittent maintenance and special projects labor. Now that construction employment is greatly reduced, this program represents a valuable element in the local economy, providing temporary employment to villagers to supplement the regular job opportunities.

The village corporation, Atqasuk Corporation, was formed in 1974 with seventy-one original stockholders. The corporation operates a fuel distribution service in the village in a joint venture formed in 1983 with SKW/Eskimos, Inc., a subsidiary of ASRC. This arrangement is similar to those formed in other North Slope communities. The village corporation also operates a retail store. In 1983, a construction company (Atqasuk Construction) was operating with an Inupiaq president (who was a board member of the parent corporation) and a non-Inupiat general manager. This company has participated in joint ventures on "several" NSB construction projects including housing units, the village fire station, and the new school (Alaska Consultants et al. 1984:433).

The corporation has taken several actions with regard to providing land for municipal purposes as required under ANCSA 14(c)3. Some lands were simply quitclaimed by the corporation to the NSB and ASRC Housing Authority (Alaska Consultants et al. 1984:435). In addition, several blocks or portions of tracts have been dedicated for public use by the corporation.

The Atqasuk Corporation received surface rights to 69,120 acres and, as of June 1, 1978, it had received 68,652 of those acres (AEIDC 1978). The village and all of the corporation land lie within NPR-A, and as a result of this special circumstance the regional corporation is not entitled to the subsurface estate. Instead, ASRC is entitled to the subsurface estate of other land available in the region. However, under an option made available in ANILCA, ASRC is entitled to select the subsurface eatate to the Atqasuk Corporation selections in NPR-A in the future if public lands in NPR-A are opened for commercial development (rather than exploration) of oil and gas within 75 miles of the village-selected lands. In this case, ASRC will forfeit its Atqasuk-related selections of other lands made earlier, in an exchange of equal acreage.

Because our field plan allowed only limited fieldwork in Atqasuk, which focused on the relationships between the communities of Barrow and Atqasuk, we do not have updated information on most of the village voluntary associations. Our focus was more on formal political and economic structures, since they are the agencies which communicate with the NSB. What follows is based primarily on the literature with some field observations added.

As maybe expected, given the Barrow origins of much of the population, the Presbyterian church is the church of choice. The first ethnographic work done in Atqasuk documented this fact (Alaska Consultants et al. 1984:433). A church building was constructed between 1978 and 1983. A visiting minister occasionally conducts services in the church, and community members serve in this capacity at other times.

A Mother's Club was formed in 1983 (Alaska Consultants et al. 1984:434-35). According to this source, "all influential women belong to this group." Apparently, the Atqasuk group was being encouraged by a similar group in Barrow, which at this time was reaching out to the communities to educate and support the development of locally-based groups (see Smythe and Worl 1985). We were not able to verify the current activity of this group due to time constraints.

Search and Rescue is another voluntary organization that has functioned since at least 1983. All able-bodied men were members of this group, and its leaders "are accorded a certain amount of status and prestige" (Alaska consultants et al. 1984:434). This group was operating as a local group of volunteers before the NSB formed a search and rescue unit and took over some management and coordination functions of village groups. The membership of the volunteer Fire Department is overlapping with Search and Rescue. It continues in the same form as before, and is very similar in form and function to Search and Rescue in other villages.

The Atqasuk fire station was completed in 1983 and is identical to the other fire stations built by the NSB in other small North Slope villages. A new health clinic was built in 1983. A new school was completed in 1984. Other facilities in Atqasuk have been upgraded on a par with those in other NSB communities.

## B. City of Atqasuk

Like the other small villages on the North Slope with the exception of Point Lay, Atqasuk is incorporated as a second class city under Alaska state law and operates with a city council/mayor

form of government. There are seven members of the council, with staggered terms; presently all are Inupiat men. The mayor is elected each year, for a one-year term, from the council members. The present mayor has been in office for 5-6 years. Recreation is the principal program of the city government, but the council concerns itself with village-wide issues and seines as the communication node for external governmental agencies and groups having business in Atqasuk. The monthly city council meetings are structured like town meetings, and provide regular opportunities to villagers and the representatives of village organizations for the communication and discussion of events and issues involving the community.

The city owns and operates the community center, which includes the city offices, a recreation hall and arcade, and a new addition that is used for public meetings and recreational programs. The city offices include the offices of the mayor, city clerk, and assistant city clerk. The recreation hall is a large open room with two tables and chairs, a large screen TV, a "foosball" game, blackboard, and children's books. Restrooms, a small kitchen/snack bar, and the entry way (with a pay telephone) are located off the recreation hall. The arcade is another room extending out from the hall. There are two pool tables, three pinball machines, and seven video games in this room. The meeting hall is another larger extension of the recreation hall. It is used as a meeting room and a place to hold recreational bingo games and other special events such as cake walks, potluck meals, and community Thanksgiving and Christmas feasts. The double doors connecting the recreation hall with the meeting room can be opened to make a large space available.

At the time of field research in 1989, the mayor was enthusiastic about his job and was proactive in his approach to his duties to improve the village and help the people living here. The basic philosophy he espoused was communication: by having open communication among individuals and organizations, the community is helped to improve itself. He has shaped his activities as mayor according to this philosophy, and it appears to be effective. The mayor is also the NSB village coordinator, which centralizes governmental activities in the city offices to a degree not typically found in other villages. The mayor has an open-door relationship with individuals in the community, and structures meetings to maximize dissemination of information about community affairs and the activities of local officials, with the purpose of being constructive to community affairs. The approach appears to be effective.

The city runs a recreation program for the community that includes the use of the community center. The recreation hall and arcade are open for general use in the afternoons (l-5 p.m.) and evenings (6-10 p.m.), when it is staffed by one of two recreational aides. Use of the hall increases after school is let out in the afternoon, and in the evening. During the city council meeting attended during field research, two teenage girls were using the telephone and there were four women and eight little children in the recreation hall. The women were sitting at the table together, and the small children were playing in the room. The arcade was being used by one adult, four teens, and five small children. The city council was sitting in the meeting room, with thirteen people in attendance.

The city has four employees: city clerk, assistant clerk, and two recreational aides. The budget sources are from state revenue sharing and an NPR-A grant. State revenue sharing is a small amount, and the NPR-A grant includes a grant for local government operations. The salaries of the two recreation aides and a portion of the assistant city clerk's salary is secured from the NPR-A grant. The city was awarded three NPR-A grants by the state, which administers the NPR-A oil

impact fund, for the following projects: (1) expansion (additions) of the community center, (2) upgrading of equipment (including games and pool tables) in the community center, and (3) maintenance and operations funds for the city (including the recreational aide positions). Proposals for the construction of a restaurant/hotel, which was planned to provide training to members of the local population, and for a taxi service, were denied In April 1989, the state informed the city that $110,000 is left over from the 1986 capital improvement grant, which is available for further improvements to the community center. A second round of NPR-A proposals is being budgeted by the Alaska legislature for 1989, and the city is optimistic of Atqasuk's chances to receive another grant.

The NPR-A grants funded the meeting room expansion on the community center, and provided a few of the video games. Most of the games in the arcade were purchased with funds raised from the bingo games sponsored through the city's recreation program. At the time of field research (1989), most of the games had been acquired within the previous six to eight months. Bingo is limited by state law to fourteen sessions per month, with no more than thirty games per session. Most of the proceeds are used in the recreation program for the purchase of equipment, furniture, and games. Occasionally, the proceeds of an evening have been set aside for the Atqasuk Search and Rescue (SAR), to assist them with an outstanding bill at the local store.

According to the mayor, there has been a decline in vandalism and other problems with the youth in the community since the video machines and other games were installed about eight months ago. The resident PSO was on vacation during field research in the village, so his perspective on this correlation was not obtained. However, the field researcher was able to observe that there was regular use of the recreation hall and arcade games during the afternoon and evening hours by teens and young adults. The community center was well maintained and provided another center of social activity in the village, in addition to the school.

1. Observation of a City Council Meeting, April 3, 1989

The field researcher attended a meeting of the Atqasuk village council on April 3, 1989. The mayor had invited the researcher and put him on the program to explain the project. An agenda was handed out and followed closely. The meeting was conducted principally in the Inupiaq language. Financial matters, however, tended to be discussed in English, as were reports by non-Natives (the researcher, Public Safety).

In terms of the process of consensus formation, it was interesting that when the mayor asked for a vote, silence was treated as a yea. For example, when he asked the council if it was agreeable that an agenda item be tabled until the next meeting, the silence of the council signified assent. Six city council members were present; it was later learned the remaining member was at home with a broken leg. In addition to the city clerk and assistant city clerk, there were six women and four men in attendance from the community. Representatives from the village corporation and SAR were present. Visitors and invited guests included the researcher, the Public Safety Officer, and a man (Inupiaq) from NSB housing in Barrow.

The first item of business was a report on the Alaska Eskimo Whaling Commission (AEWC) by a council member who attended the recent conference in Barrow, when the membership decided

on the distribution of this year's whaling quota. The meeting was summarized and discussed in Inupiaq.

The next item was communications, a slot in the agenda for individuals to notify and explain forthcoming projects, activities, meetings, and trips, to the village council. The mayor introduced the researcher at this point, who described the project, with whom he would be talking in the village, and approximately how long he would be in Atqasuk. The mayor then announced that the researcher would be available to talk with anyone in the community during the morning hours in the city offices, and anyone wishing to speak with him could send a message through the city. The mayor then discussed a forthcoming trip to the 1989 Village Mayors Conference which he would be attending.

Under new business, there was a discussion of per diem expenses by the city clerk. She directed her statements to the council, explaining that per diem is taxable now and must be reported. She instructed them to account for their per diem expenses, and to return unused advances to the city. The next item was work on the city code of ordinances. Apparently the city had hired an attorney to compile a book of city ordinances, based on those of Barrow, and some issues needed discussion. In some cases, things such as taxi regulations did not apply to Atqasuk and so it was questioned if they should be included in the city's ordinances now, in others, the attorney had presented differently options and the council needed to select which course the city should follow. After some discussion, a day was set for the council to meet and work on the ordinances.

The city clerk announced that the NSB Health Board will be meeting in Atqasuk on April 11-12, and that a potluck will be given for the board members at the community center. The Council discussed it and set a date for the potluck,

Next, there was a long discussion in English and Inupiaq about the city budget, specifically the need to amend the city's operating budget to move unexpended moneys from one category to others which are depleted. Money was needed for salary to continue the assistant city clerk through the end of the present fiscal year (June 30) and for workman's compensation insurance for city recreation employees, which had been underestimated. It was difficult for the council to reach a decision on this matter, partly because most of the members were not comfortable dealing with budget matters and partly because the city clerk did not present all the facts or a proposed solution at the outset. The council depended upon one council member to handle the numbers and arrive at a decision, after which the council voted to approve transfers from per diem (travel), honoraria, and utilities to make up the shortfall.

The city clerk then gave a report in Inupiaq about the conference of city clerks in Fairbanks which she attended in March. The meeting lasted for one week. The mayor complimented her in front of the council, saying that things have improved considerably in the city office as she learned more about the procedures of municipal government. He applauded her and was joined by the council and audience in clapping.

The next agenda item was public participation, and the borough official discussed the issue of bedroom additions. The borough has received seven applications, and there is money for only five. He requested the council to prioritize the list for the coming year. He added that the expansion program will bean ongoing program, and that they expect to do those who cannot be included this

year in the following year. This was followed by a discussion of ANCSA 14(c)3 issues initiated by the village corporation president relating to a problem in prioritizing land transfers and CIP projects. She indicated that the city needs to select more land, and referred to a forthcoming meeting between the Alaska Native Foundation (ANT'), the city, and the corporation to discuss the issue. The city clerk responded that the corporation has not been clear on which tracts had been accepted or rejected for transfer by the corporation board. Apparently, this is an ongoing issue between the city and the corporation at the present time, and technical assistance is being sought from the ANF in this matter.

The chairman of the Atqasuk Search and Rescue amounted a meeting for the SAR for the following evening, to discuss incorporation. One of the council members responded to this at length. The mayor announced that on the following day, a representative from the BIA would be flying in to meet with SAR about where to set up trail markers, such as between Atqasuk and Wainwright and between Atqasuk and Barrow. The BIA representative would be stopping there after visiting Pt. Lay and Wainwright for similar meetings, traveling on a charter plane.

A woman in the audience spoke up about the sale of drugs and alcohol in the community. "Gotta do something about drugs and alcohol; gotta stop this!" The woman spoke first in Inupiaq and then switched to English, presumably because she wanted some response by the NSB Public Safety Officer. The PSO responded, saying that the community has to help in notifying Public Safety that a purchase is being made. In order for a bootlegger or dealer to operate, someone in the village has to make a buy. So the village has to assist Public Safety by informing them of occurrences of this. A suggestion was made from the audience that Public Safety change their channel on the CB (when someone calls in this information), since drunks may listen to the townspeople who call in.

Another member of the audience asked the mayor if he had a policy for this issue. The mayor backed off, referring to the Rainbow Group (an informal group of concerned villagers seeking to do something about alcohol and drug use in the community). Much of the conversation was in Inupiaq; but one man said in English, "We gotta keep on trying to get the kids to school, somehow." At one point the mayor said, "it is public, community involvement [that is necessary]." The PSO asked the person sitting next to him what was being said, but no reply was given to him. This is a sensitive subject, one involving people observing what is going on and taking some action, such as giving information to the authorities. At one point, a woman said, "...can't say this in public," referring to naming the names of well-known bootlegged or consumers. At this point, the meeting switched to English as emotions rose over the issue of saying names in public. A man said, "I'll do it now," and the mayor said to call 1-800-852-DRUGS (presumably the drug hotline in Barrow). The mayor's statement defused the situation. Then the PSO said that people must still call Public Safety, even when they know who brings it in, in order for them to take some action. The PSO, who was a stand-in from Kaktovik while the regular officer is on vacation, described a similar situation in Kaktovik. There, he said, people are afraid to call the PSO because they are all related and are afraid they will get beaten up by their relatives. As in Atqasuk, the Kaktovik villagers do not come forward and the PSO has a problem learning who and when something is brought into the village. At this point, the mayor repeated the Barrow phone number, saying "You don't have to give your name."

Another Public Safety issue was brought up from the audience dog control. There was a complaint that the community's dog control officer, the fire chief, was not doing his job. The city

clerk described the problems with the tranquilizer gun freezing in cold air and the need for some transportation vehicle to be used to prevent this from happening. The PSO said they are available for such a need. There was concern expressed over the report of a rabid fox which had been shot in Atqasuk in the previous month, and the presence of loose dogs in the community. The PSO explained that even a dog who was chained up may become infected with the rabies virus if it is bitten by the fox. But the underlying issue was how to manage the level of activity of the dog control person, and provide effective control over chronic loose dogs as contrasted with those that are only loose temporarily. The PSO made a statement that it is not effective for Public Safety to have complete control of this issue, since the PSO often cannot identify which dogs are problem animals and which belong to people and are temporarily loose. Public Safety has a policy not to take the lead in dog control to avoid the situation of shooting someone's pet inadvertently, which has been a problem in the past.

The discussion returned to the issue of drugs in the community, and switched back to Inupiaq. After a while, one person spoke out in English, saying, "They want to know how to say, 'It's time for you to go.'" The issue that was being discussed in Inupiaq was the eviction of people from Atqasuk who were from out of town. The mayor asked the PSO what they could to do about this. He responded that the city council could get together with Public Safety and go see the individual in question. For example, if the mayor went to talk to the individual in question, the PSO would go along for any assistance required, and back up any course of action decided upon in the community. The mayor said he would not have a problem carrying out this function. The discussion ended here, but there was a sense that the issue was still unresolved. In a subsequent conversation, the mayor remarked that this was the first instance when there was mention that someone should tell another person to leave the community.

The mayor summarized and reiterated all of the council's decisions about the next month's meetings, pot lucks, and other activities, and for the use of the community hall. Included in the schedule was the mayor's trip later in the week to attend a borough-wide meeting of village mayors and NSB Public Safety. The meeting was adjourned.

2. Relationships between City and NSB

The current mayor is serving without pay. He holds the position of NSB Village Coordinator and receives a salary from the borough. His office is in the community center adjacent to the city clerk's office. He rents this office to the NSB, and so collects rent for the city. He feels there is no conflict with the NSB in the conduct of his duties as NSB Village Coordinator and as Mayor of Atqasuk. The mayor of the NSB calls him and talks to him in his capacity of village coordinator; alternatively, he may call the NSB mayor and speak to him as the Mayor of Atqasuk. He reported that there has never been a problem in this arrangement. He would rather be paid by the city, but as the city is in the red he finds it beneficial to be employed by the NSB.

When he first became mayor, the NSB was in the habit of calling up the city and telling them when they should hold a council meeting to discuss some issue. He put a stop to this by refusing to call a meeting unless the NSB followed the proper procedures. He suggested that the NSB send a request in writing, and then give the city a week to formally notify the community about the meeting. There have been no problems of this sort since, according to the mayor. City council

meetings are regularly scheduled in the first week of every month, and the meeting is open to any NSB representative. During the fieldwork, the researcher observed an NSB official making a request to the council at one of their regular meetings, concerning the selection of five houses on which an expansion was to be performed. The council agreed to act on the request by their next meeting in a month's time.

The city council has recently assumed more authority for allocating housing within the village, probably in response to the increasing levels of overcrowding within the existing houses. In prior years, the ASRC housing authority assigned housing to persons without examining the level of need of other families. The last time ASRC sought to assign housing in Atqasuk, the city council said it would be more appropriate to allocate housing on the basis of need, and ASRC accepted their decision. The city now makes recommendations based on the extent of overcrowding in the existing homes. Presumably, this will be the procedure for prioritizing the applications for bedroom expansions, which is a current request of the NSB, for an existing RELI project in the village.

For the past year, the local NSB Public Safety Officer has provided "courtesy reports" of the previous month's Public Safety actions in the village. The report includes a listing of all Public Safety personnel present in the village and tallies of official actions and complaints, including search and rescues, bail collections, assaults, domestic disputes, fights, welfare checks, deaths, and agency assists. A percentage of complaints involving alcohol is provided. The PSO gives his report during the public participation agenda item for the town meeting, and it provides an opportunity for the council or any community member to discuss an issue or ask a question. In the meeting observed by the field researcher, giving the report offered a window of opportunity for villagers to discuss sensitive community issues with the PSO and among themselves.

The mayor commented that relationships with Public Safety "have improved quite a bit." The courtesy report was institutionalized after a meeting last year between village mayors, village coordinator, and the Department of Public Safety (DPS); the report was the concern of several mayors. The second annual meeting between village mayors, village coordinators, and the DPS was scheduled for April .1989. Other Public Safety concerns are the need for the local PSO to continuously monitor a specified CB charnel in the village, because the majority of Atqasuk residents do not have telephones. The need for house numbers is another issue. House numbers are necessary to deal with the high level of turnover in PSOS in the village, which brings personnel to the village who are unfamiliar with the residents. The problem of turnover probably explains why the DPS personnel are listed in each month's courtesy report.

Effective dog control is another issue in Atqasuk. The killing of a rabid fox in March 1989 contributed to the high level of community concern over this issue, as reported in the notes from the village council meeting above. Members of the community are not satisfied with the methods of dog control in effect now, since neither the local city government nor the NSB, through the local PSO, have clear responsibility and effective procedures for removing stray dogs that are a problem in the village. Based on discussions during the council meeting the field researcher observed, Atqasuk is urging the development of some effective, cooperative relationship with DPS to take care of the problem.

3. RelationShim between the City and Village Corporation

Regarding the village corporation, the mayor said, "I like to work with the corporation, because we are both working for the community." From field researcher observations, this statement was true both in a general sense of helping the community to develop with the participation and cooperation of village organizations and residents, as it is in a specific sense dealing with providing employment opportunities in the village. The city and the corporation have similar goals in these respects. Because the mayor also serves as village coordinator, his office has become an important center for notifying the community of NSB employment opportunities. However, the corporation is also significant in this respect, since all construction-related NSB programs are organized through their construction arm.

According to a recent report, the city is working harmoniously with the Atqasuk Corporation on ANCSA 14(c)3 transactions (Alaska Consultants et al. 1984431). Section 14(c) of ANCSA details the responsibilities of the village corporations to reconvey land that the corporation has selected to certain other parties who are entitled to it. Subsections 14(c)1 and 14(c)2 deal with reconveyance to parties who were using the land in question prior to December 18, 1971. Action under these two sections has generally been very slow *on* the North Slope. Village corporations have not as yet reconveyed much land to individuals or nonprofit organizations. Subsection 14(c)3 governs the reconveyance of land from the village corporation to the local municipal government. In most villages this has been a difficult process, even though ANCSA is quite clear that the village corporation must reconvey at least 1,280 acres to the local government (or the state acting as trustee for the local government) unless the two parties mutually agree to a lesser amount. In principal, ANCSA requires the village corporation to transfer enough land to accommodate all present village buildings as well as to provide for future expansion, community right-of-ways, and foreseeable future needs. In practice, the 1,280 acres has been taken as the proper amount to be conveyed (at least on the North Slope].

In Atqasuk, both the city and the corporation have set up committees to work together on the reconveyance decisions. The ANCSA 14(c)3 issues remain outstanding between the city and the village corporation. At the present time, the reconveyance issues are being driven by the need for more housing, and the problem of the houses having been built too close together, in the community. There is also the need for a new Public Safety building, which has been identified by the city; this may also involve the ANCSA 14(c)3 issue. The housing issues are central to the ongoing discussions between the city and the corporation. The April city council meeting included exchanges between the city and the corporation on ANCSA 14(c)3 issues; plans have been made for the city and corporation officials to meet with an ANF representative who will provide technical assistance in working out the reconveyance agreements. The city wishes to receive more land so that it can in turn transfer it to the NSB for NSB construction projects. In the past the city has received $S0,000 from the NSB for the municipal lots for a generator building, water tanks, and a warehouse facility.

4. Relationships Between the City and Community Institutions

Any individual may appear before the city council in any regularly scheduled meeting, either as an individual or as the representative of a community organization. The mayor follows a policy of

open communication, in which he encourages communication among all persons and organizations in the community. Similarly, persons coming to the community from outside are encouraged to attend a council meeting and present themselves. The city council meetings serve the function of regular town meetings. The meetings are scheduled on the first Monday of every month, and the schedule is well known. Notices are put up in the community only when a special meeting is called, with a week's notice given. Villagers and village organization representatives regularly attend the meetings.

In the town meetings, there are opportunities given for persons to notify the council and community of activities, or otherwise make a statement about an issue of concern. The meeting agenda routinely includes the items of communications and public participation for this purpose. In addition, individuals who have attended a meeting outside the community as a representative of a village organization are encouraged to make a report to the village council at their regularly scheduled meetings. This is also a regular agenda item. Such reports serve to inform and involve the city council and other community members in the activities of village institutions and their representatives.

The mayor supports other community organizations and encourages their participation in the town meetings. For example, the president of SAR commented that, after he returned from a NSB-sponsored meeting about Search and Rescue, he was expected to give a report at the meeting. The mayor is also a member of the Rainbow Group, an informal association of volunteers concerned with alcohol and drug use in the village.

### 5. The City and Employment

Announcements for jobs are posted at the city hall and in the village store. In addition, because the mayor serves as the Atqasuk Village Coordinator for the NSB, he maintains a clipboard of borough job vacancies which is available in his office. Finally, he is the representative for employment positions in the Mayor's Job Program, which consists of temporary positions made available through the NSB Mayor's Office. In addition, the mayor advocates for local hire on borough-sponsored projects in the village. The mayor also provides advice and consultation to community members about employment opportunities in the community. In this regard, his responsibilities as NSB Village Coordinator serve the interests of the city. To assist this process, the city has a draft local hire ordinance.

## C. Atqasuk Corporation

The Atqasuk Corporation has been operating continuously in the village since 1983. In prior years it existed primarily on paper, and the books were maintained by ASRC. Two women in Atqasuk decided to open an office in Atqasuk, and filed the appropriate paperwork after finding out that the corporation had lapsed because the paperwork to the state was not maintained.

The corporation consists of three divisions: Atqasuk Fuel Division, Meade River Store, and Atqasuk Construction. The president supervises the staff of the main office and the managers of the fuel and store divisions. Atqasuk Construction has a board of directors, and in this sense it is a

subsidiary of the Atqasuk Corporation, but it has no regular employees. Atqasuk Construction hires local residents for any joint venture construction projects and the NSB housing improvement program, RELI, using pass-through money from the construction partner or the borough.

The corporation has nine regular employees, one student intern, and six temporary construction workers. At the main office, the president, bookkeeper, and secretary conduct the day to day operations of the business. A student intern comes in after school to provide assistance to the office. The fuel division has one employee, who serves as a fuel clerk and laborer for delivery to residents' homes. The Meade River Store has five regular employees consisting of a manager and four clerks and laborers.

The corporation's bookkeeper maintains the retards for the parent corporation as well as its divisions and subsidiaries. The Atqasuk Corporation president permits each employee one week of unpaid subsistence leave per year. Apparently, this is an unofficial practice instituted from a sense of fair play and the feeling that everyone should be treated equally. NSB employees receive two weeks paid subsistence leave a year, so corporation employees feel deprived if they can only take one week for these activities. Also, one week is simply too short for most subsistence pursuits which require taking time off from work. Whaling is the major activity in this category, but extended hunting trips for moose and/or caribou, and perhaps a trip to fish camp, would also fit in this category. Two weeks is still not long enough for all that any hunter would like to do, but provides a long enough time so that he can hunt and not feel too hurried about it. For whaling, two weeks allows the individual to participate in most of a typical whaling season, since the quota is often filled very quickly. In years such as 1989, when conditions for whaling are never quite right and few are taken, a limit of only two weeks can be quite frustrating, especially if it is used up and conditions then improve. This is a compromise that has been made between the need for a dependable work force and the desire of individuals to have the flexibility to hunt when they want (and need) to.

The corporation owns several small buildings which were Naval Arctic Research Laboratory (NARL) facilities originally located out near the Burnell coal mine. The Atqasuk Corporation probably acquired them at the same time the NARL facilities in Barrow were transferred to Ukpeagvik Inupiat Corporation (UIC), the Barrow village corporation. These buildings have been moved into the village, and two of them serve as the business offices of the corporation. The subsidiary, Atqasuk Construction, owns the construction camp facility which was in use by SKW/Eskimos, Inc., during fieldwork. The subsidiary leases it out during active projects.

The Meade River Store is small and carries a basic inventory of food, household items, and some hardware supplies. The food is principally comprised of canned and dry goods, with bread being the main item imported fresh. Small televisions and cassette players are also available. Observations indicate that prices compare favorably with the larger stores in Barrow, meaning that some items are less expensive and the extent to which more expensive items differ from Barrow prices is not as large as might be expected. The previous store manager reported that the profit margin was maintained at 7.5% while he was in charge, up until about two years ago. The store has been less successful in the recent period. The level of debt has risen at the store, which is a burden that is passed on to the parent corporation at the present time. Reportedly, the store is having more difficulty than in the past because individuals are not paying their bills as promptly as they used to.

Discussions with community members suggest that while there is less cash circulating in the village, compared to two years ago, one cannot conclude that there is a chronic shortage of money in the community. There have been recent opportunities available to the local population for construction jobs that were left unfilled, as will be described below. It was reported that villagers, even those with regular jobs, receive money and do not save it, or plan ahead for a period with leas cash income. Villagers may go out of town on a trip, or otherwise spend their money, and they are forced to get a loan from the store. Consequently, some families have experienced hardships, have gone into debt at the store, and cannot afford subsistence expenses such as gas, camping supplies, snowmachine or outboard motor parts, etc. Also, the use of alternative sources of energy, such as coal, has increased in some households.

During the first week of April 1989, consulting engineers from ASRC visited Atqasuk to investigate the potential for introducing coal as an energy source for the village. The engineers visited the power plants in the school and at the NSB utilities, recording demand levels and examining the boiler capacities for possible conversion to coal-fired facilities. This project is discussed more fully below. The local response to this potential development was very positive in the village, and within the village corporation.

As in other North Slope villages, the corporation's fuel operation is a joint venture with ASRC. The local price of fuel is subsidized by the NSB, calculated to cover the costs of home delivery, but not the purchase and transportation of fuel to Barrow.

Atqasuk Construction provides employment in the village by entering into joint ventures with NSB contractors doing CIP jobs in Atqasuk. The construction subsidiary has been in a joint venture with SKW/Eskimos, Inc., for the past three to four years, and has participated in the construction of the fire station, school, community center, public works maintenance and operations center, and the current project, utilities and school district warehouse (USDW). Atqasuk Construction was not involved in the utilities, power plant, and clinic projects. The parent corporation takes a strong stance on local hire provisions in forming the joint venture agreements. The usual agreement is that while skilled workers, defined as certified electricians, plumbers, mechanics, etc., can be brought to the job from outside, all the unskilled jobs, such as plasterboarder, painter, laborer, etc., will be made available to villagers. Local hire on the USDW project has been as follows:

| | |
|---|---|
| Dec. 1- Jan. 15 | 2-3 workers |
| Jan. 15- Mar. 31 | 7-8 workers |
| Apr. 1- completion | 2 workers |

Atqasuk Construction is also the local NSB RELI representative, and hires local residents for the appropriate projects. Current RELI programs include installation of insulation, construction of kunnichuks around the doorways of houses, and window replacement. Future projects include bedroom expansions, scheduled to begin in the summer of 1989. The employment for these projects is dependent on NSB annual budgets. Currently (April 1989) there are four RELI employees in Atqasuk, and these positions are scheduled through June 30. For the following fiscal year beginning July 1, eight positions are scheduled in the existing programs, and up to eight positions (two four-man crews) are scheduled for the bedroom expansion project. However, since the loans for the bedroom project will not be guaranteed by the NSB, the actual start-up is

uncertain. Another RELI project upgrades residential plumbing systems in villages to a basic interior running water system, through a loan program administered by the NSB. The NSB has hired a plumber to oversee the work, and he is responsible for hiring any helpers as he needs them. Finally, a special CIP project was planned for the summer to repair the roof and wall of the school, which was damaged during a severe winter storm.

Atqasuk Construction is an important source of employment in the community. This role is taken seriously by the corporation. One employee stated, "Part of what I do is putting people to work." The level of temporary construction work in the community is down from the relatively high levels seen as recently as 1987. According to one source, the new opportunities available through the NSB (including RELI and the Mayor's Job Program) do not make up the complete difference between present and earlier employment levels. However, local residents reported that there has been no movement of families out of the village in response to these conditions, as might be expected. Nor have Atqasuk residents sought jobs in the oil industry, or at other locations, while maintaining their residence in the village. "People are real hesitant about going elsewhere for work. Like Prudhoe, there are jobs available; people have tried it but they don't stay through the end of project. They quit or are fired. I know of one or two people who have tried it [in Prudhoe Bay, but] it was a onetime thing." These statements appeared representative of the community regarding employment in Prudhoe Bay.

On the other hand, the availability of temporary employment in the village does not guarantee that all positions will remain filled for as long as they are available. While Atqasuk Construction goes to great lengths to fill such positions with local labor, there are occasional problems with keeping the positions filled with local residents. Examination of time records in the USDW project confirmed accounts from the SKW/Eskimos, Inc., construction team that some local workers did not report to work regularly. Some time records showed substantial gaps; the village corporation confirmed that the project had problems with local workers coming to work. The consequence was that progress was slowed, and three unskilled plasterboard tapers and painters had to be brought in from outside to maintain the work schedule. Atqasuk Construction reported that similar problems occur in the RELI program, although in this case outsiders are not brought in. As described by local residents, some local workers stay home, or leave town on a trip, after they have received a paycheck or two. Later, they return to the site and ask for their job back again. Reportedly, the crew of SKW/Eskimos, Inc., which on this particular job was composed entirely of non-Natives, emphatically admonished workers who showed up late, or missed days of work, and local workers complained about this. Whether this occurred with any greater frequency on this job as compared with similar projects in other villages was not determined.

1. ANCSA 14(c)3 Reconveyances

According to a corporation spokesperson, Atqasuk Corporation is 80 to 90% completed with their reconveyance work. The reconveyance process was explained in the following terms: Atqasuk Corporation waits for the city to make requests to the Atqasuk Corporation board for village lands, and the board votes to accept or reject the proposals. Recently, some requests were rejected by the board for unspecified reasons. Atqasuk Corporation commented that the city needs an uncertified land ordinance to accept unsurveyed land, which is not in place yet. Atqasuk Corporation is requesting some technical assistance from the Alaska Native Foundation (AFN) and

the Alaska Department of Community and Regional Affairs (ADCRA) regarding the procedures for conveying land to the city. The Atqasuk Corporation, the city, and a representative of ANF or ADCRA will be meeting to discuss this issue in more detail.

The corporation owns the surveyed block of land immediately to the north of town. Three houses were built there by the NSBSD in 1984, without local hire, according to one informant. The remaining lots are vacant and belong to the corporation. Atqasuk Corporation reports there is a need for housing in the village; ten new houses could be used in Atqasuk to relieve overcrowding in existing homes which have two families living together under the same roof. Another discussant said that at least twelve new homes are needed, and a twelve-plex, due to the overcrowding. "Young people are getting married and staying with their parents." For example, one couple moved into town about two years ago and lived with their son. He was married and had children, and they lived with his wife's aunt at the time. Their son applied for a house and, when he assumed ownership of an available house, his parents moved in with him. Subsequently, his parents have moved into NSBSD housing. In addition to housing needs involving current residents living in multi-family situations, Atqasuk Corporation reported there are a few families living outside the village who desire to move into Atqasuk but cannot migrate because housing is unavailable.

A current house expansion project sponsored under the NSB RELI is addressing some of Atqasuk's need for more housing. In this project, the successful applicants will have their existing homes expanded with the addition of another bedroom. In April, the NSB requested the city council to prioritize the applications, since more applications were received than can be accommodated with this year's funding. The program is expected to be continued next year (1990), so the remaining applications will be acted upon. However, while the expansion program helps to meet the need for more housing in the village, it exacerbates another problem with the housing situation: houses were built too close together.

The problems associated with the town plan, with the houses situated close together, was described by the Atqasuk Corporation representative. Village houses were located very close together because the original design of the village was based on a scheme for arctic housing, incorporating dense residential plans with tunnels that would join the houses together through walkways providing protection from the weather. However, the project was never completed as designed, and today the concentrated layout of lots and houses is considered hazardous. First, there is a fire hazard caused by the danger of a house fire spreading to neighboring structures that are placed too close together. Second, the closeness of the houses hampers the removal of snowdrifts which build up between the houses. Moving heavy equipment between the houses to remove drifting snow is dangerous. Third, outside storage is limited and, in some cases, use of the garage is restricted due to its proximity to a nearby home. The spokesperson described his own home, which has a full-size garage that has limited use because the end of the ramp is only four or five feet from his neighbor's house. Finally, the close proximity of the houses means that noise and disturbances in one house are a nuisance to the families in neighboring homes.

Given these problems, the NSB'S plan to add bedrooms to some of the houses compounds the problems resulting from the high-density town layout. Some individuals suggested that the proposed NSB expansions under the RELI program should be postponed until the houses are moved to newer, larger lots, since an expansion of existing structures would extend the house all the way to the boundary line. Some individuals would like to apply for an expansion, but will not do so until

their house is moved because of the extent of overcrowding that already exists. These housing problems are elements in the ongoing discussion between the corporation and the city over ANCSA 14(c)3 issues. The NSB is also involved, not only in the ANCSA 14(c)3 issue, but in the prioritizing and scheduling of RELI program activities for the moving and/or expansion of houses.

The Atqasuk Corporation has limited the amount of surveyed land available for further development. The corporation, in addition to housing needs, also seeks to respond to the need for additional commercial land in the village. There have been requests for land for commercial purposes in the village, and the Atqasuk Corporation is in the process of preparing leases. Current homeowners cannot have a business in their home because the lots belong to the NSB. If all of the surveyed land were to go for housing expansion, the opportunities for expanded commercial activities would be reduced.

*2.* Contributions to Village Organizations

The Atqasuk Corporation occasionally makes contributions to assist the functioning of organizations benefiting the community as a whole. The corporation has donated money to the community center for the city's recreation program. The Atqasuk Corporation also gave a small building to the Atqasuk SAR organization, and a land lease for the site. In this case, the corporation is not insisting on required payments on the lease.

D. Search and Rescue ‘

> The purposes of this Corporation are to organize and conduct Search and Rescue operations for persons and/or property reported missing or delayed in the North Slope area of Alaska, and also to conduct public education programs about survival techniques for any season on the North Slope, and about snowmachine or other motor maintenance and repair, to support worthwhile community projects, and to engage in fund-raising programs to support such activities. (Article III, Articles of Incorporation of the Atqasuk Search and Rescue)

"Every human being in Atqasuk is a member of the SAIL" This statement by the president of SAR indicates the level of support and participation in the goals and activities of the organization. When asked if the membership includes women, he responded, "Women bake bread, cook soup, for the searchers. Young ladies are trained to use the CB [in the office]; they talk to Barrow [SAR], fill out papers (logs)."

The headquarters of the SAR is in the volunteer fire station. The building and equipment has been provided by the NSB. SAR has four snowmachines from the borough, and uses the radio room and office as their command post when there is a search mission. The radio room serves as the link between the Barrow SAR headquarters and the local search parties, and is manned

continually during any mission. The NSB SAR in Barrow provides air search by plane or helicopter, often flying first to Atqasuk to pick up a local spotter, or two. In addition to the snow-machines and parts needed for repair, the borough reimburses the Atqasuk organization for any fuel expenses incurred during a mission.

Other equipment and supplies, including the costs of food, are the responsibility of the local SAR. This policy was adopted by the NSB last year (1988) after an unusually long search (30 days) which involved searchers from several communities on the Slope. Largely because the NSB discontinued the practice of reimbursing them for food expenses, the Atqasuk SAR began the process of formal incorporation as a nonprofit corporation, to enable them to sponsor fund-raising events to defray their expenses. In the past, the city recreation program has occasionally turned over the proceeds of an evening's bingo to the SAR, to help with their outstanding bill at the village store. In April 1989, the local SAR was resubmitting their articles of incorporation for approval by the state.

The most recent mission occurred in late March, one and one-half weeks prior to the fieldwork in Atqasuk. The following account of the activity was recorded in the SAR log:

| | | |
|---|---|---|
| 3/21/89 | 1030 a.m. | Call from Barrow: Mike Shugluk, Jacob Shugluk, Lucy Itta. They left Barrow at 1030 or 11:00 a.m. from Max Ahgeak house with one snowmachine Cheyenne Skidoo color yellow hood 1989, and one sled. Think they have tent, sleeping bag and two caribou skins. |
| | 8:45 p.m. | 48 Delta [helicopter] left at 8:45 p.m. for air search. |
| | 945 p.m. | 48 Delta returned to Barrow due to darkness and fog. |
| 3/22/89 | 900 a.m. | 945 [Cessna] left Barrow for area search, flying west. |
| | 1020 a.m. | 945 radioed: Look like they have overnite at Peard Bay and the trail are heading toward Atqasuk. |
| | 12:00 p.m. | Radio contact with 945 - there have been some camping near Nigisatukvik River. |
| | 12:35 p.m. | Ground crew left Atqasuk: Joshua Nashaknik, Herman Kignak, Gary Itta, Abe Kippi.<br>All snowmachines have extra fuel tanks.<br>Joshua Nashaknik - own [snowmachine].<br>Herman Kignak -- own. |
| | 1:55 p.m. | 214 Echo Bravo airborne at 243 p.m. with spotter from Barrow, for air search. |

3:30 p.m. *945* called in to ATQ base to confirm victims as above. Walking from Upiksuu, Wesley Aiken's camp towards Atqasuk. Everyone OK, snow machine had broken down, found undercarriage that belongs to Mike Shugluk's machine.

833 p.m. 945 called in to see if our (ATQ ground) crew made it back to base. Negative contact with ATQ ground crew, will follow trails for back tracking.

922 p.m. 945 called, found ground crew at 30-35 miles SW. One snowmachine -- broken chain, ground crew will pick up machine and head on back to ATQ Base. Atqasuk SAR Base will continue until ground crew gets in.

In a previous search in March 1989, the Cessna was launched from Barrow and picked up spotters at Atqasuk. A ground crew from Atqasuk searched for two days in severe high winds and blowing snow, then contacted Atqasuk Base from a cabin south of the village. They waited there for more fuel which was brought by helicopter from Barrow. The helicopter picked up supplies and a spotter in Atqasuk on the trip to the cabin. The missing persons were found on the third day. One of the victims remained out for another day to retrieve a broken snowmachine; the other victim returned to Atqasuk with the assistance of SAR.

Although the NSB assists with equipment and air support from Barrow, the Atqasuk SAR organization is seen as one constituted, supported, and served by local residents. Unlike some other communities, there is no apparent discontinuity or parallel structure between a local SAR and another under the auspices of the borough.

1. Observations of a Search and Rescue Meeting, April 4.1989

The meeting was attended by ten Inupiat men from Atqasuk, with one observer. Four of those present are 'on the village council, including the mayor. - One other council member most likely would have been present, but could not attend meetings at the time because of a broken leg. The president chaired the meeting; he is a member of the village council. The meeting was conducted in Inupiaq.

An announcement was made that the BIA representative did not land in Atqasuk that day as planned, because of a snowstorm. He was going to consult with the Atqasuk SAR about where to place trail markers between the villages. It was presumed that the meeting will be rescheduled at a later date.

The first item of business was a discussion of the articles of incorporation which the organization had submitted to the state of Alaska. The state received them and had returned them with a request for some modifications and clarifications. The letter from the state was presented, and the researcher was asked to assist in explaining what was necessary. The researcher examined the

letter and volunteered to telephone the Alaska Department of Commerce to clarify what was needed on the following day. This assistance was accepted by the group.

The status of the SAR snowmachines was the next item of discussion. The SAR has four machines, but three are in need of repair. Volunteers were asked to come to the fire hall on the following evening to work on the machines. The president said he would be here.

Finally, the discussion turned to the issue of money owed at the store and the need to raise funds to pay the bill. Bingo, cake walks, and other community fund-raising events were discussed. It was pointed out by the mayor that, as a recognized nonprofit corporation, careful bookkeeping procedures will be necessary to fulfill the requirements of the state for tax purposes. It was noted that SAR will have to schedule bingo with the city recreation program, to avoid schedule conflicts, and to enlist their assistance in staffing the recreation hall.

Before the meeting adjourned, the mayor (who is also the NSB Village Coordinator) announced that he was going to Barrow later in the week to a meeting with the village mayors and NSB Department of Public Safety. He stated that he would be in his office on the following day, if anyone wished to talk with him about what to present at the meeting from Atqasuk.

## 2. Trail Markers

In a subsequent discussion of the trail markers which the BIA is planning to place on the land, one traveler told of his experience on a recent snowmachine trip from Barrow to Atqasuk. During the journey, he got into whiteout conditions and found himself on the trail to Nuiqsut. It took him twelve hours to reach Atqasuk, a journey that usually requires three to four hours. For a while he used his compass to set his direction, but after his companion said he did not want to depend on the compass, he stopped using it. He felt he was lucky that he did not break down. Normally he does not add gas to the tank during the trip from Barrow, but he needed to on this one. This story indicates that trail markers are seen as valuable assists to travelers on the tundra.

### E. churches

There is one church in Atqasuk, of Presbyterian denomination. The church building was erected by volunteer work in the summer of 1984. Village men put their labor into it in the evenings after work, after supper. According to one individual, "sometimes there were two guys there, sometimes there were twenty-five." They used scrap wood, surplus, and discarded materials from the Blackstock homes.

Services are in Inupiaq, when a church elder gives the sermon. However, if one of the Presbyterian ministers comes over from Barrow, it is given in English followed by a translation into Inupiaq.

F. The Issue of Alcohol and Drugs

1. Village Ban on the Possession of Alcohol

The residents passed the most restrictive of the local options available on the control of alcohol in October 1986, prohibiting the possession of alcohol in the village. This option, which prohibits importation and sale by virtue of banning possession, is known as the "dry" option. Barrow, in contrast, is "wet/dry" because importation and possession are legal, only the sale of alcohol is prohibited. The initiative was put on the ballot in Atqasuk again in October 1988, but the local regulation was not changed. According to a community member who was responsible for putting the initiative on the ballot in 1986, it passed by only three or four votes in that year. In 1988, however, the margin increased to about sixteen votes. According to this individual, there are 96 registered voters in Atqasuk, and about 60 voted in the last election. Also, most village organizations came out against changing the village's position, including the Mother's Club, the church, the city, and the village corporation.

After the village voted to be dry, some families moved out of town. These persons are not expected to return as long as the community maintains its "dry" status. However, one local resident reported that the situation in the village is "much better. You don't have to worry about people in cold weather anymore, or bar your door after midnight, and domestic violence has decreased."

2. The Rainbow Group

This group is an informal association of volunteers formed to do something about alcohol and drug use in the community. There are twelve members, of which the mayor is one. Representatives of other organizations are also members, but it appears that the membership was principally a group of concerned citizens, rather than a group of representatives of the village organizations. It is unclear where the name came from. When people spoke about the Rainbow Group, they referred to its membership as a group of interested people, not as an association of representatives from village institutions. It had not met for at least six months, judging by the lack of commentary about it. Two members were contacted, both of whom said there had not been a meeting of the group, or much activity related to the group, for some time.

The individual of the Alaska Department of Health and Social Services who manages the Suicide Prevention Program consisting of grants to villages for locally developed projects reported that there had been an inquiry from Atqasuk last year, but that nothing more had been heard from the community. Presumably, it was a member of the Rainbow Group that contacted her office. The mayor thought the program application papers were in his office somewhere. During the city council meeting the researcher attended, the mayor indicated that the Rainbow Group was the village entity that should be responding to the issues of drug and alcohol use in the community, as if it was a committee established to deal with these issues within the village.

G. Future Development Projects

ASRC is assessing the potential of opening up the old coal mine in Atqasuk. In April 1989, two engineers visited Atqasuk to examine the capacities of existing power plants, the demand levels at high and low demand periods, and other characteristics of power and heating systems in the village. A huge supply of high quality coal is available at the old mine and in nearby areas. A potential economic project to mine coal for consumption in the village, and possible export to other communities such as Wainwright, is being suggested as a long-term solution to the high fuel subsidies which the NSB is paying at the present time, in order to reduce annual budget expenditures. The project could also be expected to provide employment in the village.

A pilot project for the use of coal for heating homes is underway in the village. Similar to current projects in Point Lay and Point Hope, coal-burning stoves were installed in a number of houses in the village for a trial period this year. Villagers reported that burning coal was expedient because, if they ran out of fuel, it was very convenient to borrow some from their next-door neighbor. The coal heating system was also advantageous because it provided a continual source of heat, put out by a coal-burning stove, that was preferable to a hot air system, in which the heat was on and off intermittently.

While subsistence was not a focus of research in Atqasuk, several elements of the Atqasuk subsistence cycle are relevant to the consideration of the relationship between Atqasuk and Barrow. Caribou, freshwater fish, waterfowl, and marine mammals are the primary resources important to Atqasuk households. The largest component is caribou. Caribou is hunted by snowmachine, sometimes even in summer. The importance of snowmachines and the short period of their useful life for hunting caribou has been pointed out in Alaska Consultants et al. (1984:426-29). Aluminum skiffs with small outboard motors are used extensively in summer for traveling on the Meade River and its tributaries, but the shallow water level of the rivers and streams limits their utility (and life expectancy of the outboards). By August, the rivers have dried up and travel to fish camps is done overland.

Caribou, fish, and waterfowl are acquired locally in areas completely different from Barrow residents, according to the report by Alaska Consultants et al. (1984:439). However, Atqasuk people go out along the Inaru, Meade, Topogoruk, and Chipp (Ikpikpuk) rivers, which are also used by Barrowites. The interactions and cooperation between Barrow and Atqasuk people in hunting and fishing activities is not well reported in the available literature. Also, recent patterns of land use may have changed, which would alter the reported lack of interaction on the land. For example, in 1978, community residents were talking about their intent to go down to the coast on the Meade River delta and hunt seals, but they had not done that yet (Schneider et al. 1980).

It is well known that Atqasuk residents participate in marine mammal hunting in Barrow at substantial levels, as former residents of the area did during the historical past. Atqasuk hunters acquire bowhead and beluga whale, walrus, ugruk, and seal during spring and summer hunting periods. According to Alaska Consultants et al. (198441-43), Atqasuk hunters store sea mammal hunting equipment with relatives in Barrow "so that any trip to that community can become an unplanned hunting trip." Several Atqasuk men store wooden and aluminum boats in Barrow for summer marine mammal hunting (beluga, walrus, ugruk). The harvest products are either stored in Barrow and retrieved later (in fall and winter) by snowmachine, or are air freighted to Atqasuk. Seals are occasionally purchased from friends and relatives in Barrow and sent to Atqasuk on the plane. Sometimes, Atqasuk hunters travel by snowmachine to the coast between Nulavik and Peard Bay in the spring for seal hunting. "This is not common, however, because of conflicts with caribou hunting and trapping and because of limited daylight hours." Summer hunting for ugruk and walrus by boat in the broken ice out of Barrow is preferred over this spring shore-based hunting. The substantial local interest in bowhead whaling was also described:

> Between six and ten Atqasuk residents travel to Barrow each spring to join whaling crews. Local residents also desire to have their own crews, which further demonstrates local enthusiasm for this activity. Three Atqasuk men, who were whaling captains when they lived in Barrow, expressed interest in establishing a bowhead whale quota for Atqasuk. These men stated that if given the opportunity, they would establish a whaling camp near Nulavik, the closest suitable point on the coast from Atqasuk. In addition to sending men to be crew

> members, Atqasuk residents provide caribou skins for sleeping mattresses and other supplies to Barrow's whale harvest. Residents state that they always receive a village share from Barrow and Wainwright, and these are divided among all members of the community (Alaska Consultants et al. 1984:442).

There are many clear and direct kinship ties between Atqasuk and Barrow, and even more friendship linkages, but our research could not quantify or measure these in any meaningful way. Such ties are almost certainly operative when individuals from Atqasuk go to other villages to whale, but information in this regard is simply not available. The ongoing subsistence studies in Barrow and Wainwright also have been unable to collect this sort of information because of research resource constraints (Holmes 1989, personal communication). This topic would require an extended period of fieldwork devoted solely to it, since nearly all Atqasuk residents lived at one time in Barrow and have relatives there, as well as friendships and other operative relationships. To sort this out in any meaningful way would require a great deal of work.

Another important aspect of subsistence as it relates to informal institutions is the level of sharing that is exhibited by members of the community. Table 24-ATQ shows the relationship between household characteristics and levels of household income. Although the title is misleading in this context, the relevant point concerns the characteristics of those households that share subsistence resources within the community. There are some non-Inupiat households that share more of their subsistence resources and spend more of their income in the village than other non-Inupiat households. And this trend appears to be associated with not being in the highest income category. This may indicate that the non-Inupiat households in Atqasuk that do make the most money are saving it or spending it elsewhere and are probably not permanent residents. In contrast, among Inupiat, sharing and spending income in the village is associated more strongly with the higher income categories.

Other characteristics associated with level of household subsistence participation are shown in Table 25-ATQ. Of interest here are: the bimodal distribution of household income by degree of subsistence participation and average meat and fish consumption from a household's own subsistence efforts; the opposite trends that occur between Native and non-Native in regard to average household size and degree of subsistence participation; and the differences in average percentage of meat and fish harvested that is given away (a measure of sharing) between Native and non-Native households.

Little additional information is available on the patterns and extent of subsistence participation, beyond the general statement that Atqasuk hunters spend additional cash resources hunting marine mammals in the Barrow area. Further discussion and data about subsistence patterns are available in Schneider et al. (1980) and on maps collected by Braund in 1983 (in connection with the MMS research) and by Pedersen as part of the NPR-A 105(c) research (on file with the ADF&G, Subsistence Division, Fairbanks).

Table **24-ATQ**

**Atqasuk** Household Characteristics -1988
By Levels of Household Income

| | HOUSEHOLD INCOME CATEGORIES | | | | |
|---|---|---|---|---|---|
| | BELOW $20K | $20-40K | $40-60K | ABOVE $60K | ALL HHs |
| **Average HH Income ($):** | | | | | |
| Inupiat HHs | $11,429 | $30,000 | $47,500 | $70,000 | |
| Non-Inupiat HHs | | | $49,500 | $108,333 | |
| All HHs | $11,429 | $30,000 | $48,611 | $93,000 | $35,057 |
| Cases: | 14 | 16 | 9 | 5 | 44 |
| **Average HH Size (# Persons per HH):** | | | | | |
| Inupiat HHs | 4.9 | 4.4 | 3.5 | 5.5 | |
| Non-Inupiat HHs | | | 3.2 | 2.7 | |
| All HHs | 4.9 | 4.4 | 3.3 | 3.8 | 4.3 |
| Cases: | 14 | 16 | 9 | 5 | 44 |
| **Average Meat & Fish Cmptn from Own HH Subsistence (%):** | | | | | |
| Inupiat HHs | 55.8% | 39.0% | 60.0% | 70.0% | |
| Non-Inupiat HHs | | | 39.0% | 3.3% | |
| All HHs | 55.8% | 39.0% | 48.3% | 30.0% | 44.9% |
| Cases: | 12 | 15 | 9 | 5 | 41 |
| **Average Meat & Fish Cmptn from Other HH Subsistence (%):** | | | | | |
| Inupiat HHs | 11.7% | 19.7% | 5.0% | 5.0% | |
| Non-Inupiat HHs | | | 20.0% | 0.0% | |
| All HHs | 11.7% | 19.7% | 13.3% | 2.0% | 13.8% |
| Cases: | 12 | 15 | 9 | 5 | 41 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | | |
| Inupiat HHs | 10.4% | 10.0% | 26.3% | 35.0% | |
| Non-Inupiat HHs | | | 18.0% | 3.3% | |
| All HHs | 10.4% | 10.0% | 21.7% | 16.0% | 13.4% |
| Cases: | 12 | 15 | 9 | 5 | 41 |
| **Average Proportion HH Income Spent in Village (%):** | | | | | |
| Inupiat HHs | 75.0% | 81.6% | 87.5% | 75.0% | |
| Non-Inupiat HHs | | | 38.0% | 10.0% | |
| All HHs | 75.0% | 81.6% | 60.0% | 36.0% | 69.6% |
| Cases: | 12 | 16 | 9 | 5 | 42 |

**Note:** Total roses (households) = 55.

**Source:** NSS Department of Planning and Community Services
Census of Population and Economy

Table 25-ATQ

**Atqasuk** Household Characteristics - 19SS
By Levels of Subsistence Participation

| | DEGREE OF SUBSISTENCE PARTICIPATION | | | |
|---|---|---|---|---|
| | MINIMAL | MODERATE | ACTIVE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $26,250 | $17,500 | $30,556 | |
| Non-Inupiat HHs | $85,000 | $57,500 | $45,000 | |
| All HHs | $43,529 | $27,500 | $32,000 | $36,431 |
| Cases: | 17 | 4 | 20 | 41 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 4.2 | 4.5 | 4.8 | |
| Non-Inupiat HHs | 3.2 | 2.0 | 2.0 | |
| All HHs | 3.9 | 4.0 | 4.6 | 4.3 |
| Cases: | 17 | 5 | 23 | 4s |
| **Average Meat & Fish Csmptn from Own HH Subsistance (%):** | | | | |
| Inupiat HHs | 13.8% | 35.0% | 78.1% | |
| Non-Inupiat HHs | 6.0% | 25.0% | 75.0% | |
| All HHs | 11.5% | 33.0% | 77.8% | 47.8% |
| Cases: | 17 | 5 | 23 | 45 |
| **Average Meat & Fish Csmptn from Other HH Subsistance (%):** | | | | |
| Inupiat HHs | 12.9% | 5.0% | 17.7% | |
| Non-Inupiat HHs | 0.0% | 0.0% | 50.0% | |
| All HHs | 9.1% | 4.0% | 20.5% | 14.4% |
| | 17 | 5 | 23 | 45 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 5.4% | 10.0% | 18.3% | |
| Non-Inupiat HHs | 2.0% | 0.0% | 45.0% | |
| All HHs | 4.4% | 8.0% | 20.7% | 13.1% |
| Cases: | 17 | 5 | 23 | 45 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 77.5% | 62.5% | 82.6% | |
| Non-Inupiat HHs | 13.0% | 25.0% | 65.0% | |
| All HHs | 58.5% | 55.0% | 81.1% | 69.7% |
| Cases: | 17 | 5 | 23 | 45 |

WTC

Notes: Degree of subsistence participation measured on the basis of how much HH meat & fish consumption was from the HHs own subsistence activities; where
MINIMAL: Under 20% meat & fish from own HH subsistence
MODERATE: 20-40% meat & fish from own HH subsistence
ACTIVE: Over 40% meat &fish from own HH subsistence.
Teal cases (households) = 55.

Source: NSB Department of Planning and Community Services
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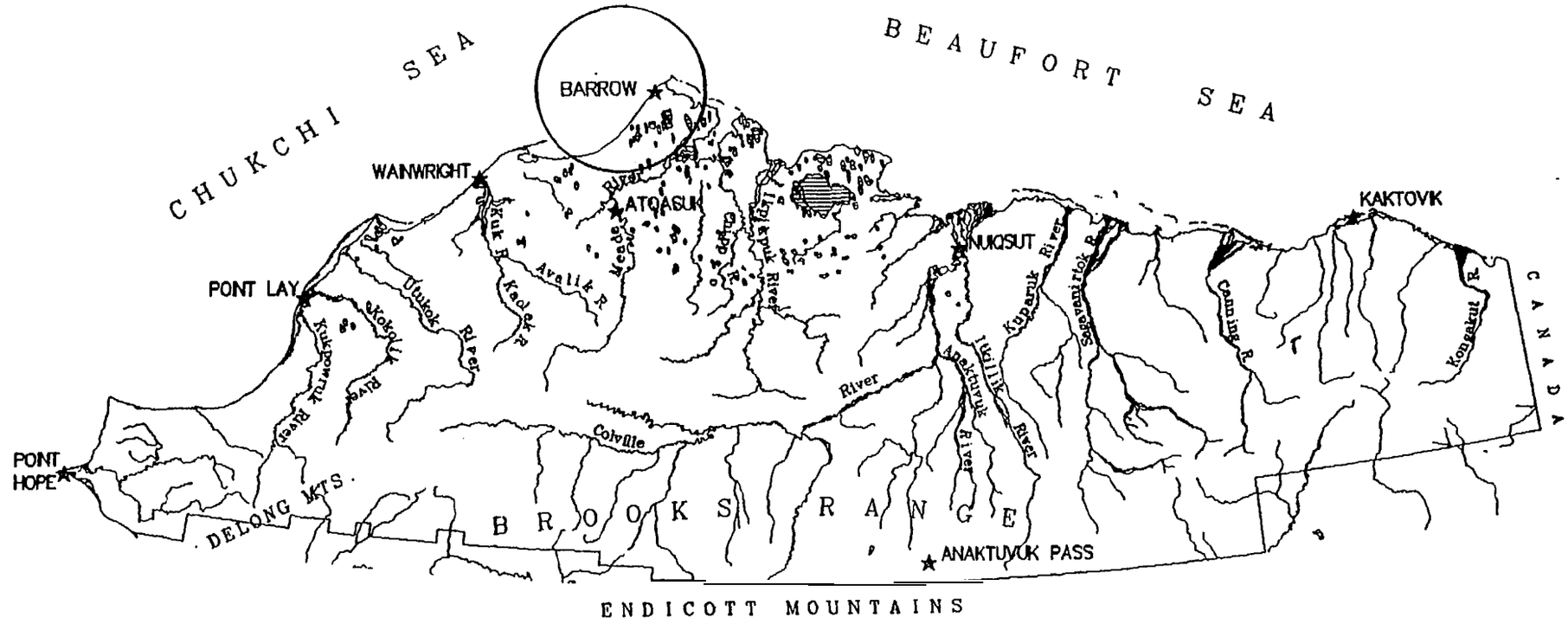
# BARROW

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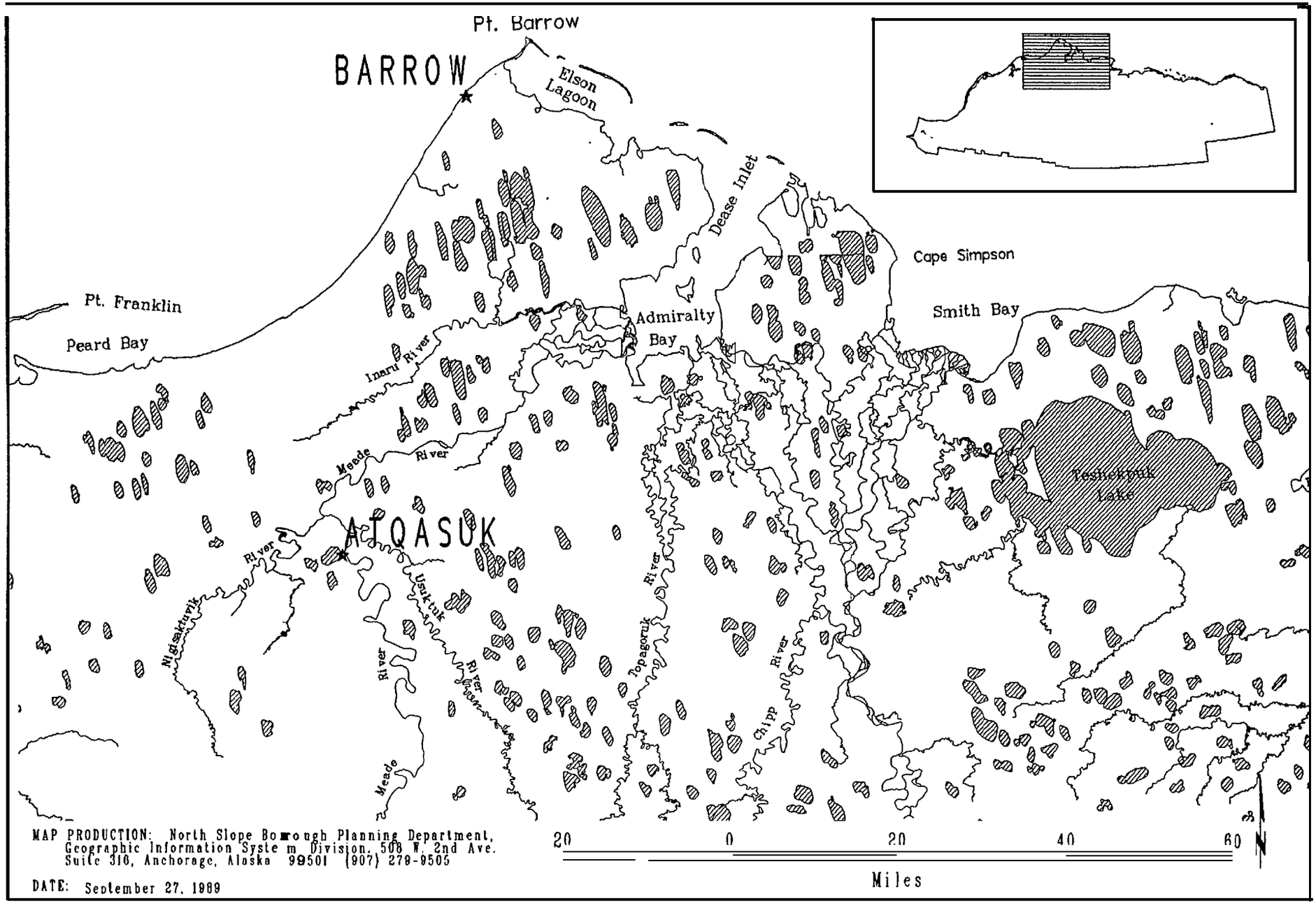
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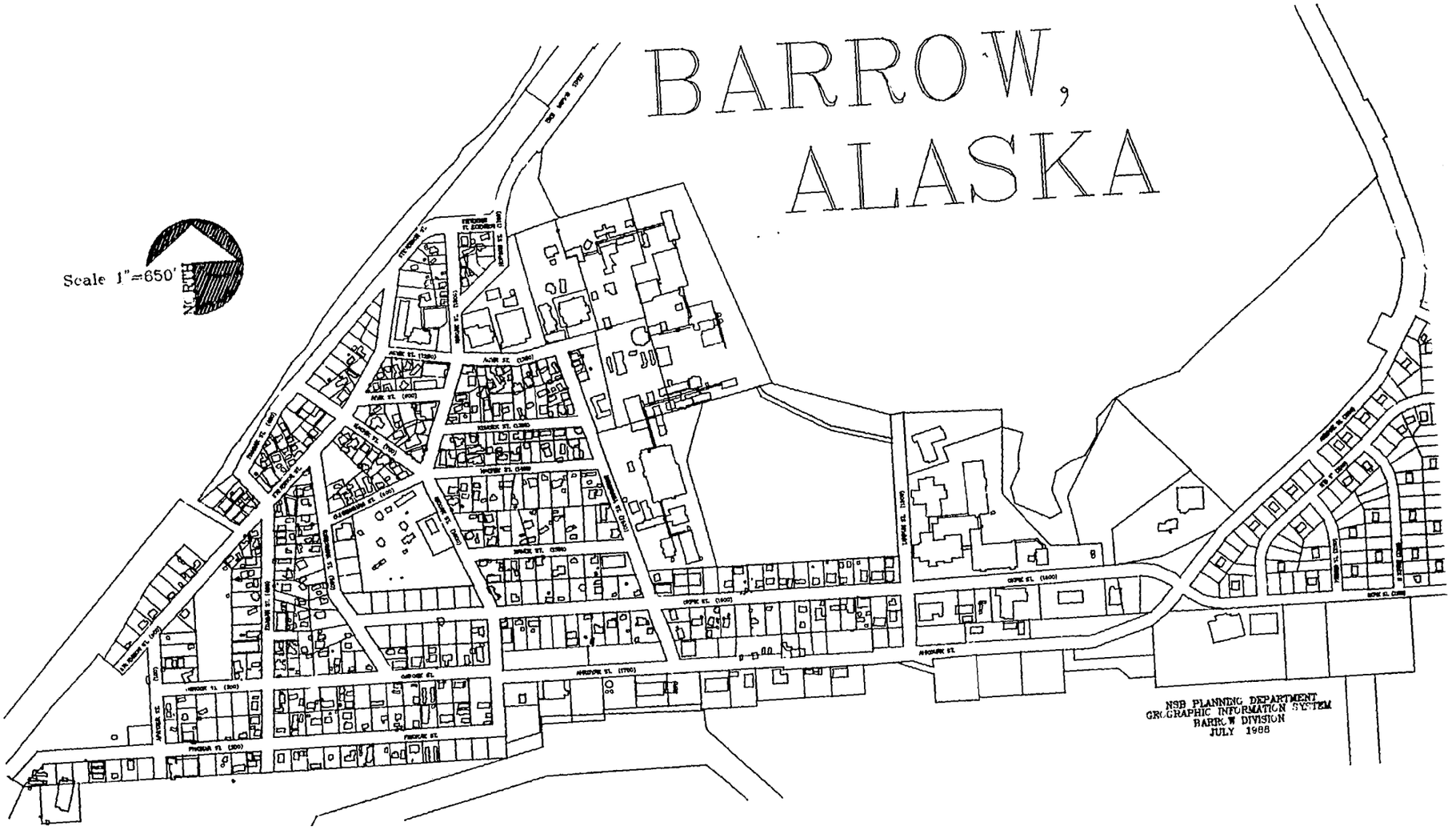

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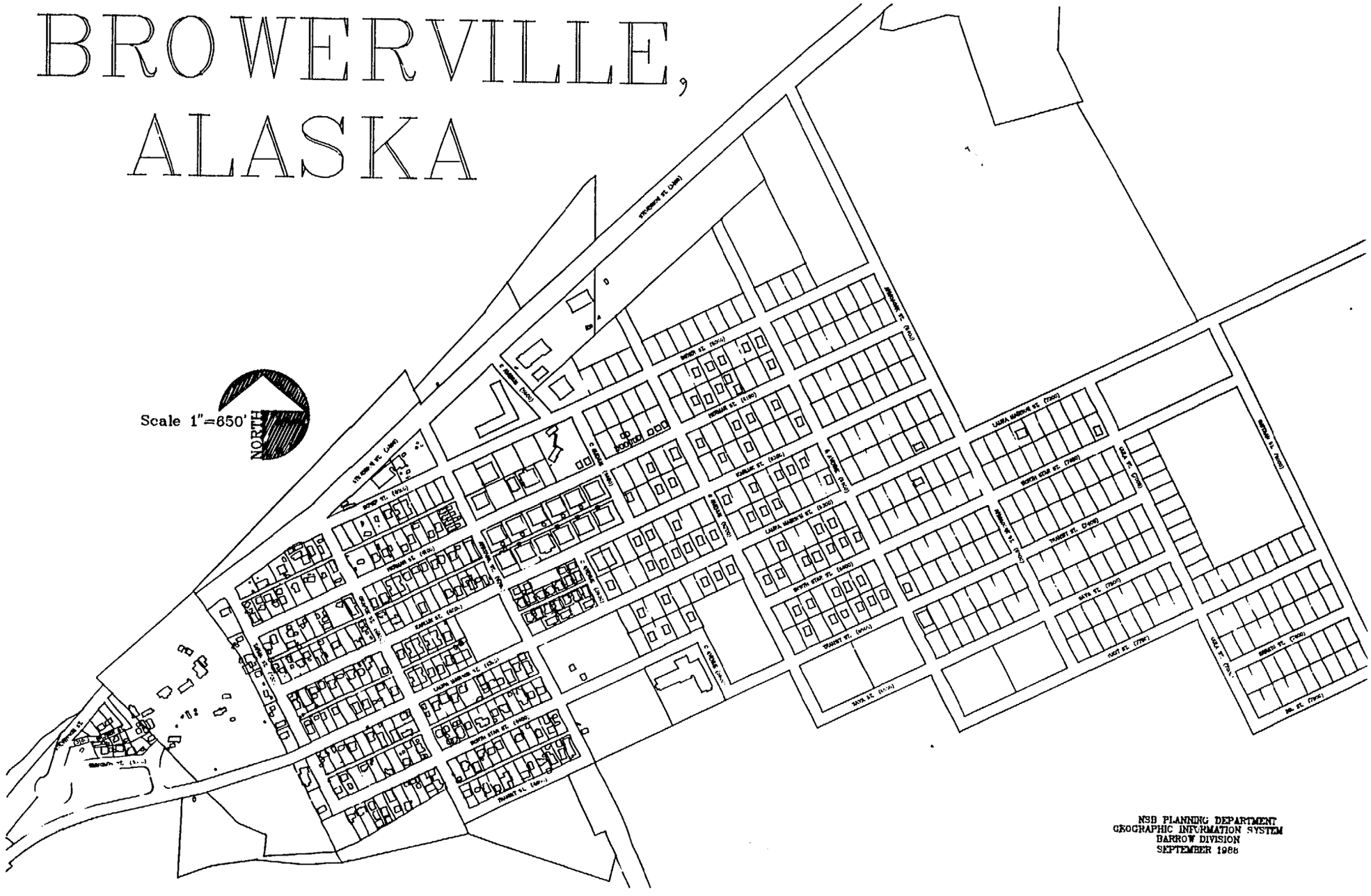


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## SECTION I: POPULATION

### A. Size and Composition

#### 1. Demographic Characteristics

The size and ethnic composition of Barrow is unique among the eight villages on the North Slope. It is both the largest village and the one containing the highest proportion of non-Natives. The slow but constant increase in the number of Natives and, to a lesser extent, non-Natives in Barrow characterizing the 30-year period prior to 1970, changed abruptly with the passage of the Alaska Native Claims Settlement Act (ANCSA) in 1971 and the incorporation of the North Slope Borough (NSB) in 1972 (Alaska Consultants et al. 1984:476; Smythe and Worl 1985:187). The increase in population between 1960 and 1970 was 60.0%. However, growth slowed between 1970 and 1980 to only 4.9% (Alaska Consultants et al. 1984:475). These trends in Barrow, relative to the other villages on the North Slope, are illustrated graphically in Figure 1-BRW. This apparent lack of growth actually masks major changes that were taking place in the ethnic composition of Barrow. A graphic representation of the changes in the ethnic composition of Barrow is in Figure 2-BRW.

The Inupiat population in Barrow decreased from 90.5% in 1970 to 77.9% in 1980. A housing survey from 1980, which included temporary construction personnel in its count, found only 71.2% to be Alaska Natives. Had that survey included the population of the former Naval Arctic Research Laboratory (NARL) and the Distant Early Warning Line station (DEW Line), the proportion of Natives would have been closer to 70% (Alaska Consultants et al. 1984:477).

Two processes can account for these changes. First, there was the out-migration of Inupiat from Barrow to resettle the traditional villages of Nuiqsut, Atqasuk, and Point Lay, and take advantage of new employment opportunities. Second, there was an influx of non-Natives to Barrow which offset the decline in the population from emigrating Natives. These new residents were primarily professionals attracted by the massive capital construction projects that were being subsidized directly by the NSB and indirectly by oil revenues.

An interesting consequence of this demographic shift was the change in the age structure of the population to include more men in their early 20s and more Natives under the age of 20. The median age of males was 23.1 in Barrow in 1980. The age composition of the Barrow population in 1980 can be seen in Table 1-BRW. This contrasts with the median age of the national population which, in 1980, was 30 years (Alaska Consultants et al. 1984:481). This relationship can be seen graphically in the population pyramid in Figure 3-BRW. Significant age distribution differences are found between the Native and non-Native components of Barrow's population. According to Worl and Smythe (1986:102-103),

> The Native population is significantly larger than the non-Native for ages under twenty and over sixty years, but between those years Natives comprised just over half of the total population (52.7

percent). Moreover, Natives are in the minority between the ages of 30 and 50. This group is 46.1 percent Native, which results from a higher total of non-Native males, compared to Native males, in this age group. By way of comparison, in 1980 there was only one age group, 40-44 years, in which non-Native males outnumbered Native males; and between the ages of 30 and 50, which was the locus of the major shift by 1985, Natives comprised 67.4 percent of the population.

The 1989 NSB Census of Population and Economy shows an increase in the non-Native population to 1,179 from the 1985 population of 1,152, as assessed by the 1985 Barrow Housing and Employment Survey, and a decrease in the Native population from 1,864 to 1,922. These figures represent an increase in the number of non-Inupiat and decrease in the number of Inupiat of 2.3% respectively. The exact age, sex, and racial composition of Barrow in 1988 is shown in Table 1-BRW. A graphic representation of this breakdown, excluding sex, can be found in Figure 4-BRW. Figure 5-BRW presents a population pyramid for Barrow for 1988.

Another trend which emerged in the 1980s was a diversification of non-Native ethnic groups. Smythe and Worl report interviewing Filipinos, Koreans, Mexicans, South Americans, and Yugoslavians during their fieldwork in 1985 (p. 189). Many of these new immigrants have become permanent residents of Barrow. However, only the Filipino population emerged as a distinct social group and this occurred between 1979 and 1983. Table 2-BRW gives a detailed breakdown of the ethnic composition of Barrow in 1988, which is illustrated graphically in Figure 6-BRW.

## 2. Influences on Population Size and Structure

Between 1870 and 1920 death from disease was very high in the coastal villages such as Barrow. But the overall population figures remained constant because the high mortality rate was offset by the migration of inland Inupiat to the coast (Hippier 1%912). Some of the elders from Barrow who were interviewed in Worl and Smythe's study (1986:24) reported that Barrow began to grow with the arrival of whalers. They also reported that the establishment of Western facilities, such as the school and church, changed the face of Barrow.

Since 1946, however, the primary influence on population size and structure has been migration. (A more detailed examination of the influences on population and migration prior to 1946 will be discussed in the section on community history.) It wasn't until 1944 when the Naval Petroleum Reserve Number 4 (PET-4, now referred to as National Petroleum Reserve-Alaska, NPR-A) was established and oil exploration began that changes occurred in Barrow significant enough to cause major in-migration. But it was the passage of ANCSA and the incorporation of the NSB that have resulted in the most profound changes. These events produced "unprecedented levels of local employment opportunities as well as greatly improved basic services and facilities . .." all over the North Slope which became the major incentive for migration to or from Barrow (Worl and Smythe 1986:98).

Table 1-BRW

Population Composition •
Barrow, June 1980

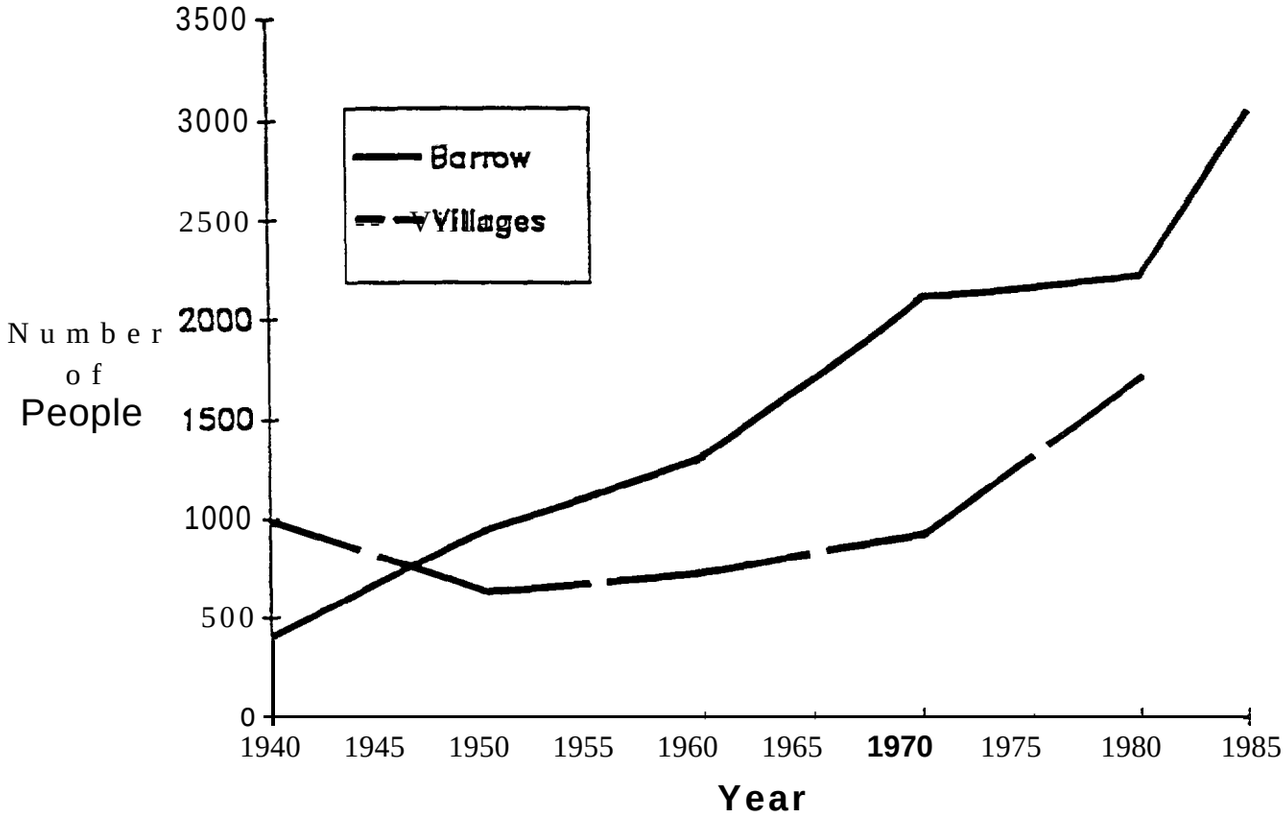
| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Under 5 yearn | 92 | 92 | 184 | 11 | 22 | 33 | 103 | 114 | 217 |
| 5 - 9 | 78 | 83 | 161 | 14 | 16 | 30 | 92 | 99 | 191 |
| 10-14 | 85 | 101 | 186 | 18 | 9 | 27 | 103 | 110 | 213 |
| 15-19 | 122 | 117 | 239 | 19 | 21 | 40 | 141 | 138 | 279 |
| 20 - 24 | 107 | 88 | 195 | 43 | 33 | 76 | 150 | 221 | 271 |
| 25-29 | 101 | 87 | 188 | 85 | 55 | 140 | 186 | 142 | 328 |
| 30-34 | 63 | 53 | 116 | 65 | 32 | 97 | 128 | 85 | 213 |
| 35-39 | 45 | 31 | 76 | 25 | 19 | 44 | 70 | 50 | 120 |
| 40-44 | 38 | 33 | 71 | 28 | 10 | 38 | 66 | 43 | 109 |
| 45-49 | 38 | 23 | 61 | 28 | 9 | 37 | 66 | 32 | 98 |
| 50-54 | 29 | 26 | 55 | 10 | 12 | 22 | 39 | 3s | 77 |
| 55-59 | 21 | 21 | 42 | 9 | 2 | 11 | 30 | 23 | 53 |
| 60-64 | 17 | 13 | 30 | 4 | 3 | 7 | 21 | 16 | 37 |
| 65-69 | 16 | 21 | 37 | 1 | 2 | 3 | 17 | 23 | 40 |
| 70-74 | 9 | 5 | 14 | 2 | 0 | 2 | 11 | 5 | 16 |
| 75 and over | 15 | 7 | 22 | 1 | 0 | 1 | 16 | 7 | 23 |
| TOTAL | 876 | 801 | 1,677 | 363 | 245 | 608 | 1,239 | 1,046 | 2,285 |
| Median Age | 231 | 203 | 22.8 | 293 | 268 | 28.4 | 258 | 22.7 | 2.45 |

• Figurea exclude a total of 104 persons (16 Alaska Native males, 9 Alaska Native females, 56 non-Native males and 23 non-Native females) for whom no age information waa provided. Thus, a total of 2,389 persona in Barrow waa surveyed by Alaska Consultants, Inc.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

Figure 1-BRW

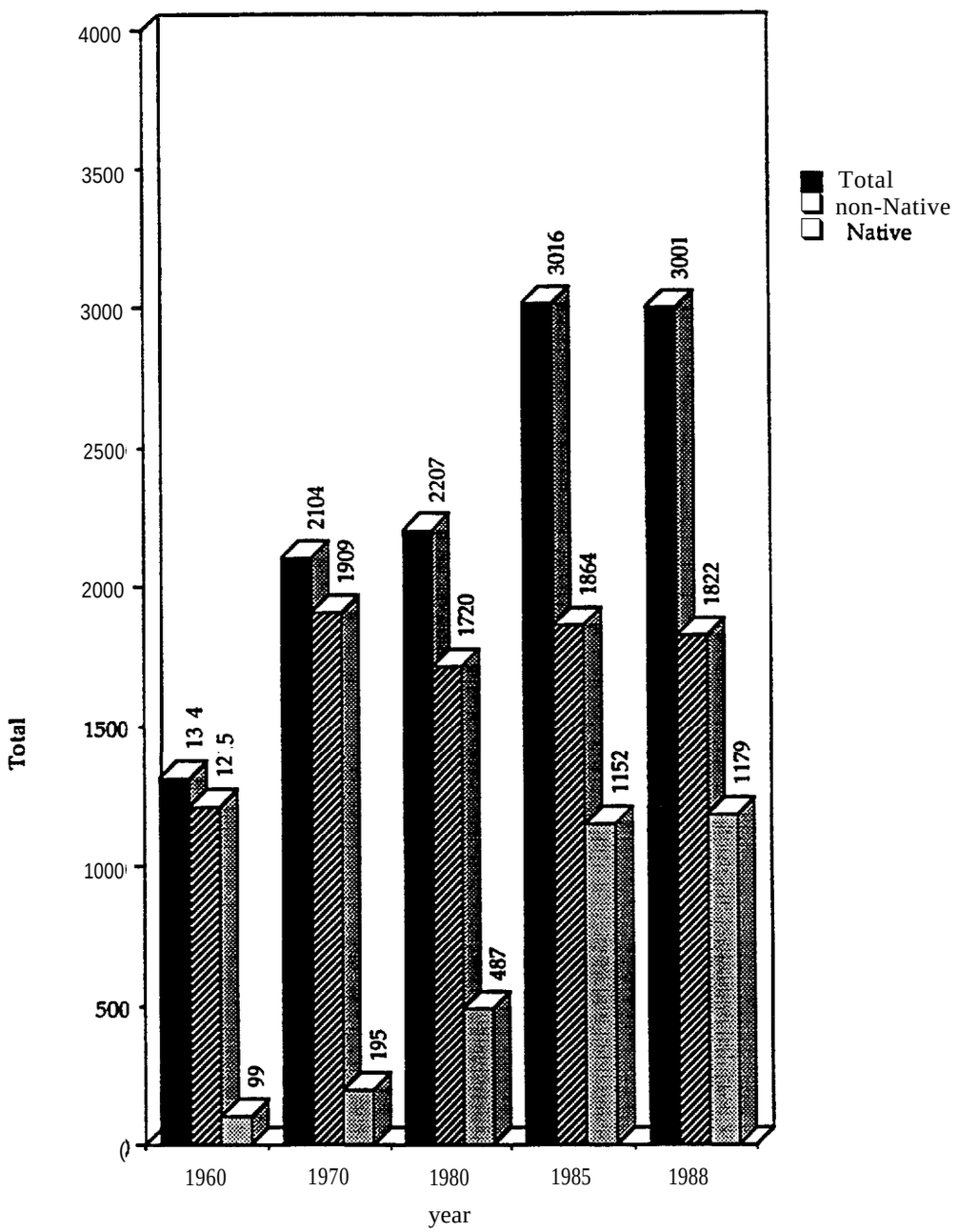
North Slope Population
1940-1985




Sources: 1940-1980: U.S. Census.
1985: 1985 Barrow Housing and Employment Survey.

Figure **2-BRW**

Barrow Population Growth
1960-1988




Note: Native includes **Inupiat.** Indian,. and **Aleut.**
The **Inupiat population** was **1,695** in 1980 and **1,823** in 1985.

Sources: 1960-1980: U.S. Census.
1985: 1985 Barrow Housing and Employment **Survey.**
**1988:** NSB Census of Population and Economy, 1989.

**Figure 3-BRW**

**Barrow Age/Sex Pyramid**
**1985**

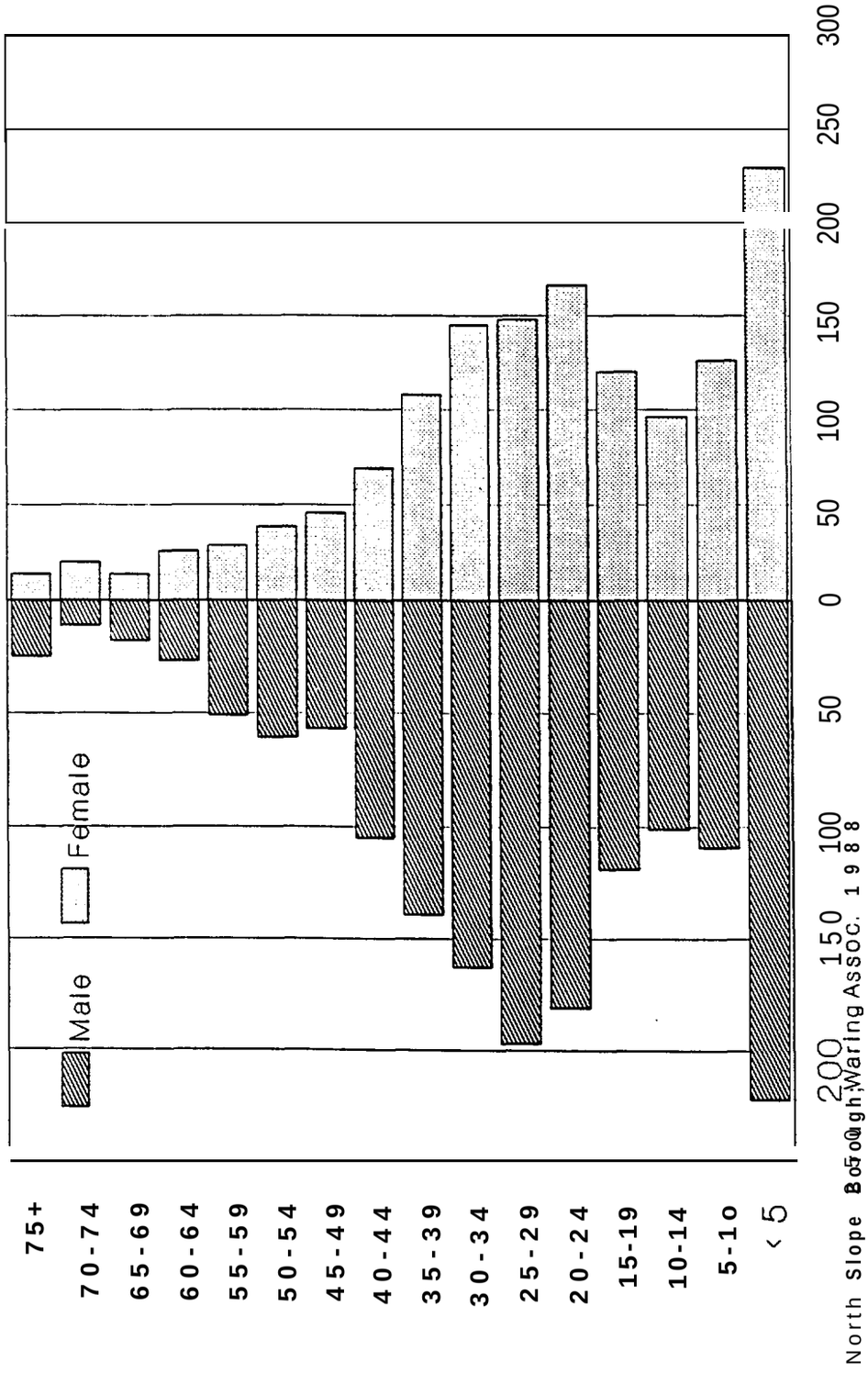


Table **2-BRW**

**Age, Sex,** and Race Composition of Population -1988
Barrow

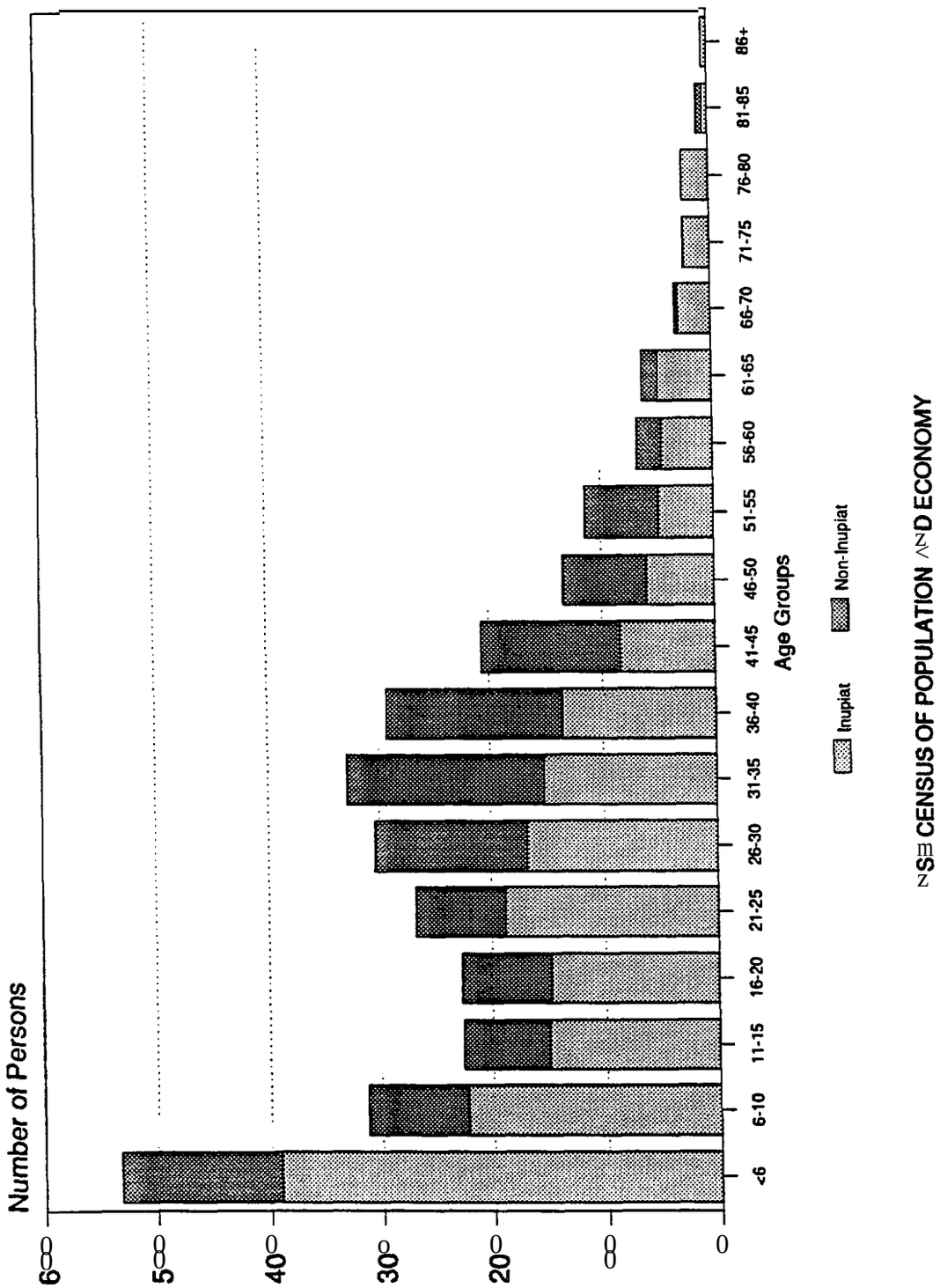
| | INUPIAT | | | NON-INUPIAT | | | TOTAL | | | % |
|---|---|---|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | TOTAL |
| UNDER 4 | 127 | 131 | 258 | 59 | 37 | 96 | 186 | 168 | 354 | 11.8% |
| 4 - 8 | 126 | 131 | 257 | 45 | 36 | 81 | 171 | 167 | 338 | 11.3% |
| 9 - 15 | 103 | 113 | 216 | 60 | 47 | 107 | 163 | 160 | 323 | 10.8% |
| 16-17 | 31 | 35 | 66 | 16 | 12 | 28 | 47 | 47 | 94 | 3.1% |
| 18-25 | 127 | 128 | 253 | 56 | 64 | 120 | 183 | 190 | 373 | 12.4% |
| 26-39 | 181 | 225 | 406 | 242 | 180 | 422 | 423 | 405 | 828 | 27.6% |
| 40-59 | 124 | 120 | 244 | 177 | 121 | 298 | 301 | 241 | 542 | 18.1% |
| 60-65 | 25 | 20 | 45 | 11 | 7 | 18 | 36 | 27 | 63 | 2.1% |
| 68+ | 32 | 45 | 77 | 6 | 3 | 9 | 38 | 48 | 86 | 2.9% |
| TOTAL | 876 | 946 | 1822 | 872 | 507 | 1179 | 1548 | 1453 | 3001 | 100.0% |
| % | 29.2% | 31.5% | 60.7% | 22.4% | 16.9% | 39.3% | 51s% | 48.4% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | | | 222 | |
| TOTAL POPULATION | | | | | | | | | 3223 | |

| | AVERAGE AGE (years) |
|---|---|
| ENTIRE POPULATION | 282 |
| MALE | 26.4 |
| FEMALE | 25.9 |
| INUPIAT | 24.3 |
| NON-INUPIAT | 29.1 |

Source: NSB Census of Population and Economy, 1989.

Figure **4-BRW**

**Inupiat** and Total Population in 1988
**Barrow**




SS CENSUS OF POPULATION AND ECONOMY

Figure **5-BRW**

Barrow Population Characteristics -1988

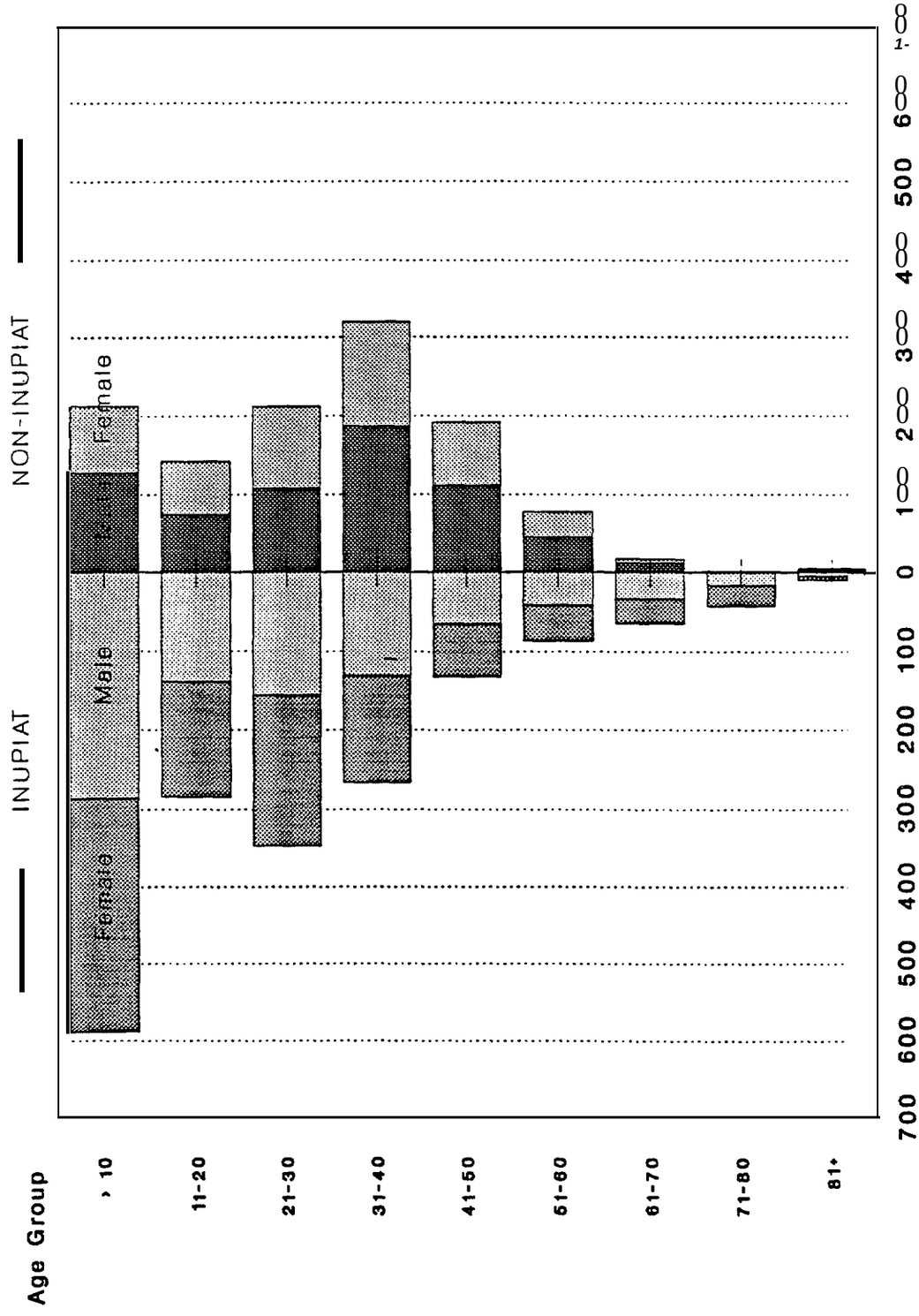


Table 3-BRW

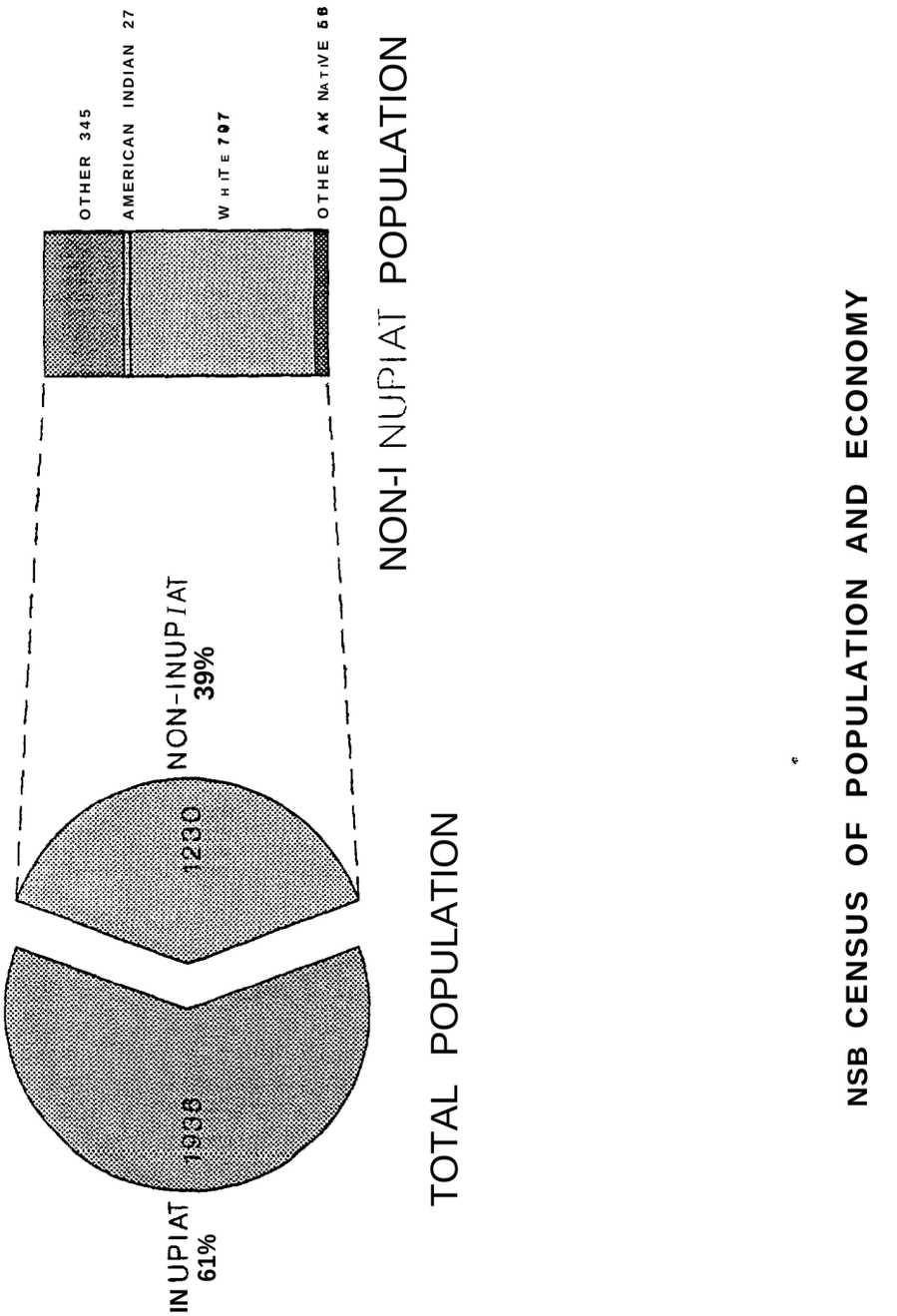
Ethnic Composition of Population -1988
Barrow

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 942 | 994 | 1936 | 61.1% |
| OTHER AK NATIVE | 28 | 30 | 58 | 1.8% |
| WHITE | 470 | 327 | 797 | 252% |
| AMERICAN INDIAN | 17 | 10 | 27 | 0.9% |
| HISPANIC | 18 | 13 | 31 | 1.0% |
| FILIPINO | 75 | 80 | 155 | 4.9% |
| ORIENTAL | 8 | 16 | 24 | 0.8% |
| BLACK | 28 | 18 | 46 | 1.5% |
| OTHER | 49 | 34 | 83 | 2.6% |
| NOT ASCERTAINED | 7 | 2 | 9 | 0.3% |
| TOTAL | 1642 | 1524 | 3166 | 100.0% |
| % | 51 .9% | 46.1% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | 67 | |
| TOTAL POPULATION | | | 3223 | |

Source: **NSB Census of Population and Economy, 1989.**

**Figure 6-BRW**

**Ethnic Composition of Barrow Population - 1988**



In his comparison study on acculturation and education in Barrow and Kotzebue, Hippier (1969:109) offers five reasons why many Northwest Alaskan Inupiat migrate to larger villages. They are: (1) economic opportunity; (2) the promise of more social interaction and more excitement than can be found in small villages; (3) the availability of medical and educational sew-ices that either cannot be found or are of lesser quality in the smaller villages; (4) "There is the possibility of being close enough to a village atmosphere to permit the acculturating Eskimo the opportunity to have a 'foot in both camps'"; and (5) some degree of subsistence hunting and fishing is still possible while living in these larger communities. While we were unable to collect systematic information on why people have moved to Barrow from the outer villages, it appears that the first three reasons are more prominent than the last two, at least at present. It may seem paradoxical, but at the same time that village corporations and village governments are in great need of trained office and professional personnel, that Inupiat with these skills must most often go to Barrow to find a job that will pay them a reasonable wage within a professional environment. The reasons most often cited by informants for moving or returning to Barrow to live are that they need to do so to find the job they want (or to find a job at all, although that phrasing is less common), because there is "nothing to do" in the outer villages and they want to live in a place with more action, and/or because they need services such as child care or emergency medical treatment that are available in Barrow but not in the outer villages. No informant mentioned subsistence activities as a factor in deciding whether to relocate to Barrow or not, but it may be significant that most of the informants in this unsystematic sample were relatively inactive as subsistence resource harvesters and perhaps more enmeshed in the wage and professional economy than Inupiat at large. These may indeed be the very factors which predispose them to relocate to Barrow, but our information is not systematic enough to be more than suggestive on this matter.

As for the migration of the Filipino population to Barrow, economic opportunity was a significant motivating factor. Some individuals took jobs that were below their level of competency. One in particular, who had been employed as an engineer in the Philippines, worked as a janitor in Barrow because he was able to earn more money. Kin ties were very important in the initial move of Filipinos to Barrow. "They arrived in Barrow at the invitation and under the sponsorship of individuals who had already established themselves in the community. The migration pattern generally involved the movement of one individual member of a family, usually a male, living at the home of his relatives or friends in Barrow" (Smythe and Worl 1985:194). When the male was secure in a job the rest of his family would move to Barrow. Later, extended family members would join them. (It should be noted, however, that the very first Filipinos in Barrow were women who later brought their children.)

A second wave of Filipino immigrants was initiated by a Filipino man who began to "sponsor" others to come to Barrow. He capitalized on the need of all new immigrants to find a place to live by offering them beds in bunkhouses that he had created for $250 per month. The resident Filipino population reported that after this second wave of Filipino migrants began to arrive, the character of the population changed and the closely-knit kin-based Filipino community disintegrated (Smythe and Worl 1985:195).

B. Household Size and Composition

1. Characteristics of Households

Households in Barrow range in size and type. Until the bulk of non-Inupiat arrived in Barrow, most of the families consisted of at least four people. In addition to relatively large household sizes, because of strong kin ties, homes were frequently visited friends and relatives increasing, if only temporarily, the size of households. Many of those who had moved to Barrow in the 1940s to work and then lost their jobs when oil exploration activity ceased in 1953 were able to leave and return to Barrow without restriction because strong kin ties were sustained (Worl and Smythe 1986:41).

Even today the Inupiat kinship system displays certain properties that allow for the "...structural rearrangement of roles and statuses, such as substitution or extension of a close relationship to a more distant relative, existence of multiple and alternative connections between individuals in the system, and different applications of the principle of affinal exclusion (Heinrich 1%3; Burch 1975)" (cited from Worl and Smythe 1986:41). This flexibility in kinship relationships forms the basis for many formal and informal institutions in Barrow. This will be discussed further in the section on kinship and sharing. However, it is important to note here that these extended family networks have become smaller and simpler, household tasks are now performed by fewer people, and the constituent household units have become geographically dispersed throughout Barrow (Worl and Smythe 1986:230).

Non-Inupiat households typically contain a married couple or a man without children. The large number of these small households in Barrow, in contrast to other North Slope villages, accounts for the average smaller household size found there. Table 4-BRW shows the age of heads of households by household size for 1980. This is corroborated by the data from the 1989 NSB census which indicate that the average household size in Barrow is 3.2 persons. However, when the data are broken down into Inupiat and non-Inupiat households, there are obvious differences. The average household size of Inupiat households is 3.9 persons. Non-Inupiat households average only 2.5 persons.

It is striking to note how these figures fall in specific categories of household size. As shown in Table 5-BRW, within the Native population, 45.3% of the households contain 1-3 persons, 44.6% contain 4-6 persons, and 10.1% contain 7 or more persons. These data contrast with the non-Native population where the bulk, 75%, of households contain between 1 and 3 persons. Ten and one-half percent of non-Native households contain 4-6 persons and 2% contain 7 or more individuals. Also associated with household size are a variety of household characteristics, which are outlined in Table 6-BRW. Of concern here is the second box concerning average household size. One can see that within the small and medium categories of household size, Inupiat households are larger, on the average.

Table 4-BRW

Age of Head of Household for
Alaska Natives* **, Non-Natives*** ****, and all Groups
Barrow, June 1980

| Household size | 14-24 | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total |
| 1 person | 13 | 9 | 22 | 23 | 31 | 54 | 5 | 18 | 23 | 9 | 16 | 25 | 13 | 4 | 17 | 63 | 78 | 141 |
| 2 persons | 18 | 10 | 28 | 27 | 42 | 69 | 10 | 10 | 20 | 12 | 15 | 27 | 6 | 0 | 6 | 73 | 77 | 150 |
| 3 persons | 18 | 5 | 23 | 24 | 13 | 37 | 4 | 4 | 8 | 18 | 7 | 25 | 11 | 0 | 11 | 75 | 29 | 104 |
| 4 persons | 5 | 4 | 9 | 36 | 15 | 51 | 15 | 10 | 25 | 10 | 5 | 15 | 7 | 0 | 7 | 73 | 34 | 107 |
| 5 persons | 1 | 2 | 3 | 18 | 5 | 23 | 21 | 1 | 22 | 11 | 2 | 13 | 3 | 0 | 3 | 54 | 10 | 64 |
| 6 persons | 0 | 0 | 0 | 4 | 2 | 6 | 11 | 2 | 13 | 18 | 0 | 18 | 1 | 0 | 1 | 3 | 4 | 4 | 38 |
| 7 persons | 0 | 1 | 1 | 2 | 0 | 2 | 8 | 1 | 9 | 19 | 0 | 19 | 5 | 0 | 5 | 3 | 4 | 2 | 36 |
| 8 persons | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 3 | 7 | 0 | 7 | 2 | 0 | 2 | 13 | 0 | 13 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 5 | 1 | 6 | 0 | 0 | 0 | 7 | 1 | 8 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 3 | 2 | 0 | 2 | 6 | 0 | 6 |
| 11 persona | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 3 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 2 |
| 14 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 55 | 31 | 86 | 135 | 108 | 243 | 81 | 46 | 127 | 117 | 46 | 163 | 51 | 4 | 55 | 439 | 235 | 674 |

- For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.
- * Figures exclude 8 heads of household for whom no age information Waa obtained.
- ** Figures exclude 21 heads of household for whom no age information was obtained.
- *** Excludes 3 occupied units without permanent residents and one bunkhouse with 27 occupants.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey. Prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

Another characteristic of households in Barrow is the dichotomy between Inupiat and non-Inupiat in the area of household income. This was apparent in 1980, as shown in Figures 7-BRW and 8-BRW. One can see from Table 7-BRW that over half of non-Inupiat earn $60,000 or more and only 5.7% earn less than $20,000. This contrasts markedly from Inupiat household income levels; 31.5% of Inupiat households have incomes of $60,000 or more and 24.4% have incomes less than $20,000. These figures show that there is an unequal distribution of income in Barrow. There are additional factors associated with household income and these can be seen in Table 8-BRW. The information to directly compare average income based on ethnicity is lacking, but in all income categories except for $40,000-$60,000 non-Inupiat households have higher incomes on the average than Inupiat households. Non-Inupiat households are also significantly smaller than Inupiat households, at all income levels and especially at lower income levels. Clearly, per capita household income is much larger for non-Inupiat than for Inupiat.

Also from Table 8-BRW, one can see that in both Inupiat and non-Inupiat households, high annual income is associated with large household size (as reflected in Table 7-BRW as well). This trend does not hold for all North Slope villages, such as Wainwright or Atqasuk. Another interesting trend that seems to be unique to Barrow is the association, in both the Inupiat and non-Inupiat households, between increased income and decreased average proportion of household income spent in the village. Perhaps this reflects an orientation of higher income Barrowites to a community beyond the North Slope. Based on field interviews, one reasonable interpretation is that they may perceive of themselves as permanent residents of a different community, either on or off the North Slope. It could also be that beyond a certain point there is little to spend money on in Barrow. Once this threshold is reached, all other income would be saved or spent outside of Barrow. Other household characteristics associated with household income also have important implications in terms of subsistence sharing but these will be discussed in the section on subsistence.

### *2.* Recent Trends in Household Size and Composition

In conjunction with the influx of non-Natives in Barrow and the out-migration of Natives, there have been changes in the quantity, size, and composition of residential units (Wed and Smythe 1986:105). The rate of increase in new households in Barrow was 11.5% between 1978 and 1980 and 5.0% between 1980 and 1985 (Worl and Smythe 19%106). This increase consisted primarily of "mixed" (an Inupiat married to a non-Inupiat) and non-Inupiat households. Between 1978 and 1985 the number of mixed households increased by 63%. This increase was gradual until 1980. However, by 1985 the number of mixed households doubled.

Mixed households were almost always composed of a nuclear family (parents with children). In 1978, 95% of mixed households involved the marriage of an Inupiat to a non-Inupiat. In 1985 this percentage dropped to 82%, "indicating a small trend towards diversification among the kinds of intra-household relationships in these households" (Worl and Smythe 19W108). Examples of this diversification include ". . . a variety of nuclear and extended or compound family forms, such as a mixed couple living with another couple, a white child or grandchild living in an Inupiaq household, or an individual living in a family household of another race" (Worl and Smythe 19W108).

Table **5-BRW**

Household Size -1988
Barrow

| NUMBER OF PERSONS | NUMBER OF HOUSEHOLDS: INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| 1 | 66 | 160 | 226 | 22.9% |
| 2 | 80 | 120 | 200 | 20.2% |
| 3 | 91 | 71 | 162 | 16.4% |
| 4 | 95 | 56 | 153 | 15.5% |
| 5 | 83 | 32 | 115 | 11.6% |
| 6 | 55 | 15 | 70 | 7.1% |
| 7 | 35 | 5 | 40 | 4.0% |
| 8 | 7 | 2 | 9 | 0.9% |
| 9 | 6 | 2 | 8 | 0.8% |
| 10 | 2 | | 2 | 0.2% |
| 11 | 2 | | 2 | 0.2% |
| 12 | 1 | | 1 | 0.1% |
| TOTAL OCCUPIED HOUSEHOLD | 523 | 465 | 9SS | 100.0% |
| AVERAGE HOUSEHOLD SIZE | 3.9 | 2.5 | 32 | |

Source: NSB Census of Population and Economy, 1989.

Table **6-BRW**

## **Barrow** Household **Characteristics** - **1988**
By **Categories** of Household Size

| | HOUSEHOLD SIZE | | | |
|---|---|---|---|---|
| | SMALL | MEDIUM | LARGE | ALL HHs |
| Average HH Income ($): | | | | |
| Inupiat HHs | $37,346 | $59,559 | $72,563 | |
| Non-Inupiat HHs | $s7,518 | $87,500 | $116,111 | |
| All HHs | $55,803 | $68,839 | $80,561 | $61,959 |
| Cases: | 461 | 2s0 | 49 | 790 |
| Average HH Size (# Persons per HH): | | | | |
| Inupiat HHs | 2.1 | 4.8 | 7.7 | |
| Non-Inupiat HHs | 1.8 | 4.6 | 7.7 | |
| All HHs | 1.9 | 4.8 | 7.7 | 3.2 |
| Cases: | 579 | 338 | 62 | 979 |
| Average Meat & Fish Csmptn from Own HH Subsistence (%): | | | | |
| Inupiat HHs | 29.7% | 39.9% | 52.6% | |
| Non-Inupiat HHs | 6.7% | 8.2% | 5.5% | |
| All HHs | 15.7% | 30.0% | 45.7% | 22.7% |
| Cases: | 500 | 303 | 55 | 858 |
| Average Meat & Fish Csmptn from Other HH Subsistence (%): | | | | |
| Inupiat HHs | 26.1% | 18.1% | 19.6% | |
| Non-Inupiat HHs | 3.5% | 3.2% | 1.4% | |
| All HHs | 12.2% | 13.4% | 17.0% | 13.0% |
| Cases: | 492 | 304 | 55 | 851 |
| Average Meat& Fish Harvested and Given Away (%): | | | | |
| Inupiat HHs | 14.4% | 18.0% | 26.8% | |
| Non-Inupiat HHs | 3.4% | 3.1% | 1.3% | |
| All HHs | 7.7% | 13.3% | 23.1% | 10.7% |
| Cases: | 497 | 302 | 55 | 854 |
| Average Proportion HH Income Spent in village (%): | | | | |
| Inupiat HHs | 59.5% | 59.4% | 62.4% | |
| Non-Inupiat HHs | 35.4% | 35.5% | 49.8% | |
| All HHs | 44.9% | 51.7% | 60.4% | 48.4% |
| Cases: | 475 | 298 | 56 | 829 |

Now Household size categories measured es follows:

SMALL: Under 4 persons per household

MEDIUM: 4-6 persons per household

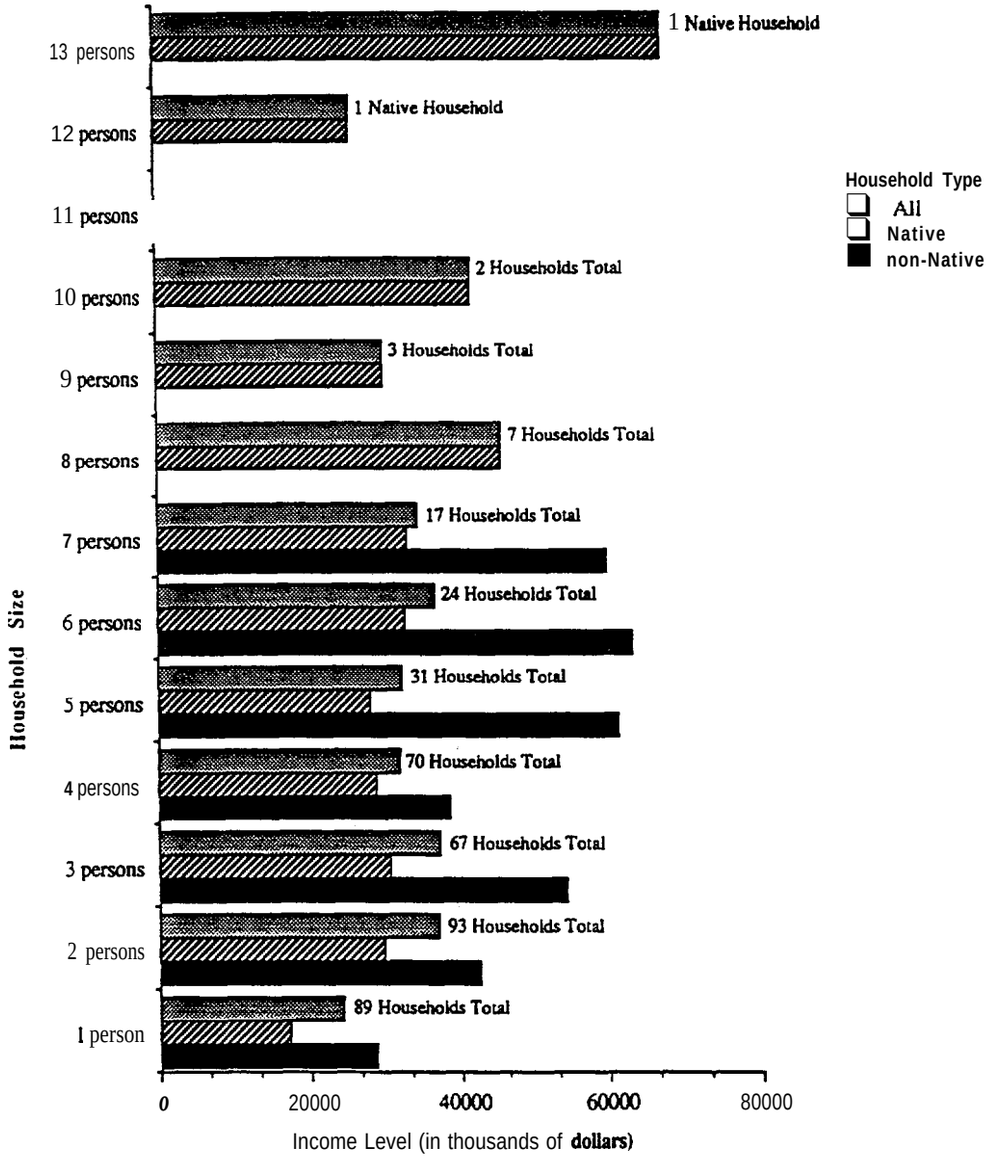
STRONG: 7 or more persons per household.

Total cases (households). 9s8.

Source: NSB Department of Planning and Community Services
Census of Population and Economy

Figure 7-BRW

Average Household Income Distribution
Native and non-Native Households by Household Size
**Barrow:** June 1980



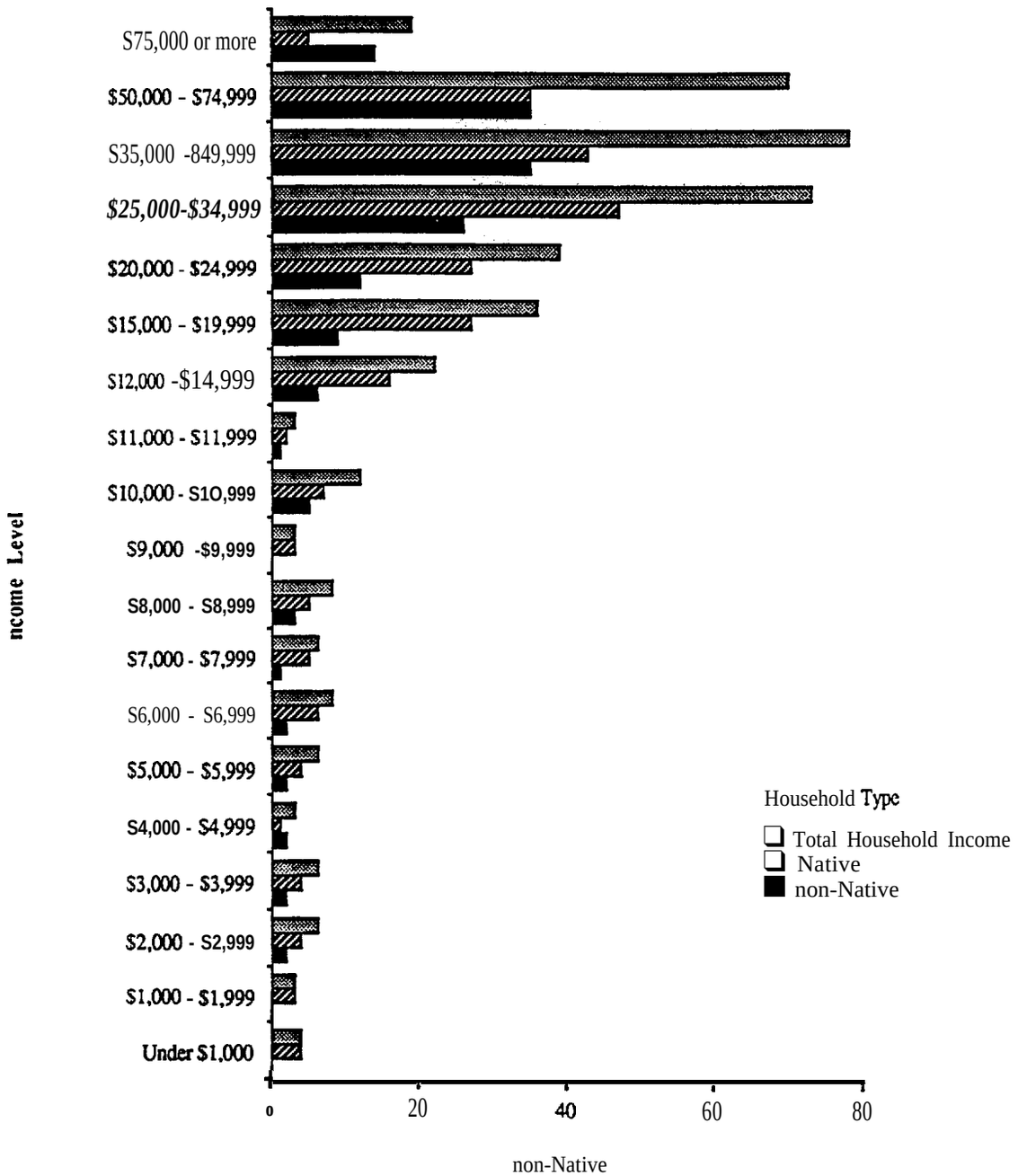

Total Number of Households 405
Mean Household Income:
All: $33,155
Native: S29.156
Non-Native S39.473

* Excludes three occupied tits without permanent residents and one bunkhouse with 27 occupants.
** Figures exclude 298 households (199 Alaska Native and 99 non-Native) for whom no income information was obtained.
*** For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.

Note: Due to Barrow's large sample size. the number of Native and non-Native households could not be disaggregated from its original source.
Source: Alaska Consultants, Inc.. Nonh Slope Borough Housing Survey.
Prepared for the North Slope Borough Public Works Department. Anchorage, September 1980.

Figure **8-BRW**

Average Household Income Distribution
Barrow, June 1980




* Figures exclude 298 households (199 Alaska Native and 99 non-Native) for whom no income information waa obtained.

Source: Alaska Consultants, Inc. North Slope Borough Housing Survey.
Prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table 7-BRW

Household Income and Spending -1988
Barrow

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 99 | 22 | 121 | 15.3% |
| $20,000 - $40,000 | 86 | 63 | 149 | 18.9% |
| $40,000 - $60,000 | 93 | 92 | 185 | 23.4% |
| $60,000 & ABOVE | 128 | 207 | 335 | 42.4% |
| TOTAL | 406 | 384 | 790 | 100.0% |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 198 |
| TOTAL OCCUPIED HOUSEHOLDS | 98s |

| | FOR ALL VILLAGE HOUSEHOLDS MEDIAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $52,500 | $61,959 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 50.0% | 4s.4% |
| MONTHLY HOUSING PAYMENT (2) | $614 | $593 |
| MONTHLY HEATING COSTS | $60 | $98 |
| MONTHLY ELECTRICITY COSTS | $50 | $81 |

Notes (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 19S9.

## Table 8-BRW

**Barrow** Household Characteristics - 19S8
By Levels of Household Income

| | HOUSEHOLD INCOME CATEGORIES | | | | |
|---|---|---|---|---|---|
| | BELOW $20K | $20-40K | $40-60K | ABOVE $60K | ALL HHs |
| **Average HH Income** ($): | | | | | |
| Inupiat HHs | $1 0,530 | $29,767 | $49,059 | $98,125 | |
| Non-Inupiat HHs | $12,045 | $30,119 | $48,696 | $104,251 | |
| All HHs | $10,806 | $291916'. | $48,878 | $101,910, | $61,959 |
| Cases: | 121 | 149 | 185 | 335 | 790 |
| **Average HH Size (# Persons per HH):** | | | | | |
| Inupiat HHs | 2.9 | 3.8 | 4.1 | 4.8 | |
| Non-Inupiat HHs | 1.6 | 1.7 | 2.1 | 3.2 | |
| All HHs | 2.7 | 2.9 | 3.1 | 3.9 | 3.3 |
| Cases: | 121 | 149 | 185 | 335 | 790 |
| **Average Meat & Fish Csmptn from Own HH Subsistence (%):** | | | | | |
| Inupiat HHs | 29.4% | 29.3% | 31.4% | 45.3% | |
| Non-Inupiat HHs | 0.9% | 6.5% | 7.9% | 8.0% | |
| All HHs | 23.9% | 19.8% | 19.9% | 22.4% | 21.6% |
| Cases: | 114 | 142 | 180 | 319 | 755 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | | |
| Inupiat HHs | 30.5% | 24.1% | 22.5% | 12.6% | |
| Non-Inupiat HHs | 3.4% | 4.3% | 4.4% | 2.7% | |
| All HHs | 25.3% | 15.8% | 13.7% | 6.5% | 12.8% |
| Cases: | 113 | 141 | 181 | 316 | 751 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | | |
| Inupiat HHs | 15.2% | 11.9% | 17.8% | 22.1% | |
| Non-Inupiat HHs | 5.0% | 3.9% | 2.9% | 3.6% | |
| All HHs | 13.2% | 8.6% | 10.5% | 10.7% | 10.6% |
| Cases: | 114 | 142 | 160 | 316 | 752 |
| **Average Proportion HH Income Spent In village (%):** | | | | | |
| Inupiat HHs | 68.0% | 67.5% | 60.6% | 46.4% | |
| Non-Inupiat HHs | 43.1% | 44.5% | 35.0% | 31.7% | |
| All HHs | 63.5% | 57.4% | 48.5% | 37.3% | 47.6% |
| Cases: | 112 | 135 | 169 | 318 | 734 |

**Note:** Total **cases** (households)= **988.**

**Source:** NSB **Department** of Planning and **Community Services**
Census of **Population** and Economy

An inevitable consequence of the diversification of households was that the number of those composed only of Inupiat decreased. In 1985, Inupiat heads of households had become the minority, representing only 47% of all household heads. This was a decrease from 1978 when 64% of household heads were Inupiat (Worl and Smythe 19M108). The figures from 1985 contrast with the 1989 NSB census which shows that Inupiat households constitute 53% of the households in Barrow.

In addition, between 1978 and 1985 the percentage of households headed by women of all ethnic groups increased from 20 to 26%. Among those households headed only by Inupiat, 22% were headed by women in 1978 and 33% by women in 1985. A similar increase in female heads of households in the non-Inupiat population has not occurred (Worl and Smythe 1986:1 10).

3. Influences on Household Size and Composition

Three factors typically influence the size and composition of households on the North Slope and this holds true in Barrow. The NSB policy to provide separate housing for all nuclear families has been one important influence on household size and composition in Barrow. Planners assumed that adults would prefer to live separately from their parents (Smythe and Worl 1985:124). This NSB mandate paved the way for household land subdivisions which were also contrary to the Inupiat cultural preference to live with, or near, ones extended family.

In addition to household and land use planning, economic and educational opportunities have influenced the size and composition of families. Worl and Smythe report that in the period after the closing of the Arctic Contractors (ARCON) facility (the base from which exploratory work in NPR-A took place), contact with the outside world intensified despite the loss of many jobs for Inupiat (1986:41-42). Teenagers and men began to travel and remain away from their homes for prolonged periods. The men were most often working in Alaskan urban centers. More than a hundred children from Barrow attended the Bureau of Indian Affairs (BIA) school in Mt. Edgecumbe near Sitka. An unknown number of these individuals never returned to Barrow.

The composition of households in Barrow has been affected greatly by the in-migration of non-Natives. Many of the outsiders who came to Barrow for employment decided to remain there permanently and have since become integral members of the community. Often this integration included non-Native men marrying Native women and bearing children. The extent of this phenomenon is discussed above.

C. Educational Status

1. Current Educational Levels

The current educational status of Barrowites is illustrated in Table 9-BRW. It should be noted that not only do Barrow residents have more diversified programs in the local high school than in other villages, there is also greater access to educational programs beyond high school.

2. Social and Ethnic Differences in Educational Levels

One important contrast in educational achievement by age may be seen among Inupiat residents. In the age group between 18 and 39 years of age, for example, nearly 70% of all residents finished high school. If one looks at ages 40 through 59, however, only 38% of these individuals finished high school. For individuals aged 60 and over, less than 3% finished high school. For non-Inupiat residents, only 10% of the population as a whole did not finish high school. Further, in contrast to the Inupiat portion of the population, 100% of non-Inupiat individuals over the age of 60 finished high school.

3. Educational and Employment Opportunities

Prior to the incorporation of the NSB, the BIA was responsible for the education of those living on the North Slope. School was available to students until they reached high school. Students desiring to complete high school had to go to Mt. Edgecumbe near Sitka or to BIA schools in Oregon, Kansas, or Oklahoma. It was also possible for students to attend high school in Nenana, Fairbanks, and Anchorage through a boarding home program (Alaska Consultants 1983:91).

Since the incorporation of the NSB, schools have been run by the NSB School District, which offers classes from Early Childhood Education (ECE) through the twelfth grade. A modem school complex, containing five wings housing classrooms, recreation facilities, an auditorium, a vocational education unit and a utilities structure, replaced the old one in 1983 (Alaska Consultants 1983:91).

In the economic and employment sphere, the NSB has been most influential in providing employment opportunities. This is true for both direct government employment under the NSB and for indirect employment through Borough government contracts (Alaska Consultants 1983:12). "In addition, the operations of locally based native corporations, the Arctic Slope Regional Corporation and the Ukpeagvik Inupiat Corporation (UIC), also make important contributions to local employment and income" (Alaska consultants 1983:12).

**D.** Marriage Patterns

1. Characteristics of Marriage

Some interesting characteristics of marriage status can be gleaned from the NSB Census of Population and Economy (Table 1O-BRW). The proportion of divorce in the non-Inupiat population, 10.1%, is over three times that of the Inupiat population, 3.5%. On the other hand, the proportion of widows in the Inupiat population (3.6%) is much larger than that of the non-Inupiat population (0.7%). Perhaps this is due to the permanence of most of the Barrow Inupiat compared to Barrow's non-Inupiat population. More Inupiat than non-Inupiat are likely to be in Barrow long enough for a spouse to pass away. However, it is likely that these percentages are misleadingly low, especially among Inupiat.

Table 9-BRW

Highest Level of Education Attained by **Age** Group
**Inupiat Residents,** Barrow - 19S8

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | 33 | 222 | 1 | 256 |
| 4 - 8 | | | | | | 237 | 19 | | 256 |
| 9 - 15 | | | | | 4 | 211 | 1 | | 216 |
| 16 - 17 | | | | 1 | 15 | 47 | | | 63 |
| 18 - 25 | 4 | 26 | 5 | 137 | 64 | 11 | 3 | 1 | 251 |
| 26 - 39 | 27 | 61 | 6 | 211 | 92 | 1 | 2 | 6 | 406 |
| 40 - 59 | 14 | 35 | 9 | 64 | 106 | | 3 | 11 | 242 |
| 60 - 65 | | 2 | | 1 | 40 | | 1 | 1 | 45 |
| 66 + | 3 | | | 2 | 58 | | 4 | 10 | 77 |
| TOTAL | 48 | 124 | 20 | 416 | 379 | 540 | 255 | 30 | 1812 |
| % | 2.6% | 6.8% | 1.1% | 23.0% | 20.9% | 29.8% | 14.1% | 1.7% | 100.0% |

NUMSER OF MISSING **OBSERVATIONS** 137

TOTAL POPULATION **(Inupiat)** 1949

Source: NSS Department of Planning and Comity Services
Census of Population and Economy, 1989.

Table **9-BRW** (continued)

## Highest Level of Education Attained by Age Group
## Non-Inupiat Residents, Barrow -1988

| | COLLEGE+ | SOME COLLEGE | VOTECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN - | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | 15 | 78 | 6 | 99 |
| 4 - 8 | | | | | | 74 | 6 | 2 | 82 |
| 9 - 15 | | | | | 4 | 97 | 4 | 2 | 107 |
| 16 - 17 | | 1 | | 1 | 6 | 20 | | 1 | 29 |
| 18-25 | 13 | 42 | 6 | 48 | 5 | 5 | 1 | 0 | 120 |
| 26-39 | 161 | 126 | 14 | 105 | 13 | 1 | 1 | 4 | 425 |
| 40 - 59 | 146 | 59 | 7 | 68 | 15 | | 1 | 1 | 297 |
| 60 - 65 | 5 | 3 | | 8 | 2 | | 0 | 0 | 18 |
| 66 + | 2 | 1 | | 2 | 4 | | 0 | 0 | 9 |
| TOTAL | 327 | 232 | 27 | 232 | 49 | 212 | 91 | 16 | 1186 |
| % | 27.6% | 19.6% | 2.3% | 19.6% | 4.1% | 17.9% | 7.7% | 1.3% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 68

TOTAL POPULATION (Non-Inupiat) 1274

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Table 1O-BRW

Marital Status by **Ethnicity**
Barrow -1988

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| NOW MARRIED | 203 | 255 | 456 | 265 | 218 | 503 | 961 | 49.0% |
| WIDOWED | 16 | 46 | 62 | 1 | 7 | 8 | 70 | 3.6% |
| DIVORCED | 23 | 36 | 61 | 59 | 56 | 117 | 176 | 9.1% |
| SEPARATED | 10 | 15 | 25 | 8 | 7 | 15 | 40 | 2.0% |
| NEVER MARRIED | 262 | 209 | 471 | 149 | 92 | 241 | 712 | 36.39'0 |
| TOTAL | 514 | 563 | 1077 | 502 | 382 | 884 | 1961. | 100.0% |
| % . | 26.2% | 28.7% | 54.9% | 25.6% | 19.5% | 45.1% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | 25 | |
| TOTAL POPULATION (age 16t) | | | | | | | 1986 | |

Note: Figures Include persons age 16 and above.

**Source:** NSB **Department** of planning and **Community Services**
**Census of Population and Economy, 1989**

Several factors could be at work. Perhaps chief among them is that Inupiat also tend to be much less formal than many non-Inupiat (and especially those non-Inupiat who only spend a few years on the North Slope) in their spousal relationships. Formal marriage is often not entered into until after several children are born. If the relationship terminates before then, no divorce or even separation is in effect. Impressionistically, a very high percentage of Inupiat have experienced such a breakup of a significant relationship.

2. Changes in Marriage Patterns

There is little good direct information on marriage patterns in Barrow or any of the other NSB communities. What can be discussed with some confidence is the difference between Barrow and the other communities. While the outer villages have stayed about the same in terms of the percentage of the population that is non-Inupiat, in Barrow this population has increased greatly over time. This increase is not restricted to working age males, hitherto the typical non-Inupiat "resident." The numbers of non-Inupiat attending school in Barrow attest to the increasing number of non-Inupiat families who are settling in the community. This is another indication of the change in the North Slope regional economy and the NSB government spending pattern. Large-scale CIP programs, which used to employ large numbers of single, male, non-Inupiat have been completed for the most part. Operating and maintenance progranis rely more on a resident labor force, and that portion which must be recruited from off-Slope is more apt to relocate rather than commute, since most such jobs are year-round and have no special provision for a week-on, week-off or similar schedule as do the jobs at Prudhoe Bay. All these generalizations are borne out by the recent (1989) NSB census.

The percentage of ethnically "mixed" marriages can also be assumed to have increased in Barrow, although this is based more on local informants' observations than on statistical information, since the NSB census did not collect this information. School teachers report more children of interethnic marriages as students. In addition, the larger numbers of non-Inupiat, non-White individuals in Barrow have resulted in various Inupiat-"other" marriages. These also exist in the outer villages, but only on a very limited basis.

In terms of who marries whom, the information is far from definitive, but it still appears that the village pattern of non-Inupiat men marrying Inupiat women is by far the most common interethnic marriage. There are non-Inupiat women married to Inupiat men, but the numbers of single non-Inupiat women who come to the North Slope are still much less than the number of single, non-Inupiat men. Interethnic marriages composed of non-Inupiat men and Inupiat women also tend to be more stable (observationally and by informant report) than do other types. Anecdotal evidence suggests that this may be because Inupiat men have certain cultural expectations regarding husband/wife roles, sexual division of labor, and differing standards of behavior that non-Inupiat women have trouble adjusting to. No informant ever assessed the relative stabilities of "mixed" marriages and Inupiat-Inupiat or White-White marriages on the North Slope, but this could be a fruitful future research topic.

## E. Migration Patterns

1. Characteristics of and Influences on Migration

Migration has been a regular feature of Inupiat life for thousands of years. Especially in pre-contact times, but also until permanent villages were established, migration patterns were based upon the seasonal supply of subsistence resources. This type of migration changed to some degree after contact because the motivation to migrate was no longer for subsistence purposes. Wage employment became the motivating factor in both immigration and emigration. And it was both of these processes that have had such important effects on the population of Barrow.

Dramatic increases in migration to Barrow occurred between 1975 and 1985, as discussed in the previous section on population. However, it is interesting to note that ". ..43 percent of all 1980 households were new to the community since 1978, and 58 percent of the 1985 households immigrated between 1980 and 1985. This figure compares with an average of between five and ten percent immigration in previous decades" (Worl and Smythe 1986:114). These figures attest to the newness of the population of Barrow.

To complement the increasing proportion of non-Natives in Barrow there was a significant out-migration of local Inupiat. Of 535 households that left Barrow between 1978 and 1985, 44% were Native families (Worl and Smythe 1986:117). The rest were presumably non-Natives leaving temporary jobs.

Influences on migration are not static in Barrow. People's motives for moving change with the times. In addition to economic opportunities associated with the wage labor economy, education and military training have been important factors influencing Inupiat to migrate to or out of Barrow. Tourism became another source of migration to Barrow once the Wein airline service began to serve Barrow in 1944 and a hotel was built a few years later (Worl and Smythe 1986:43).

2. Community History

Most of the information for this discussion is taken from Worl and Smythe 1986, pp. 36-50, 87-105. The Inupiat living in or around the Barrow area were first contacted by outsiders (non-Native Americans, Europeans, Polynesians, Negroes, and undoubtedly nearly all other nationalities and "races") in the early to mid-nineteenth century. These foreigners remained in the vicinity of Barrow (and other locations in the north) so that they could exploit the large populations of bowhead whales and walrus in the Arctic Ocean. When large whaling fleets came into contact with the local Inupiat it was not uncommon for the Natives to provide food and shelter for whalers who overwintered in ships or established onshore whaling stations. Inupiat also provided relief for those crews who were wrecked or otherwise became stranded.

During the whaling period, which lasted until the market for baleen crashed in 1908, the population of Barrow grew significantly. In 1890 there were 398 people in the Pt. Barrow area. This area included the two villages of Utqiagvik and Nuvuk. Out of this figure, 66 were reportedly non-Natives. After 1890 the population of Nuvuk began to decline and soon Utqiagvik, the site of modem Barrow, was the permanent settlement. In 1900 there were 314 people in Utqiagvik alone.

However, between 1910 and the end of World War II the population of Barrow did not continue to increase. The lucrative whaling industry died and the economy slowed tremendously.

After the demise of the whaling industry, the Bureau of Education arranged for the importation of reindeer from Russia. It was thought that they might be herded as a means of support for former Inupiat whalers. The history of the reindeer industry on the North Slope has not received the attention that it has in other parts of Alaska, and is fairly complex. Ownership around Barrow appears to have become rather concentrated, even though a significant number of people still participated in the business as wage earners. Information is still unfortunately too scattered to provide a good overview at this point. A significant number of individuals were also involved in trapping and trading. The total population along the coast and rivers to the south and east of Barrow was 280 individuals in 1939. This number was a decrease from being the largest North Slope village in 1910. An important but temporary characteristic of this period was the relative absence of non-Inupiat in the area. The only non-Natives in the area were the ". . . owner and staff of the Cape Smythe Whaling and Trading Company, the Presbyterian missionary and family, a school teacher, and three nurses" (Worl and Smythe 1986:93).

The mild depression and slow growth of Barrow continued until the establishment of PET-4, when the Navy began exploring for oil in 1944. Until this time wage employment had been limited. But in response to political pressure to employ Natives, Inupiat laborers in oil exploration became numerous. More than 200 Inupiat were employed with the naval contractor ARCON during its seven years of operation (Worl and Smythe 1986:36). Also, during the 1940s Barrow itself was modernized. The Navy subsidized the construction of 100 new homes and roads. An airport was built, a sanitation program was instituted, and generators were introduced for electricity. Another major change was the discovery of gas outside of Barrow. Once the people managed to get the gas piped into their homes, all agreed that life became much easier. One adult in Worl and Smythe's study said, "Children born after the gas was hooked up don't know anything about hard living; I think they never believe me when I told them we had a hard time when we were kids" (Worl and Smythe 1986:38).

Once wage labor employment came to Barrow, people had cash and were able to buy material items such as washing machines. Another effect of the employment with the Navy was the availability and subsequent abuse of alcohol. Coincident with this was the appearance of child neglect and abuse (Wed and Smythe 1986).

Employment with ARCON ended in 1953. Nevertheless, more than a thousand Inupiat chose to remain in the community. Hunting and fishing activities once again became the mainstay of household economy (to the extent that they had been displaced by wage activities). Some families chose to leave Barrow to go to Fairbanks or Anchorage but they usually returned to their kin in Barrow or at least maintained a residence there. Many children went to boarding school in Mt. Edgecumbe near Sitka and a number of men joined the military or the National Guard. These activities outside of Barrow proved to be very important in shaping the personal lives of these people. Many of these people who went "off Slope" for school or work became political figures in the movement to unify Alaska Natives or members of boards and committees after the formation of the NSB. Examples of these boards that were established during the 1960s are the Barrow Health Board, the Barrow Improvement Board, the Arctic Slope Native Association (ASNA), and

the Inupiat Paitot (People's Heritage). The latter two were formed to promote Native land claims in Alaska (Worl and Smythe 1986:41-44).

The passage of ANCSA, the incorporation of the NSB, and the decision to make Barrow the capital of the borough marked the beginning of truly dramatic change. The borough squired a substantial revenue base from its ability to tax oil production facilities within its boundaries and was thus financially able to create a myriad of public services for the eight villages on the North Slope. A NSB central office building was built for the administrative staff that grew from year to year (and that continues to do so). New departments such as Public Safety and Search and Rescue were established in response to the desire to have local control over services vital to local communities, and state-of-the-art facilities and equipment were provided for these departments. The NSB School District was organized and also headquartered in Barrow. Numerous commercial enterprises were created as well. Barrow presently contains '. . . multi-storied, glass-fronted office buildings; city buses; a variety of stores, hotels, and restaurants; racquetball courts, an indoor track, and swimming pool; and local radio and TV stations . . .' all of which have appeared since the mid-1970s (Worl and Smythe 1986:54).

Accompanying the exponential increase in activity in Barrow was new employment. The majority of the new jobs that were filled by Natives consisted of the construction of homes, storage houses, buildings, and roads. Administrative and professional jobs were filled by primarily by non-Natives. This continues to be the case in Barrow today as is discussed in the following section on economy.

SECTION II: ECONOMY

**A. Historical Overview**

The economy of the people in the Barrow area was subsistence-based until the foreign whalers arrived in the mid-1800s. That contact marked the beginning of formalized trading and bartering, although subsistence hunting was still the most important part of the Native way of life. When the market for baleen collapsed in the latter part of the nineteenth century, reindeer herding and trapping and trading for furs constituted a major portion of the local economy (Alaska Consultants 1983:11; Smythe and Worl 1985; Worl and Smythe 1986).

The Inupiat continued to engage in these activities until the fur market collapsed in the 1920s. The cash (wage) economy around Barrow, as well as that of the whole North Slope and United States, became depressed. From this time period until the early 1940s, changes in the economy occurred slowly. "Changes in the economic system were associated with the commercialization of wildlife production which allowed the Inupiat to continue activities with which they were already familiar, i.e., whaling, reindeer herding, trapping, and producing arts and crafts from the harvested wildlife resources" (Worl and Smythe 1986:35).

It wasn't until the U.S. Navy decided to explore for oil in the NPR-A that the cash (wage) economy began to regain strength. Many Inupiat men gained employment with ARCON, the private contracting company that was hired to carry out the actual exploratory program. In addition, there were normally 300-500, mostly non-Inupiat, men employed at the Naval Arctic Research Laboratory (NARL) camp. The exploration for oil with ARCON ceased in 1953, which eliminated one source of jobs for locals. However, Barrow's economy continued to grow. Construction of the DEW Line across the arctic was one of a number of new sources of employment for Inupiat.

Today, the NSB and firms contracting through the NSB are by far the primary supporters of the economy of Barrow.

> The borough structure gave the Inupiat the means to tap into revenues from development of fossil fuels in the region, both on- and offshore, and it also gave them the political standing in Juneau and Washington to increase their access to state and federal sources of revenue, which amounted to more than $33 million (Worl and Smythe 1986:135).

B. The Public Sector

1. Organization

The organization of the public sector as distinct from the private sector is difficult to analyze. This is because so much of the employment in Barrow is subsidized by the NSB, either directly or indirectly. In most censuses, for example, contract construction is not included as being part of the public sector. However, the ultimate source of funding for virtually all construction projects is the NSB, despite the fact that the contractors are private firms (see Alaska Consultants 1983:Table 3). With this in mind, the figures for public sector employment become even more extraordinary.

NSB government jobs are pervasive. NSB employees staff the School District, the Administration and Finance department, the Department of Social Services, the Fire Department, the Search and Rescue department, the Planning department, and the Department of Public Safety, and that is only a partial list of NSB responsibilities. In both 1978 and 1982 there were only 13 State of Alaska jobs in Barrow. Federal government employment in Barrow in 1982 came primarily from the U.S. Public Health Service which operated the hospital in Barrow serving most of the NSB. Other federal agencies that employ locally are the Federal Aviation Administration, the National Weather Service, and the Postal Service (Alaska Consultants et al. 1983:497). The vast majority of wage positions in Barrow are NSB positions.

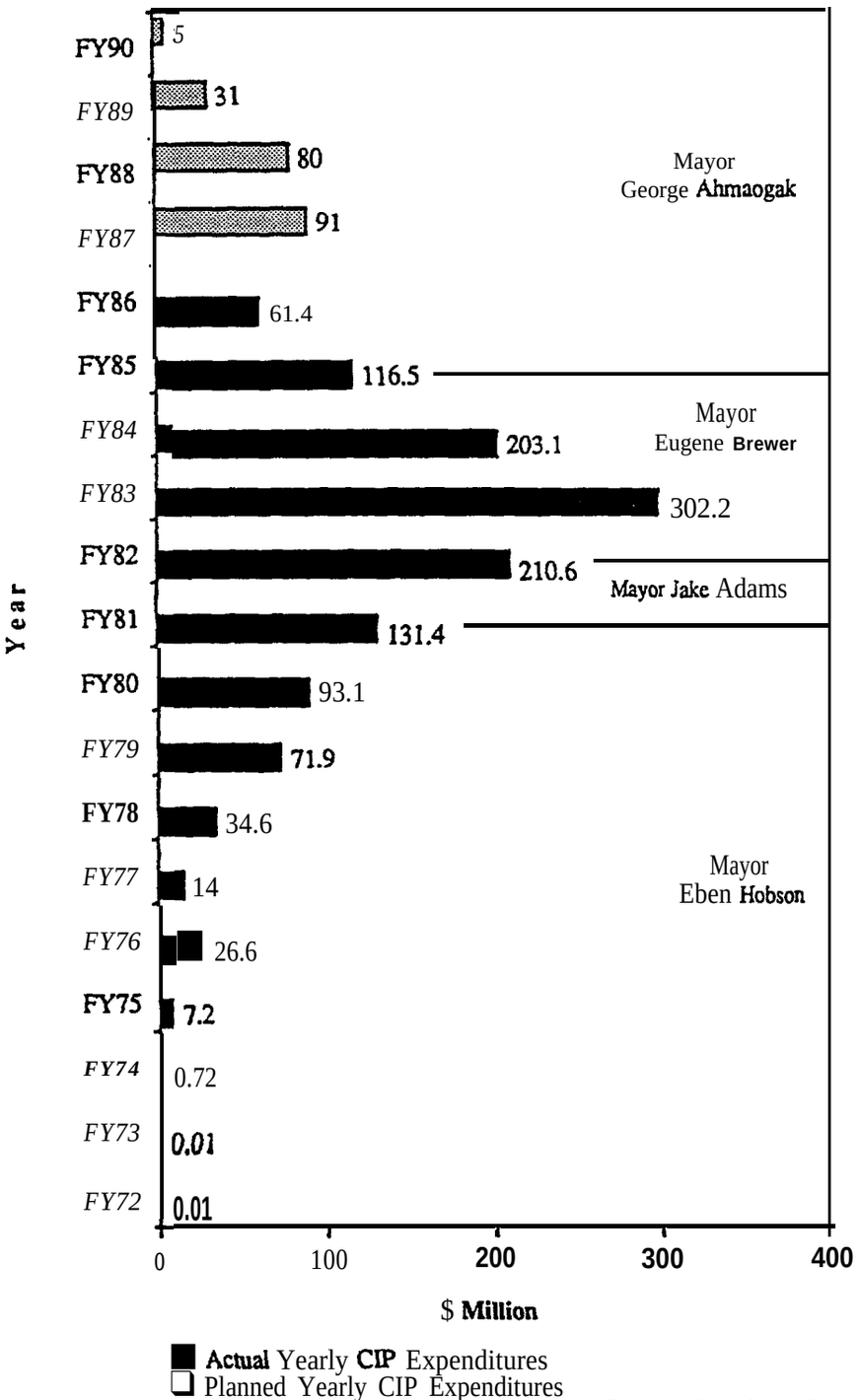
2. Employment

Local government employment through the late 1970s and 1980s was primarily with the Capital Improvements Program (CIP). The CIP was funded by huge annual property tax revenues which amounted to $35 million in FY 1979 and $152 million in FY 1983. "Local government employment in the region increased from 19 in 1972 to 1,183 in 1979 (Knapp 1985b:E-37)" (Worl and Smythe 1986:138). Knapp also estimated that ". . . in 1984, 71 percent of all employment on the North Slope either directly or indirectly depended on borough spending, and about 34 percent of total employment was directly attributable to NSB CIP and contractor CIP employment" (Knapp 1985a:7, cited from Worl and Smythe 1986:137). Figure 9-BRW illustrates the exponential increase between 1978 and 1983 in CIP spending. These expenditures are directly related to the boom in Inupiat employment in the public sector.

In 1980 and 1985, local government employment in Barrow accounted for more than 50% of all employment (Worl and Smythe 1986:138). In 1982, for example, 667 people (49.6%) of the population of Barrow was working in the public sector. About 44.3% of these were NSB government jobs. If one includes the contract construction industry, 63.6% of employment was with the NSB (Table 11-BRW). Unfortunately, Alaska Consultants does not provide a breakdown of employment by sex or ethnicity.

**Figure** 9-BRW

North **Slope** Borough **CIP Expenditures**
1972- 19S6 **Actual;** 1987-1990 **Planned**




Source **North Slope** Borough

Table 11-BRW

Average Annual Full-Time Employment*
Barrow -1982

| Industry Classification | Number | Percent of Total |
|---|---|---|
| Agriculture, Forestry, and Fishing | 0.0 | 0.0 |
| Mining | 32.0 | 2.4 |
| Contract Construction | 260.0 | 19.3 |
| Manufacturing | 0.0 | 0.0 |
| Transportation, Communication, and Public Utilities | 177.0 | 13.2 |
| Trade | 70.0 | 5.2 |
| Finance, Insurance, and Real Estate | 60.0 | 4.5 |
| services | 79.0 | 5.9 |
| Government | 667.0 | 49.6 |
| Federal | (58.0) | (4.3) |
| State | (13.0) | (1.0) |
| Local | (5%.0) | (44.3) |
| TOTAL | 1,345.0 | 100.0 |

* Excludes local persons working in the Prudhoe Bay area.

Source: Alaska Consultants, Inc.

Table **12-BRW**

Industry Composition of Employment by Sex and **Ethnicity**
Barrow -1988

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % OF |
|---|---|---|---|---|---|---|---|---|
| INDUSTRY GROUP | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| PRIVATE SECTOR | | | | | | | | |
| FISHERIES | 1 | | 1 | 2 | | 2 | 3 | |
| MINING | 17 | 2 | 19 | 3 | | 3 | 22 | |
| CONSTRUCTION | 35 | 4 | 39 | 19 | 2 | 21 | 60 | |
| TRANSP/COMM/PUBLIC UTIL | 9 | 20 | 29 | 57 | 16 | 73 | 102 | |
| TRADE | 7 | 6 | 13 | 21 | 19 | 40 | 53 | |
| FINANCE/INSUR/REAL EST | | 2 | 2 | 2 | 8 | 10 | 12 | |
| BUSINESS/REPAIR SERV | 5 | 4 | 9 | 14 | 8 | 22 | 31 | |
| ENTERTMT/REC/TOURIST | 1 | 4 | 5 | 5 | 6 | 11 | 16 | |
| HEALTH, SOCIAL, & EDUC SER | 1 | 4 | 5 | 6 | 9 | 15 | 20 | |
| SELF-EMPLOYED | 3 | 6 | 9 | 12 | 10 | 22 | 31 | |
| NATIVE CORP & AFFILIATE | 65 | 2 s | 101 | 22 | 8 | 30 | 131 | |
| OTHER | 6 | 3 | 9 | 13 | 12 | 25 | 34 | |
| SUBTOTAL | 150 | 91 | 241 | 176 | 98 | 274 | 515 | 34.3% |
| NSB GOVERNMENT | | | | | | | | |
| HEALTH | 13 | 56 | 69 | 28 | 64 | 92 | 161 | |
| PUBLIC SAFETY | 2 | 1 | 3 | 31 | 6 | 37 | 40 | |
| MUNICIPAL SERV | 69 | 15 | 84 | 56 | 12 | 68 | 152 | |
| FIRE DEPT | 5 | 2 | 7 | 4 | | 4 | 11 | |
| SEARCH & RESCUE | 5 | 2 | 7 | 7 | 1 | 8 | 15 | |
| HOUSING | 29 | 10 | 39 | 20 | 6 | 26 | 65 | |
| WILDLIFE MGT | 4 | 1 | 5 | 6 | 3 | 9 | 14 | |
| RELI & MJP | 15 | 13 | 28 | 6 | 6 | 12 | 40 | |
| LAW OFFICE | | | 0 | 2 | 3 | 5 | 5 | |
| ADMIN & FINANCE | 4 | 37 | 41 | 8 | 11 | 19 | 60 | |
| PLANNING | 4 | 15 | 19 | 9 | 5 | 14 | 33 | |
| INDUSTRIAL DEVELOPMENT | | 2 | 2 | | 1 | 1 | 3 | |
| HIGHER EDUCATION CENTER | 1 | 2 | 3 | 2 | 3 | 5 | 8 | |
| MAYOR'S OFFICE & ASSEMBLY | 5 | 6 | 11 | 3 | 1 | 4 | 15 | |
| OTHER NSB | 9 | 10 | 19 | 2 | 1 | 3 | 22 | |
| SUBTOTAL | 165 | 172 | 337 | 184 | 123 | 307 | 644 | 42.8% |
| NSB SCHOOL DISTRICT | 17 | 56 | 73 | 63 | 91 | 154 | 227 | 15.1% |
| NSB SUBTOTAL | 182 | 228 | 410 | 247 | 214 | 461 | 871 | 58.0% |
| OTHER LOCAL GOV'T | 14 | 14 | 28 | 6 | 5 | 11 | 39 | 2.6% |
| STATE GOV'T | 2 | 3 | 5 | 5 | 7 | 12 | 17 | 1.1% |
| FEDERAL GOV'T | 4 | 7 | 11 | 26 | 20 | 46 | 57 | 3.8% |
| ARMED FORCES | 1 | 1 | 2 | 2 | | 2 | 4 | 0.3% |
| SUBTOTAL ALL GOV'T | 203 | 253 | 456 | 286 | 246 | 532 | 988 | 65.7% |
| GRAND TOTAL | 353 | 344 | 697 | 462 | 344 | 806 | 1503 | 100.0% |
| % OF TOTAL | 23.5% | 22.9% | 46.4% | 30.7% | 22.9% | 53.6% | 100.0% | |

Notes:
(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989.

According to the 1989 NSB Census of Population and Economy, the public sector employed 65.7% of the working population, indicating that the NSB continues to be the major employer in Barrow (Table 12-BRW). In addition, there are major sex differentials in certain industry classifications that are not representative of the population distribution. For example, while more men than women (61% versus 38.3%) work in the public sector, women predominate in the NSB School District industry classification by a margin of 34.8% men and 65.2% women. Men predominate in the municipal service industry by a 88.9% to 11.1% margin.

*3.* Revenues

Except for the 1979 fiscal year (FY), the revenues for the City of Barrow have increased substantially between 1977 and 1983 (see Table 13-BRW). The most dramatic increases took place in FY 1978 when revenues increased by 169.190 from the previous year and in FY 1982 when the percentage increase was 49.7. The overall increase in revenues for the City of Barrow went from 382,628 in FY 1977 to 2,390,343 in 1983, a percentage increase of 524.7%.

C. Private Sector

1. Organization

Since NSB CIP spending reached its highest level of $302.2 million in 1983, various NSB mayors have made serious efforts to cut back spending and encourage development in the private sector. This was done for two reasons. First, bonded indebtedness reached $104,410 for each of the seven thousand people of the North Slope. Second, non-local contract firms were getting an increasingly large portion of the CIP construction contracts, a practice that was unacceptable to local residents. The amount given to outside contract construction firms increased from $11.6 million in 1980 to more than $90 million in 1982 (Worl and Smythe 1986:142). However, efforts to encourage the development of the private sector have not been successful. The number of business licenses issued in Barrow between 1984 and 198S dropped, indicating that the private sector has been unable to make up for declining spending and unemployment by the NSB (Worl and Smythe 1986:142). This applies to the situation in Barrow today where private sector employment is still far below that of the public sector.

## Table 13-BRW

## City of Barrow Revenues and Expenditures 1979-19s3

| | 1977-78 | 1978-79 | 1979-80 | 1980-81 | 1981-82 | 1982-83 | 1983-84 |
|---|---|---|---|---|---|---|---|
| | | | | REVENUES | | | |
| Text | 181,516 | 178,916 | 155,082 | 219,623 | 277,438 | 305,016 | 318,267 |
| Intergovern-mental | 108,435 | 759,621 | 409,930 | 633,406 | 803,756 | 1,242,917 | 1$24,930 |
| Charges for Services | -0- | -o- | 2,404 | 2,250 | 51,814 | 51,473 | 43,503 |
| Sales & Leases | 85,358 | 49,980 | 188,383 | 12$29(I | 216,629 | 412,221 | 198,261 |
| Misc. | 7,301 | 41,151 | 259,573 | 146,441 | 104,498 | 165,445 | 305,382 |
| TOTAL | 382,628 | 1,029,668 | 1,015,372 | 1,125,010 | 1,454,135 | 2,177,072 | 2,390,343 |
| | | | | EXPENDITURES | | | |
| General | 142,191 | 233310 | 384,159 | 349,747 | 409,079 | 998,922 | 1,505,389 |
| Community Services | 113,083 | 94,583 | 53,824 | 179,073 | 321,505 | 263,198 | 303,783 |
| Capital Projects | 47,356 | 701,837 | 309,316 | 154,198 | 96,051 | 472,275 | 479,321 |
| TOTAL | 302,830 | 1,036,450 | 747,299 | 683,018 | 826,635 | 1,734,395 | 2,293,493 |

Source: City of Barrow Financial Statement (year end June 30).

The types of employment that can be categorized as belonging to the private sector are those in the mining, transportation, communications, and public utilities industries (in Barrow, where utilities are provided by a private cooperative, but not in the villages where the NSB operates the utilities), the service sector (such as hotel and construction camp services), and the trade sector (grocery stores, restaurants). Contract construction qualities as "private sector" employment only in a formal sense. Nearly all funds for construction are derived from NSB bond issues and all construction work is subject to NSB work rules and policy. Barrow, unlike the other villages on the North Slope, also has a large finance, insurance, and real estate sector. "However, aside from a branch bank and a minor amount of employment associated with rentals, all of these jobs are derived from Native organizations established under terms of the Alaska Native Claims Settlement Act, i.e. the Arctic Slope Regional Corporation and the Ukpeagvik Inupiat Corporation" (Smythe and Worl 1985:499). ANCSA was and is a governmental/legislative structure, under which the economic entities now predominate on the North Slope (the regional and village corporations) were organized and capitalized. The separation of public and private has thus been rather strained from the beginning and there are quite obvious close working relationships between the various governmental agencies and the new corporate entities. Overlapping and revolving door directorates are only one manifestation of this. In other words, there is very little traditional private enterprise in Barrow.

An arm of the private sector which is seldom mentioned is the arts and crafts trade. The largest retail store in Barrow, Alaska Commercial/Stuaqpak, sells these items on consignment. The purchasing of Native arts and crafts (including parkas) from Stuaqpak is significant enough to indicate that this sector is an important revenue source (Worl and Smythe 1986:154-55). Worl and Smythe add (1986:155):

> During 1985, a total of 147 consignments netted $157,595. The highest annual income earned by some individuals ranged between $10,000 and $13,000. The lowest income ranged between $300 and $750. These included parkas, gloves, hats, carved ivory, baleen, and furs. Small baleen baskets retail for as much as $1,200. The manager noted an increase in the number of items offered for sale by late 1985, which he attributed to the depressed economy in Barrow.

## 2. Employment

Rates of employment in the private sector in Barrow have increased along with general economic growth. According to Alaska Consultants, Inc., North Slope Borough Housing Survey for 1980, . there were 15 people in the mining industry, 94 people in the transportation, communications, and public utilities sector, 53 people in the services sector, 49 people in the trade sector, 91 people in contract construction, and 76 people employed in the finance, insurance, and real estate sector. Tables 13-BRW and 14-BRW also provide a breakdown of these areas by age, sex, and ethnicity.

## Table 14-BRW

COMPOSITION OF EMPLOYMENT BY RACE AND SEX * **
BARROW
JUNE 1980

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 13 | 2 | 15 | 0 | 0 | 0 | 13 | 2 | 15 |
| Contract Construction | 31 | 2 | 33 | 55 | 3 | 58 | 86 | 5 | 91 |
| Transportation, Communications, and Public Utilities | 31 | 11 | 42 | 44 | 8 | 52 | 75 | 19 | 94 |
| Trade | 9 | 9 | 18 | 21 | 10 | 31 | 30 | 19 | 49 |
| Finance, Insurance, and Real Estate | 26 | 21 | 47 | 16 | 13 | 29 | 42 | 34 | 76 |
| Services | 6 | 13 | 19 | 2 5 | 9 | 3 4 | 31 | 22 | 53 |
| Government | | | | | | | | | |
| Federal | 10 | 9 | 19 | 2 4 | 2 2 | 4 6 | 34 | 31 | 65 |
| State | 2 | 2 | 4 | 1 | 3 | 4 | 3 | 5 | 8 |
| Local | 218 | 131 | 349 | 155 | 97 | 252 | 373 | 228 | 601 |
| Construction | (129) | ( 22) | (1s1) | (45) | (7) | (52) | (174) | ( 29) | (203) |
| Non-Construction | ( 89) | (109) | (198) | (110) | (90) | (200) | (199) | (199) | (398) |
| TOTAL | 346 | 200 | 546 | 341 | 165 | 506 | 687 | 365 | 1,052 |

• Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

** E$_{mP}$]$_{W}$ent figures exclude 61 Alaska Natives (33 males and 28 females) and 1 Non-Native who listed various forms of assistance, primarily Social Security, as their major source of income. Employment figures also exclude 4% Alaska Natives (215 males and 281 females) and 77 non-Natives (27 males and 50 females) aged 16 and over for whom no employment information waa provided or who claimed to be unemployed.

source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department, Anchorage, September 1980.

Table **15-BRW**

MAJOR EMPLOYERS BY SECTOR •**
BARROW
JUNE 1980

| Employment Sector and Employers | be oyees |
|---|---|
| Mining | 15 |
| ARCO Oil and Gas Co. | ( 9) |
| Contract Construction | 91 |
| Eskimos, Inc. | (27) |
| H. W. Blackstock | (14) |
| Arctic Slope Alaska General | (11) |
| Haskell | (8) |
| Transportation, Communications and Public Utilities | 94 |
| Barrow Utilities (BUECI) | (25) |
| ITT | (18) |
| Wien Air Alaska | (14) |
| Cape Smythe Air Service | (13) |
| Jell-Air | (5) |
| Trade | 49 |
| Stuaqpak | (13) |
| Pepes North of the Border | (11) |
| Brower's Store No.1 | (5) |
| Finance, Insurance and Real Estate | 76 |
| Arctic slope Regional Corporation | (59) |
| Ukpeagvik Inupiat Corporation | (11) |
| Alaska National Bank | (5) |
| Services | 53 |
| Inupiat Community of the Arctic Slope | ( 9) |
| Inupiat University | ( 7) |
| Tundra Touts | (5) |
| Government | |
| - Federal Government | 65 |
| Public Health Service | ( 46) |
| Federal Aviation Administtation | ( 7) |
| National Weather Service | ( 5) |
| Post Office | ( 5) |
| - State Government | 8 |
| - Local Government | 601 |
| North Slope Borough general government | (257) |
| North Slope Borough School District | (135) |
| North Slope Borough School construction | (203) |
| city of Barrow | ( 6) |
| TOTAL EMPLOYEES | 1,052 |

• Major employers defined as having at least 5 employees.
•• Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 16-BRW

**COMPOSITION** OF **EMPLOYMENT** BY **AGE, RACE,** AND SEX "
BARROW
JULY 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 21 | 22 | 43 | 13 | 10 | 23 | 34 | 32 | 66 |
| 20 - 24 | 62 | 38 | 100 | 36 | 25 | 61 | 98 | 63 | 161 |
| 25-29 | 71 | 45 | 116 | 81 | 40 | 121 | 152 | 85 | 237 |
| 30-34 | 46 | 29 | 75 | 60 | 28 | 88 | 106 | 57 | 163 |
| 35-39 | 32 | 18 | 50 | 25 | 16 | 41 | 57 | 34 | 91 |
| 40-44 | 27 | 19 | 46 | 28 | 10 | 38 | 55 | 29 | 84 |
| 45-49 | 27 | 8 | 35 | 25 | 5 | 30 | 52 | 13 | 65 |
| 50-54 | 21 | 10 | 31 | 10 | 11 | 21 | 31 | 21 | 52 |
| 55-59 | 15 | 4 | 19 | 8 | 2 | 10 | 23 | 6 | 29 |
| 60-64 | 9 | 3 | 12 | 4 | 2 | 6 | 13 | 5 | 18 |
| 65-69 | 3 | 1 | 4 | 1 | 1 | 2 | 4 | 2 | 6 |
| 70-74 | 2 | 0 | 2 | 1 | 0 | 1 | 3 | 0 | 3 |
| 75 and over | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| Age unknown | 9 | 3 | 12 | 48 | 15 | 63 | 57 | 18 | 75 |
| TOTAL | 346 | 200 | 546 | 341 | 165 | 506 | 687 | 365 | 1052 |

* Employment waa not necessarily full-time or permanent. People were asked onfy to list their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **17-BRW**

**COMPOSITION** OF MINING SECTOR EMPLOYMENT BY AGE, **RACE,** AND SEX •
BARROW
JUNE! **1980**

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| 20 - 24 | 4 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 4 |
| 25-29 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 30-34 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 1 | 3 |
| 35-39 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 40-44 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 45-49 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 50-54 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 55-59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 13 | 2 | 15 | 0 | 0 | 0 | 13 | 2 | 15 |

• Employment waa not necessarily full-time or permanent, People were asked only to list their employer or major source of income.

Source **Alaska Consultants, Inc.,** North **Slope** Borough Housing **Survey,** prepared for the North Slope Borough, Public Worka Department. Anchorage, September 19S0.

Table **18-BRW**

COMPOSITION OF CONTRACT **CONSTRUCTION** SECTOR EMPLOYMENT BY AGE, RACE, AND SEX "
BARROW
**JUNE** 1980

| **Age Range** | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Totaf | Male | Femafe | Total | Male | Female | Total |
| 15-19 | 1 | 0 | 1 | 1 | o | 1 | **2** | **0** | **2** |
| **20 - 24** | 7 | 1 | 8 | 1 | **1** | **2** | **8** | **2** | **10** |
| **25-29** | **10** | **0** | **10** | **7** | **1** | **8** | **17** | 1 | **18** |
| **30-34** | **5** | **0** | **5** | **6** | **0** | **6** | 11 | 0 | 11 |
| **35-39** | **3** | **1** | **4** | **2** | **1** | **3** | 5 | 2 | 7 |
| **40-44** | **1** | **0** | **1** | **3** | **0** | **3** | 4 | 0 | 4 |
| **45-49** | **0** | **0** | **0** | **5** | **0** | **5** | 5 | 0 | 5 |
| **50-54** | **3** | **0** | **3** | **2** | **0** | **2** | 5 | 0 | 5 |
| **55-59** | **0** | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 |
| **60-64** | **0** | **0** | **0** | 1 | **0** | 1 | 1 | 0 | 1 |
| **65-69** | **0** | **0** | **0** | 1 | **0** | **1** | 1 | 0 | 1 |
| **70-74** | **0** | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 |
| **75 and** wer | **0** | **0** | **0** | **0** | **0** | **0** | 0 | 0 | 0 |
| Age unknown | 1 | **0** | **1** | **26** | **0** | **26** | 2 7 | 0 2 | 7 |
| TOTAL | 31 | 2 | 33 | **55** | **3** | **58** | 86 | 5 | 91 |

• Employment was not **necessarily** full-time or permanent. People were asked only to **list** their employer or major source of income.

**Source:** **Alaska** Consultants, **Inc.,** North **Slope** Borough Housing **Survey,** prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **19-BRW**

**COMPOSITION** OF TRANSPORTATION, **COMMUNICATIONS,** AND
PUBLIC **UTILITIES** SECTOR EMPLOYMENT BY **AGE,** RACE, AND SEX •
BARROW
JUNE 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Mafe | Female | Totaf |
| 15-19 | 2 | 2 | 4 | 2 | 0 | 2 | 4 | 2 | 6 |
| 20 - 24 | 3 | 4 | 7 | 3 | 1 | 4 | 6 | 5 | 11 |
| 2s -29 | 7 | 1 | 8 | 16 | 3 | 19 | 23 | 4 | 2 7 |
| 30-34 | 3 | 0 | 3 | 9 | 3 | 12 | 12 | 3 | 15 |
| 35-39 | 0 | 1 | 1 | 4 | 0 | 4 | 4 | 1 | 5 |
| 40-44 | 3 | 1 | 4 | 1 | 0 | 1 | 4 | 1 | 5 |
| 45-49 | 5 | 0 | 5 | 3 | 0 | 3 | 8 | 0 | 8 |
| 50-54 | 5 | 2 | 7 | 1 | 0 | 1 | 6 | 2 | 8 |
| 55-59 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 60-64 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 |
| 65-69 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 70-74 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 0 | 4 |
| TOTAL | 31 | 11 | 42 | 44 | 8 | 52 | 75 | 19 | 94 |

• Employment waa not necessarily full-time or permanent. People were asked only to fiat their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **20-BRW**

**COMPOSITION** OF TRADE **SECTOR** EMPLOYMENT BY AGE, RACE. AND SEX •
BARROW
JUNE 1980

| Age **Range** | **Alaska** Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Mafe | Female | Total | **Male** | Female | Total | Male | Female | Total |
| 15-19 | 1 | **4** | 5 | 4 | **3** | **7** | **5** | **7** | 12 |
| **20 - 24** | 1 | **2** | 3 | **0** | **2** | **2** | **1** | **4** | 5 |
| 25-29 | 2 | **0** | 2 | 5 | **0** | **5** | **7** | **0** | 7 |
| 30-34 | **1** | **0** | 1 | 1 | 1 | **2** | **2** | 1 | 3 |
| 35-39 | 0 | **0** | 0 | 1 | **1** | **2** | 1 | 1 | 2 |
| 40-44 | 0 | **3** | 3 | 1 | **0** | **1** | **1** | **3** | 4 |
| 45-49 | 2 | **0** | 2 | 1 | **1** | **2** | **3** | **1** | 4 |
| 50-54 | 1 | **0** | 1 | 1 | **2** | **3** | **2** | **2** | 4 |
| 55-59 | 0 | **0** | 0 | 0 | **0** | **0** | **0** | **0** | **0** |
| 60-64 | 0 | **0** | 0 | 0 | **0** | **0** | **0** | **0** | **0** |
| 65-69 | 0 | **0** | 0 | 0 | **0** | **0** | **0** | **0** | **0** |
| 70-74 | 0 | **0** | 0 | , 0 | **0** | **0** | **0** | **0** | **0** |
| 75 and over | 1 | **0** | 1 | 0 | **0** | **0** | **1** | **0** | 1 |
| Age unknown | 0 | **0** | 0 | 7 | **0** | **7** | **7** | **0** | **7** |
| TOTAL | **9** | **9** | **18** | 21 | **10** | **31** | **30** | **19** | **49** |

• Employment waa not **necessarily** full-time or permanent. People were **asked** only to fiat their employer or major **source** of income.

**So rce** **Alaska Consultants,** Inc., North Slope Borough Housing **Survey, prepared** for the North Slope **Borough, Public** Worka Department. Anchorage, September 19S0.

Table **21-BRW**

COMPOSITION OF **FINANCE, INSURANCE,** AND REAL **ESTATE**
SECTOR EMPLOYMENT BY AGE, **RACE, AND** SEX "
BARROW
JUNE 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Fernale | Total |
| 15-19 | 0 | 1 | 1 | **0** | **3** | **3** | **o** | 4 | 4 |
| 20-24 | **5** | **8** | **13** | 1 | **0** | **1** | 6 | 8 | 14 |
| 2s -29 | **6** | **5** | 11 | **3** | **3** | **6** | 9 | 8 | 17 |
| 30-34 | 4 | 3 | 7 | **2** | **1** | **3** | 6 | 4 | 10 |
| 35-39 | 4 | 0 | 4 | **3** | **1** | **4** | 7 | 1 | 8 |
| 40-44 | 1 | 2 | 3 | 1 | **0** | **1** | 2 | 2 | 4 |
| **45-49** | 1 | 1 | 2 | **2** | **0** | **2** | 3 | 1 | 4 |
| **50-54** | 2 | 1 | 3 | **2** | 1 | **3** | 4 | 2 | 6 |
| **55-59** | 1 | 0 | 1 | **0** | 1 | 1 | 1 | 1 | 2 |
| **60-64** | **1** | 0 | 1 | 1 | 1 | **2** | 2 | 1 | 3 |
| **65-69** | 0 | 0 | 0 | **0** | **0** | **0** | **0** | **0** | **0** |
| **70-'74** | 1 | 0 | **1** | **0** | **0** | **0** | 1 | **0** | 1 |
| **75 and over** | 0 | 0 | 0 | **0** | **0** | **0** | 0 | 0 | 0 |
| **Age unknown** | 0 | 0 | 0 | 1 | **2** | **3** | 1 | 2 | 3 |
| TOTAL | 26 | 21 | 47 | **16** | **13** | **29** | **42** | 34 | 76 |

• Employment waa not necessarily full-time or permanent. People were asked only to **list** their employer or major source of income.

**Source:** **Alaska** Consultants, Inc., North **Slope** Borough Housing **Survey,** prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

## Table 22-BRW

COMPOSITION OF SERVICES SECTOR EMPLOYMENT BY AGE, RACE, AND SEX "
BARROW
JUNE 19s0

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 1 | 2 | 3 | 1 | 1 | 2 | 2 | 3 | 5 |
| 20-24 | 0 | 3 | 3 | 2 | 1 | 3 | 2 | 4 | 6 |
| 25-29 | 3 | 1 | 4 | 9 | 3 | 12 | 12 | 4 | 16 |
| 30 - 34 | 0 | 0 | 0 | 4 | 0 | 4 | 4 | 0 | 4 |
| 35-39 | 0 | 1 | 1 | 1 | 2 | 3 | 1 | 3 | 4 |
| 40-44 | 2 | 1 | 3 | 2 | 1 | 3 | 4 | 2 | 6 |
| 45-49 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 0 | 2 |
| 50-54 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 3 |
| 55-59 | 0 | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 3 |
| 60-64 | 0 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 3 |
| 65-69 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 6 | 13 | 19 | 25 | 9 | 34 | 31 | 22 | 53 |

• Employment waa not necessarily full-time or permanent. People were asked onfy to list their employer or major source of income.

Sou Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 19S0.

Table **23-BRW**

**COMPOSITION** OF FEDERAL GOVERNMENT **SECTOR** EMPLOYMENT BY AGE, **RACE, AND SEX** "
BARROW
JUNE 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Femafe | Total | Male | Female | Total |
| 15-19 | o | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 20-24 | 1 | 0 | 1 | 2 | 3 | 5 | 3 | 3 | 6 |
| 25-29 | 0 | 0 | 0 | 4 | 3 | 7 | 4 | 3 | 7 |
| 30-34 | 0 | 1 | 1 | 6 | 1 | 7 | 6 | 2 | 8 |
| 35-39 | 3 | 2 | 5 | 4 | 2 | 6 | 7 | 4 | 11 |
| 40-44 | 1 | 1 | 2 | 3 | 1 | 4 | 4 | 2 | 6 |
| 45-49 | 1 | 2 | 3 | 1 | 2 | 3 | 2 | 4 | 6 |
| 50-54 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 4 |
| 55-59 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 60-64 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 65-69 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and wer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 1 | 0 | 1 | 3 | 8 | 11 | 4 | 8 | 12 |
| TOTAL | 10 | 9 | 19 | 24 | 2 2 4 6 | | 34 | 31 | 65 |

* Employment waa not **necessarily** full-time or permanent. People were aaked only to **list** their employer or major **source** of income.

**Source:** **Alaska Consultants,** Inc., North Slope Borough Homing **Survey,** prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **24-BRW**

COMPOSITION OF STATE GOVERNMENT SECTOR EMPLOYMENT BY AGE, RACE, AND SEX *
BARROW
JUNE 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 20 - 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 | 1 | 1 | 2 | 0 | 2 | 2 | 1 | 3 | 4 |
| 30-34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35-39 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| 40-44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45-49 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 50-54 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 |
| 55-59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 2 | 2 | 4 | 1 | 3 | 4 | 3 | 5 | 8 |

* Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 25-BRW

COMPOSITION OF LOCAL GOVERNMENT NON-CONSTRUCTION SECTOR EMPLOYMENT
BY AGE, RACE, AND SEX*
BARROW
JUNE 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 4 | 7 | 11 | 1 | 2 | 3 | 5 | 9 | 14 |
| 20-24 | 10 | 14 | 24 | 8 | 12 | 20 | 18 | 26 | 44 |
| 25-29 | 18 | 29 | 47 | 25 | 24 | 49 | 43 | 53 | 96 |
| 30-34 | 15 | 22 | 37 | 30 | 22 | 52 | 45 | 44 | 89 |
| 35-39 | 12 | 11 | 23 | 9 | 9 | 18 | 21 | 20 | 41 |
| 40-44 | 8 | 11 | 19 | 16 | 8 | 24 | 24 | 19 | 43 |
| 45-49 | 6 | 5 | 11 | 8 | 2 | 10 | 14 | 7 | 21 |
| 50 - 54 | 3 | 4 | 7 | 2 | 5 | 7 | 5 | 9 | 14 |
| 55-59 | 4 | 2 | 6 | 4 | 1 | 5 | 8 | 3 | 11 |
| 60-64 | 4 | 1 | 5 | 1 | 0 | 1 | 5 | 1 | 6 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and over | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 |
| Age unknown | 4 | 3 | 7 | 5 | 5 | 10 | 9 | 8 | 17 |
| TOTAL | 89 | 109 | 198 | 110 | 90 | 200 | 199 | 199 | 398 |

* Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

Table **26-BRW**

COMPOSITION **OF LOCAL GOVERNMENT** CONSTRUCTION SECTOR EMPLOYMENT
BY **AGE, RACE,** AND SEX*
BARROW
**JUNE** 1980

| **Age Range** | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 11 | 3 | 14 | 4 | 1 | 5 | 15 | 4 | 19 |
| 20-24 | 31 | 6 | 37 | 19 | 5 | 24 | 50 | 11 | 61 |
| 25-29 | 23 | 8 | 31 | 12 | 1 | **13** | 35 | 9 | 44 |
| **30 - 34** | 16 | 2 | 18 | 2 | 0 | 2 | 18 | 2 | 20 |
| 35-39 | 8 | 2 | 10 | 0 | 0 | 0 | 8 | 2 | 10 |
| 40-44 | 10 | 0 | 10 | 1 | 0 | 1 | 11 | 0 | 11 |
| 45-49 | 10 | 0 | 10 | 3 | 0 | 3 | 13 | 0 | 13 |
| **50-54** | 5 | 1 | 6 | 0 | 0 | 0 | 5 | 1 | 6 |
| **55-59** | 9 | 0 | 9 | 2 | 0 | 2 | 11 | 0 | 11 |
| **60-64** | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| **65-69** | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| **70-74** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **75 and over** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Age unknown** | 3 | 0 | 3 | 2 | 0 | 2 | 5 | 0 | 5 |
| TOTAL | 129 | 22 | 151 | 45 | 7 | 52 | 174 | 29 | 203 |

• Employment was not **necessarily** full-time or permanent. People were asked only to list their employer or major source of income.

**Sou** Alaska Consultants, Inc., North Slope Borough Housing **Survey,** prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

The majority of jobs are filled by those in the 20-34 year-old-age range for all employment sectors (see Table 16-BRW). The sex breakdown of different industry categories indicated in 1980 that, among Alaska Natives, females were under-represented in all categories except the service sector where there were twice as many women. In the trade sector there were nine women and nine men employed. This did not hold true for the non-Natives. Men outnumbered women by almost three to one in the service sector and about two to one in the trade sector. However, one must bear in mind that the proportion of women to men in these ethnic groups was not equal. While the proportion was approximately equal among Natives, this was not the case among non-Natives (see Tables 16-BRW through 21-BRW).

The 1989 NSB Census of Population and Economy is consistent with the data from 1980 in all areas except one (refer to Table 12-BRW above), that is the finance, insurance and real estate sector. While there were 76 people employed in this industry in 1980, only 12 are counted as employed in this area in 1988. Whether this is a real difference or merely one of methodology or definition is currently being investigated.

D. Economic Issues and Concerns

A detailed financial analysis of the City of Barrow does not exist in the literature and we did not collect detailed financial information. Barrow faces many of the same problems as the other villages, however, and can be fruitfully compared to them in that regard. In terms of other ongoing MMS research (Social Indicators, HRAF), Barrow is a "hub" community and differs from the other, "non-hub," communities by an entire constellation of features. Barrow is larger, ethnically and economically more diverse, has more developed social services, and so on. Perhaps the largest and most significant difference with the outer villages is that Barrow has a larger pool of potential people from which to recruit for city (and other) positions. Many of these people gained valuable experience through establishing the utilities cooperative in Barrow, serving in the local government before the era of land claims, or through their roles in the passage of the Alaska Native Land Claims Settlement Act. A good number of people were involved in all three. While some of these people have moved to the outer villages, most still remain in Barrow for the same reasons that they were there in previous times. Barrow, for the most part, is "where of the action is." Barrow is probably the only NSB village which has a surplus of qualified people for most positions. Barrow, for example, pays its mayor a salary and thus has an easier time attracting candidates.

Barrow also has an advantage over most of the other villages in that it is a fret-class city under state law, which confers specific powers as well as obligations. Barrow's larger size and its position as a hub community to which residents of other villages come to buy certain items makes the money generated from a local sales tax a significant amount, rather than the relatively paultry amount generated in the other villages ($4,000/year in Nuiqsut, for example). The types of grants that Barrow is eligible for as a first-class city are greater in number and wider in scope than for other NSB communities. Size is clearly a significant factor because with size comes a certain minimum guaranteed city income and a relatively large talent pool to draw from to help determine how to employ that income. The City of Barrow has been able to hire effective grant writers and obtain money for a number of projects independently of the NSB (the recreation building, for one) and runs certain programs (again the recreation program is a good example) independently of NSB funds. The fact that Barrow is the seat of the NSB government does not hurt the City of Barrow

in this regard, as they have been able to hire non-Inupiat Consultants or employees who had initially been drawn to the community by employment opportunities with the NSB.

1. Employment Trends

A trend that was apparent as early as 1977 was the disproportionate representation of women in various occupational groups. Inupiat women tended to fill full-time clerical and record-keeping jobs within the borough administration. Men, in contrast, took high-paying seasonal jobs. Because these jobs were seasonal men were able to continue subsistence activities to some degree (Worl and Smythe 1986:136).

This trend exists today as well and can be seen from Table 27-BRW. While Inupiat women represent slightly over 50% of the Native population, they outnumber Native men in administrative support positions by about 9 to 1. In the teacher and teacher's aide occupations, there are six times as many women as there are men. In service positions, the proportion of Native women to Native men is approximately 2.6 to 1. Within the non-Native population, women constitute 43% of the work force. At the same time they outnumber men as administrators 5.4 to 1 and as teachers and teacher's aides by 2.5 and 16 to 1 respectively.

The implications of women occupying the bulk of the full-time year-round jobs are several. The traditional patterns of child care and child rearing are challenged. Mothers are no longer able to be the primary caretakers, at least for a portion of the day. In addition, the 'cultural safety net" used to cope with such situations in the past, the care of such children by their grandparents or other relations, has become less possible as households have become increasingly nuclear in structure and distances between households, even in the same village, have become greater. In fact, lack of child care was frequently mentioned during fieldwork as a problem for working mothers.

Looking at the numbers of people one would assume to be in the labor force, namely those ages 16 through 59, some striking differences emerge. Of 463 Inupiat men in this age group, 390 are in the labor force and 352 are employed. Of 506 Inupiat woman in this age group, 351 are in the labor force and 331 are employed. Of 491 non-Inupiat men in this age group, 471 are in the labor force and 460 are employed. Of 357 non-Inupiat woman in this age group, 340 are in the labor force and 332 are employed. Essentially all non-Inupiat adults are in the labor force, as are the great majority of Inupiat men. Well over half of Inupiat women are in the labor force, but they are, as a group, the least active in the labor force. Non-Inupiat have a low unemployment rate, while there is significant unemployment among both male and female Inupiat.

The relationship between and implications of population, labor force, and employment data for Barrow for the years 1980 and 1988 are shown graphically in Figure 1O-BRW. Also, these variables are projected to the year 1994. The figures for 1980 and 1988 show that the Barrow population increased from 2,389 to 3,223. Barrow's labor force (employed and unemployed persons age 16 to 64 that were willing and eligible to work) increased less rapidly from 1,347 to 1,547 persons. This relatively modest increase probably reflects the age composition of the population. While Barrow's total population increased over the eight-year period, the number of young persons just entering the labor force was not sufficient to dramatically offset labor force attrition from retirement and from other factors.

Table **27-BRW**

## Occupation Composition of Employment by Sex and **Ethnicity**
## Barrow -1988

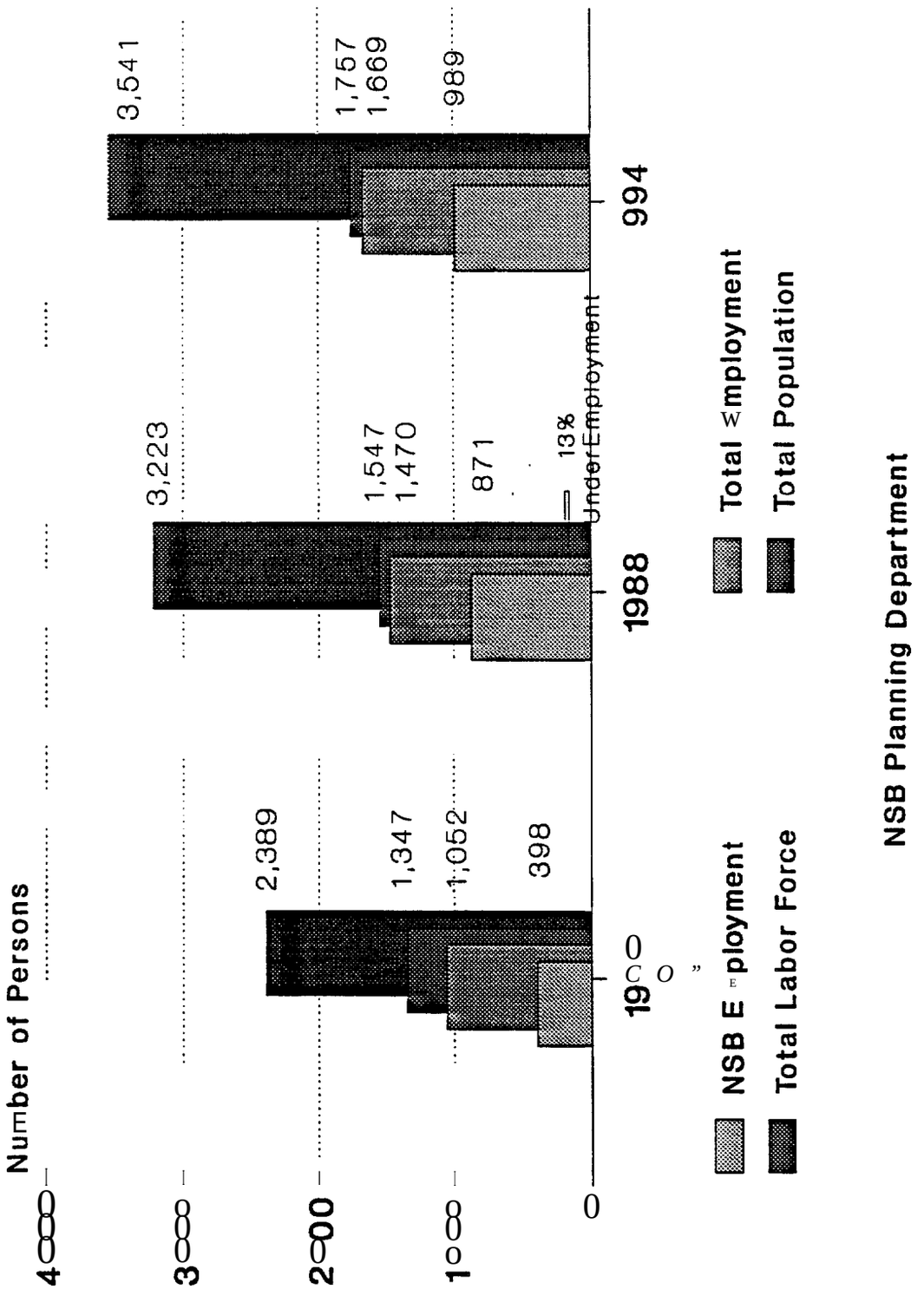
| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % OF |
|---|---|---|---|---|---|---|---|---|
| OCCUPATION GROUPS | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| EXEC. ADMIN. MGR. | 51 | 66 | 117 | 109 | 61 | 170 | 287 | 19.5% |
| PROFESSIONAL | 1 | 2 | 3 | 25 | 25 | 50 | 53 | 3.6% |
| TEACHER | 2 | 12 | 14 | 21 | 52 | 73 | 87 | 5.9% |
| TEACHER AIDE | 3 | 18 | 21 | 1 | 16 | 17 | 38 | 2.6% |
| TECHNICIAN | 13 | 21 | 34 | 23 | 28 | 51 | 85 | 5.8% |
| ADMIN. SUPPORT | 13 | 116 | 129 | 17 | 92 | 109 | 238 | 16.1% |
| SERVICE | 27 | 71 | 98 | 78 | 48 | 127 | 225 | 15.3% |
| OPERATOR/MECHANIC | 88 | 7 | 95 | 80 | 3 | 83 | 178 | 12.1% |
| PILOT | 1 | | 1 | 9 | | 9 | 10 | 0.7% |
| LABORER | 83 | 10 | 93 | 35 | 2 | 37 | 130 | 8.8% |
| CRAFTSMAN | 61 | 1 | 62 | 54 | 1 | 55 | 117 | 7.9% |
| ARTISAN | | 2 | 2 | 1 | | 1 | 3 | 0.2% |
| ARMED FORCES | 1 | | 1 | 2 | | 2 | 3 | 0.2% |
| TRAPPER/HUNTER | 1 | | 1 | | | 0 | 1 | 0.1% |
| OTHER | 7 | 5 | 12 | 4 | 4 | 8 | 20 | 1.4% |
| TOTAL EMPLOYED | 352 | 331 | 683 | 460 | 332 | 792 | 1475 | 100.0% |
| % OF TOTAL | 23.9% | 22.4% | 46.3% | 31.2% | 22.5% | 53.7% | 100.0% | |
| LABOR FORCE | 390 | 351 | 741 | 471 | 340 | 811 | 1552 | |
| % OF TOTAL | 25.1% | 22.6% | 47.7% | 30.3% | 21.9% | 52.3% | 100.0% | |
| TOTAL UNEMPLOYED | 38 | 20 | 58 | 11 | 8 | 19 | 77 | |
| UNEMPLOYMENT RATE | 9.7% | 5.7% | 7.8% | 2.3% | 2.4% | 2.3% | 5.0% | |
| TOTAL UNDER-EMPLOYED | 99 | 41 | 140 | 42 | 11 | 53 | 193 | |
| UNDER-EMPLOYMENT RATE | 25.4% | 11.7% | 18.9% | 8.9% | 3.2% | 6.5% | 12.4% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment.
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate = persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Figure **1O-BRW**

**Population, Labor Force,** and Employment
Barrow **1980, 1988,** and 1994 (Projected)



2. Economic Trends

During the same time period, total Barrow employment increased from 1,052 to 1,470 persons. This strong employment increase coupled with less rapid labor force expansion translates to a direct reduction in unemployment. Between 1980 and 1988, the rate of unemployment (the number of persons unemployed divided by the labor force) in Barrow fell from 22 to 5%. This shift toward full employment is explained in part by a significant increase in direct NSB government employment. Modest labor force expansion also contributed to this favorable outcome. Between 1980 and 1988 NSB government employment more than doubled from 398 to 871. These figures understate NSB government contributions to local employment because they do not include funded projects and programs. Private sector employment and indirect NSB government employment are depicted in the bar labeled "Total Employment."

While the rate of overall unemployment declined markedly over recent years, a 13% rate of underemployment was observed in 1988. "Underemployment" refers to the count of persons that worked part of the year but would have worked more if additional jobs had been available.

In sum, the economic data for 1980 and 1988 are generally positive. The rate of unemployment fell sharply, due to expanding job opportunities provided primarily by the NSB government at a time of relatively slow labor force expansion. Barrow's underemployment rate (13%) was the lowest recorded among all eight NSB communities in 1988. Most everyone who wanted to work was able to do so for at least part of the year. This suggests that in 1988 jobs were widely distributed across the Barrow labor force.

3. Projection to 1994

Figure 1O-BRW shows projected levels of population, labor force, and employment in 1994. The assumptions used to make these projections are:

- Recent historic rates of village population growth would continue into the future;

- Village labor force would change according to natural shifts in the age distribution of village population;

- The rate of village unemployment would be held at 5%; and

- The ratio of NSB government employment to total village employment in 1988 would prevail in 1994.

Application of these assumptions leads to increases across the board. Barrow population would increase to 3,541 in 1994. The labor force would grow at a faster rate than population, increasing from 1,547 to 1,757. In order to hold unemployment to 5%, total employment would increase from 1,470 to 1,669. NSB government employment required to support this level of total employment would increase by 118 persons from 871 to 989.

Labor force expansion is the critical element in this projection. The number of young persons entering the labor force will more than offset retirees and other labor force departures over the next six years. Village total employment must increase to support this labor force. This, in turn, would require NSB government to step up local employment opportunities either directly, or through programs that enhance private sector employment.

## SECTION III: FORMAL INSTITUTIONS

The number of institutions has grown considerably in the region since the first formal political body, the village council, was established in 1939. Nowhere are the effects of this proliferation of institutions felt as much as in Barrow, where NSB institutions are headquartered. Two formal institutions that are specific to Barrow are the City of Barrow and the Ukpeagvik Inupiat Corporation (UIC), the local village corporation established under the terms of ANCSA (Alaska Consultants et al. 1984:517). There are other institutions in Barrow but they have a region-wide mandate so they are discussed in the regional section. They are the NSB, the Arctic Slope Regional Corporation (ASRC), and the Inupiat Community of the Arctic Slope (ICAS) (Alaska Consultants et al. 1984:517). However, the scope of operations of these institutions is important in this discussion insofar as they cause conflict among individuals and disrupt traditional social structure.

### A. Government

#### 1. Organization and Scope of Operations

Formal local government in Barrow began with a tribal government which was established in 1939 and based upon the Indian Reorganization Act of 1934 as extended to Alaska in 1936. The tribal government, or village council, was composed of a body of residents whose authority was initially under the jurisdiction of the federal government. This lasted until 1958 when Barrow was incorporated as a fourth-class city under the jurisdiction of the Territory of Alaska. The council was again reorganized in 1959 after Alaska became a state and jurisdiction of the village council was transferred from the federal government to the State of Alaska. The village council governing body remained until 1971, when ANCSA was passed and their authority was superseded, at least in theory, by the city council of the City of Barrow (Smythe and Worl 1985:209-210).

##### City *of Barrow*

After the passage of ANCSA, the NSB was created to promote the interests of the Inupiat on the North Slope. This is when the City of Barrow and the UIC were established. The City of Barrow, like the other incorporated villages on the North Slope, does not have much power since most municipal responsibilities are held by the North Slope Borough. As the largest municipality on the North Slope, however, Barrow does exercise more powers than the other cities. It administer recreation activities and a scholarship program for Barrow students who want to attend college (Alaska Consultants et al. 1983:519). The city also collects a local sales tax and retains powers over cemeteries, dog control, and the local curfew. This curfew was begun by the Mothers' Club but handed to the city for administration in 1970. The city in turn delegated the management of the curfew to the "alternatives for youth program," which receives its funding from the NSB Department of Health and Social Services (Smythe and Worl 1985:213). The NSB is not directly involved with enforcement of the curfew through the Public Safety Department because of legal restrictions. Writing legally enforceable curfew regulations is a complex process and one which no village on the North Slope has attempted (although many do have curfews of one sort or another).

The City of Barrow has resisted numerous proposals to merge with the NSB. By maintaining its independence, the City of Barrow has retained the power to provide residents with its own services. For example, with increased revenues between 1978 and 1983, the city embarked on many of its own capital improvements (Alaska Consultants et al. 1983:519; Smythe and Worl 1985:213). The City of Barrow has constructed a community recreation building which houses a basketball court, racquetball courts, a sauna and showers, and the city recreation department offices. The city maintains a softball field as well. These facilities complement those available at the schools and provide the residents of Barrow with a wider choice than is available in any other village. The real advantage that Barrow possesses is that it can employ a person to organize and manage the community recreation program. The spring fair owes a great deal to city support and organization. Even NSB events such as the Messenger Feast rely on city assistance to a great extent.

### Stop *of Operations*

The city council is composed of seven members, including the mayor, all of whom are elected officials. Until recently the position of Barrow mayor was almost entirely titular because the everyday administration of the city was conducted by a hired city manager. In 1984, the mayor did not have an office in the city administration building (Smythe and Worl 1985:214). In 1987, dissatisfaction with the (then) current city manager and a desire to have local, Inupiat elected accountability in city hall sparked a movement back to a strong mayoral form of city government. One duty of the mayor is to attend NSB assembly meetings to keep abreast of current issues affecting Barrow. In other villages the job of monitoring NSB developments is performed by the village coordinator, a position that is nonexistent in Barrow.

The members of the city council are not directly related to each other, but do tend to be members of the larger families in Barrow. The council is currently totally Inupiat, and has been for most of its existence (a non-Inupiat, the first, was elected to the city council in 1982). The city manager between 1979-1981 was white and reportedly had a strong influence on the city council during that period (Smythe and Worl 1985:216). Since then other city managers have been non-Inupiat as well. The recent return to the mayoral form of administration was at least in part a reaction to the hiring of non-local non-Inupiat "experts" who then were perceived as having too strong an influence on local affairs. The man serving as city manager at the time of the referendum to change to a strong mayoral form of government is well known in the community as he has apparently made Barrow his home. He had worked in several positions in the NSB and city prior to his tenure as city manager and is currently working at the local radio station.

The city council has been in charge of several local elections concerning the sale and importation of alcohol into Barrow. In 1978, the community decided to make the sale of alcohol illegal. This decision forced the closing of the city liquor store, the Ukpeagvik Community Liquor Store, which had provided significant revenue to the city government's general fund ($52,083, 15% of the budget, in FY 1977) (Smythe and Worl 1985:212). The City of Barrow is a distant second to the NSB in terms of its total budget, and even though its budget is far larger than any of the other villages on the North Slope, it faces many of the same problems. The only revenue sources for the city are various state and federal programs, the NSB, and the local sales tax. The mayor and council

members are all essentially part-time volunteers. It is at times difficult to find the city mayor in his office.

2. Overlain in Authority and Conflicts Among Institutions

One of the main causes of conflict among institutions stems from the fact that many of the people on the city council are also members of other formal institutions. At times, the various institutional affiliations of various members can cause a conflict of interest to occur. It is frequently the case that the membership of the city council will overlap with that of the NSB Assembly, the ASRC Board of Directors, and the UIC Board of Directors. At other times members' kinship affiliations and interests may conflict with institutional roles and can result in intrafamilial strife. There has been an observable decline in the "interlocking directorship" of formal institutions in Barrow in the past five years, but it is still not uncommon for one person to hold positions in these different organizations sequentially. This can be attributed, at least in part, to the development of a set of unique interests within each institution to a degree that did not exist in the past.

B. Native Corporations

1. Organization and Scope of Operations

The Ukpeagvik Inupiat Corporation (UIC) is the Native corporation for Barrow established under the terms of ANCSA. The UIC mandate is to make profits for its shareholders, who, in this case, are individuals that were residents of Barrow at the time of the passage of ANCSA. The UIC has a number of landholding and business investments in approximately a dozen different companies, including insurance, construction, transportation, building supplies, and communication, all of which serve to make it a substantial economic force in the community (Alaska Consultants et al. 1983:520). The UIC is recognized in every village on the North Slope as the most successful village corporation in the region. This does not necessarily make it the model that all others wish to emulate, as there are differences of opinion as to the proper balance between profits, local hire, and service to the community. The UIC has been able to deliver to a substantial degree on all three, however, which most people attribute to its location in Barrow (large in size, large talent pool to draw on, and proximity to the movers and shakers, many of whom are indeed shareholders in UIC).

2. Overlaps in Authority and Conflict Among Institutions

The proliferation of institutions on the North Slope has brought a whole new political structure to the Inupiat. "Community leadership which at one time was vested solely in the umialik has become specialized, fragmented, and dispensed among the many organizations" (Worl and Smythe 1986:71). The consequences of this range from ineffective or inefficient decision making to altered social and familial interaction.

> One of the biggest impacts that ANCSA has had on Inupiat has been the creation of many organizations that are of an unfamiliar structure. These organizations often have conflicting goals. People tend to over-identify with the particular organization they are involved with. The end result is conflict because of these new organizations having conflicting goals. So we have situations such as the ASRC against the North Slope Borough, or the City of Barrow vs. UIC, or the ICAS against the North Slope Borough . . . There is nothing traditional about these new organizations.
>
> James Stotts
> April 9, 1984

Mr. Stotts is a Barrow Inupiat who, at the time he delivered this passage, was a member of the Inuit Circumpolar Conference (ICC) Executive Committee, the NSB Assembly, and the ASRC Board of Directors. He has also been affiliated with the Inupiat Community of the Arctic Slope (ICAS), and the UIC (Worl and Smythe 1986:70). However, in all communities of the North Slope such multiple roles are inevitable. There is a very small pool of people to staff all of the existing formal, informal, and advisory entities. Barrow is far larger than the other NSB communities, but as the hub also has many times the formal bureaucratic structure of the other communities. Conflicts of interest and of tradition are inevitable. Membership in these organizations requires allegiance to the stated goals of the institution over any familial or personal commitments that may be present.

Smythe and Worl (1985:239) present one interesting example of how the fragmentation of Inupiat social organization can come into conflict with tradition. A young man who served on a corporation board was required to do business with a commission on which his mother served. When he addressed his mother by her last name during a formal meeting, she later inquired why he had done that. The son essentially told her that their personal relationship could not interfere with their professional responsibilities. The mother was hurt by this.

Two Barrow-based organizations where a high degree of overlap and/or competition could be expected are ASRC and UIC. A discussion with officials of UIC outlined the complexities of the relationships between the two corporations. Both are profit-seeking entities with many of the same resources. UIC has surface rights to a limited amount of land, whereas ASRC has the subsurface rights to that land (as well as to the land of the other village corporations) as well as surface and subsurface rights to other land. All UIC shareholders are automatically ASRC shareholders, of course, and may comprise over half of the total ASRC shareholders. The two cooperate on a number of ventures. The Piquniq Management Corporation (PMC) has offices in the Barrow ASRC building, but is a equal joint venture of the two corporations. At the same time, the two entities also compete for certain contracts. UIC officials say that for the first five years of their existence that ASRC acted as a more-or-less guardian, with final approval or denial of all business activities. After five years, UIC shook off this supervision and struck off on their own. UIC officials think that at the time this upset ASRC officials and that it still has some ramifications in the present. Relations between the two are conducted on the basis of mutual

business interest, however, and each realizes that they are hiring and dealing with the same set of people. Thus, conflict is minimized and cooperation is stressed, while at the same time trust is tempered by the awareness that the other is after all looking out for its own economic interests.

The regional housing authority for the North Slope region (Arctic Slope Regional Corporation Housing Authority -- ASRCHA) is unique in the state of Alaska in that it does not actually build any housing and it contracts with the NSB for its staff. Thus, the NSB housing department staff also acts as the ASRCHA staff, and the NSB builds the housing. Most of these contracts have been made with various of the village corporations, usually in joint venture with a non-Native construction firm. When funds are available, the ASRCHA buys the housing from the NSB and they become part of one of ASRCHA's programs. By far the most popular program in the village is the home buyer's plan, where an individual can gain title to his house in twenty years for a monthly payment that is based on his income. The minimum monthly payment is $100 (mostly covering the administration fees of the program) and this is the most common monthly payment for those participating in the program. The point of interest here is that the NSB staff and the ASRCHA staff (formally part of HUD) are composed of the same people. There is at least the potential for NSB and ASRCHA interests to be divergent enough to create conflicts of interest. ASRCHA has in fact not received any federal funds for the acquisition of new houses in recent years and the NSB has not built many new houses in that period, and is unlikely to in the near future.

*3.* Current Issues and Concerns

Another effect of the proliferation of institutions has been the replacement of traditional means of social support by formal institutional services. For example, there is now a Children's Receiving Home to take in children who cannot be adequately cared for by their parents. In the past, such situations, if they were to arise at all, would have been the responsibility of the extended family (Worl and Smythe 1986:72).

In addition, traditional lines of authority are being altered as a result of the proliferation of formal institutions. For example, since 1980, the UIC has had a predominantly young and educated corporate board. While the demographic shift in the UIC has made it possible, for the first time, for young adults to interact on an equal basis with older Inupiat representing different boards and commissions, it has also reduced the status traditionally accorded elders (Smythe and Worl 1985:240).

There are also concerns voiced about the divisiveness fostered by the 'existence of the different economic and governmental organizations which now exist. One particular example concerning UIC and ASRC was discussed above. Other examples abound. For example, the Inupiat Community of the Arctic Slope (ICAS) opposes oil development in general and especially offshore. While the NSB is not enthusiastic about offshore development (for subsistence, environmental, health, and perhaps other reasons), most NSB revenues are ultimately derived from the oil industry and the NSB is reconciled to a certain level of and time frame for development. ASRC may actually have a financial interest in offshore leases and UIC and ASRC certainly have an interest in supplying services to oil companies through PMC. Money has a way of changing relationships, or at least limiting them in certain ways. In general, informants say that money and the things

purchased with money are shared leas frequently and with a more restricted range of people than are harvested subsistence resources. Our information from Barrow is unfortunately only general, as we did not have the time to devote to this question that would be required. It is possible that the ongoing Barrow subsistence study by Braund and Associates funded by MMS will provide more detail in this regard. In any event, the situation in general appears to be similar to that in villages for which more detail is available (Point Lay, for example).

C. Health and Social Services

Much of the discussion of Barrow health and social services is contained in the regional section because these services are administered on a regional basis by the NSB's Department of Health and Social Services. This avoids at least the grossest sort of redundancies. Barrow specific topics are covered in this section.

The only hospital on the North Slope is located in Barrow, and Barrow is the only community with resident medical doctors and nurses. All other villages have modem clinics staffed by health aides. These clinics are all recent and well equipped, but it is recognized that the level of care available in Barrow is superior to that available in the villages. However, there are serious delivery problems in Barrow as well as in the outer villages. While there are doctors in Barrow, informants report that it is difficult to see one. It appears that the number of doctors is too low for the patient load, which is one reason doctors do not visit the outer villages as often as they are actually scheduled to. Informants also do not like the hospital in terms of its atmosphere or the care provided. Inupiat consider it relatively unfriendly and complain that the doctors come and go so frequently that they never learn anything about their patients. Patients are not treated as individuals so much as they are considered a bundle of symptoms. The complaint that the doctors treat these symptoms rather than the underlying cause, because they do not know the patient well enough to know the fundamental cause, is heard in Barrow as frequently as it is heard in the outer villages. The facilities in Barrow are also inadequate for the number of patients. There is simply too little space. The outer villages have plenty of space and facilities for their patients, but generally lack medically trained staff. Although the health aides provide excellent care on a day-to-day basis, they are not trained to handle serious medical problems.

Non-Inupiat for the most part avoid the hospital altogether. When they require medical attention most prefer to go elsewhere (Fairbanks, Anchorage, or Seattle). Generally, non-Inupiat can afford to pay for this travel, are covered by good medical insurance plans, and have adequate sick leave. A good number of Inupiat also have these benefits, but many do not. As a group, Inupiat have many fewer choices in terms of medical treatment than do non-Inupiat.

A survey sponsored by the NSB in 1987 characterizes each of the NSB communities (Dann & Associates 1987). Knowledge of available health services is low in Barrow, but higher than in the outer villages. It is interesting to note that even though services are more readily available in Barrow than in the other villages, only in Barrow was an improvement in public knowledge of availability an issue that survey respondents commonly mentioned. Perhaps only in Barrow are people even aware enough of the programs to know that they exist and to realize that they do not know how to make use of them. The top health-related concerns in Barrow were about alcohol treatment programs and improving care at the hospital. These were also concerns in the outer

villages, but appeared lower on their lists. More people in the outer villages than in Barrow think that the hospital is doing a good job. Health aides are seen more positively than is the hospital. Other health and social services provided by the NSB are also seen in a generally positive light, although few people (less than a third) were enthusiastic enough to rate them as good or better.

Barrow has a much more varied population than any of the other NSB communities and thus has more of a challenge in terms of delivering services to all segments of the population. It is quite evident that such services are not evenly distributed and that certain groups request or demand more service than others. Little statistical information is available in this regard, but field interviewers with service providers confirmed the impression of Worl and Smythe (1986:331-337) that a limited number of families provided a major part of the social service case load. For the most part the description provided by Worl and Smythe remains accurate.

## D. Religion

### 1. History of Churches

***The Presbyterian Church***

When Alaska was divided up by the missionizing churches, the Presbyterian Church was given the North Slope of Alaska above Point Lay (Point Lay and Point Hope were designated as Episcopalian villages). The first missionary arrived in Barrow in 1891 and became firmly established in the community in 1899 (Smythe and Worl 1986:291). The political and social power of the church was, and still is, derived from its close association with the school, and later the National Guard (then the Territorial Guard). The Mothers' Club, which was started by Dr. Otto Greist's (the leader of the Presbyterian Church in Barrow) wife to improve the health and school attendance of Inupiat, was one of the earliest sources of power extended from the church. The Mothers' Club initiated a "truancy patrol" to prevent delinquency from school. In reference to the Territorial Guard, the Barrow Presbyterian minister was the first commanding officer of the Barrow unit which initiated 110 local men in the spring of 1942 (Smythe and Worl 1985:292).

However, even before these institutions were established, the Presbyterian Church was sanctioned by the revenue officers who patrolled the coasts. "In the introduction of law and order, and the discouraging of earlier social practices, the missionaries, and later the school teachers, were always supported by the visible power and authority of the Revenue Service Captains who were a law unto themselves in this remote area" (Milan 1964:24 cited in Smythe and Worl 1985:291-292).

During the early period, the Presbyterian Church was fundamentalist in its religious orientation. In the 1960s the church introduced a taboo against hunting and whaling on Sundays, proclaiming it day of rest (Smythe and Worl 1985:292). Nevertheless, the Presbyterian Church was very successful in converting the Inupiat and it became an important mechanism for social cohesion (Milan 1964:71 cited from Smythe and Worl 1985:293). Christian practices such as prayer became commonplace before and after hunting animals and at major community feasts such as Thanksgiving and Christmas (Smythe and Worl 1985:293).

### *The Assembly of God Church*

The first missionary from the Assembly of God church came to Barrow in 1954. He came with two assistants to construct the first church building. With the help of a converted young Inupiat, the missionaries were able to covert many other Natives after their first two-week revival meeting in the Barrow church in 1959. It is reported that 32 people signed up for baptisms and as many as 150 attended the services after the revival (Bills 1980, cited from Smythe and Worl 1985:294). Subsequently, the Inupiat church leaders met and decided upon certain restrictions to be followed by members of the church. They agreed that members of the church should not drink, smoke, attend movies, or dance even Eskimo dances since they believed its roots were in shamanism and devil worship. As a result of this latter proscription, the Assembly of God church lost some of its members (Smythe and Worl 1985:295, 298).

Despite their strict fundamentalist orientation, the Assembly of God church continued to acquire members. A new, larger church was built in Barrow in the 1960s and congregations were formed in other communities on the North Slope such as Wainwright and Kaktovik (Smythe and Worl 1985:295-96). A small but strong Assembly of God church also exists in Point Hope. Whereas the Point Hope Assembly of God church has a formal minister, the congregations in the other North Slope communities, including Barrow, are organized and led by lay leaders.

### *Other Churches*

Several other churches now exist in Barrow (Catholic, Episcopalian, Baptist, and perhaps several smaller congregations of less formally organized groups). None of these have the historical roots in the community of the Presbyterian church, or even of the Assembly of God church. We therefore treat these churches in the section on contemporary churches in Barrow which follows.

## 2. Contemporary Churches

Membership in the Presbyterian church has declined and the nature of church activities has changed so as not to include much family participation. However, the Barrow Presbyterian church still offers social services and fellowship groups for the Barrow community. There is the Geneva Cross Fellowship for adults, a youth fellowship which, in 1985, had 75 members aged 13-18, a Sunday school group, and a women's association. In the area of social support services, the church provides Alcoholics Anonymous and the Ikayuqtit, or Helpers, for substance abuse problems. In addition, in 1985 the pastor sought grant funds to develop an adolescent drug prevention program. According to Smythe and Worl (1985:297), some of the local church members felt that these church-sponsored programs result from the pastor's personal agenda and do not represent their own efforts. This may have been one of the factors which led to this pastor leaving Barrow, which most informants linked to the election of the present NSB mayor. The pastor's departure was rather abrupt and left the church without a titular head for about a year and a half while a replacement was sought. During that time services were held and led primarily by a Presbyterian minister on temporary duty as an itinerant pastor and an Episcopalian deacon who had been assigned to the Barrow Presbyterian church even prior to this time by his bishop in the spirit of

cooperation and in accordance with the historical pact among the religious groups. The present pastor feels that his is still the main church in Barrow, and certainly the central Inupiat church in Barrow. He also feels that he and his wife (also ordained) have been well received, but that the church as a whole is now less directive in the sense that people now choose to attend or not, and in general are not too responsive to the censure of the church. He still sees himself (and all pastors) as role models, but thinks that he (and other pastors) have to be much more willing to listen to the congregation, rather than simply instructing them. He recognizes that his congregation has many problems, with alcohol and family violence ranking high among them, and thinks that community fellowship is one way to start resolving these troubles.

In this regard, the Presbyterian pastor was quite upset when the Episcopalian deacon in Barrow began to hold separate Episcopalian services, in conjunction with some Lutherans also in Barrow, in October 1988. This was done with no prior announcement to the Presbyterian pastor and with the full support of the Episcopalian hierarchy. The Presbyterian pastor considers this a breach of the agreement made by the original missionaries to divide Alaska into spheres of influence as well as a divisive influence in the community. He notes that the new Episcopalian/Lutheran services are almost totally non-Inupiat and fears that this will be the basis for an ethnic split in the community. The Episcopalian deacon maintains that only after being approached on this matter several times by individuals who felt that their spiritual needs were not being met by the Presbyterian services did he consider holding separate Episcopalian services. He stresses that besides the spiritual message of a church, and perhaps not distinguishable from it, is the fellowship of the congregation. He does not view the separate services as a schism, but as a search for the sort of fellowship stressed by the Presbyterian pastor. The Episcopalian deacon is clearly more sanguine about the possibilities of an interethnic sense of community for Barrow than is the Presbyterian pastor. The deacon would still like to cooperate with the Presbyterians as much as possible, but says that in many ways this is blocked by irreconcilable differences He was denied permission to hold Episcopalian services in the Presbyterian church, ostensibly because the Presbyterians refuse to allow any alcohol into the church (or its manse) under any circumstances, whereas the Episcopalians insist upon using wine for communion. The Episcopalian deacon does not think that his congregation is self-supporting as yet, as it is comprised of only about forty families, most of whom do not intend to live in Barrow permanently. He does not think of his congregation as non-Inupiat in comparison to the Inupiat Presbyterian congregation. Instead, he characterizes Barrow Episcopalians/Lutherans as being more educated, with a better command of the English language, and perhaps having higher incomes than Barrow Presbyterians. Episcopalian services are not held in the summer, when school is out, as this is when a good portion of the congregation is traveling or in the lower-48. The Episcopalian deacon is included in this group, as he works for the NSB School District and spends a good deal of the summer outside of Barrow. He is not paid for his religious duties.

The contemporary Assembly of God church is quite small in Barrow compared to the Presbyterian church. In 1984 the reverend reported there were 40 registered members and a larger number who attended regularly. Of this number, there were 10 to 20 non-Inupiat. Its membership was reportedly more ethnically diverse than that of the Presbyterian church at that time, containing some Filipinos and Blacks (Smythe and Worl 1985:298). At the present time (early 1989) the Assembly of God remains relatively small and has a predominately Inupiat identity. There are some non-Inupiat members, but some Caucasians have said that they have been discouraged in efforts to join the Assembly of God. Without more research the question of the nature of the

Assembly of God congregation must remain somewhat vague. The Assembly of God church incorporated in 1984 and since then the pastor has been elected by the members of the congregation. The church is supported by both obligatory payments and donations (Smythe and Worl 1985:298-99). In this it is like the Presbyterian church, in that both are basically self-Supporting.

The Assembly's strict fundamentalist approach to alcohol consumption has led to the development of a prevention program. This program seeks to prevent alcoholism through faith in Christ and, ". . . is supported by practices of group behavioral reinforcement" (Smythe and Worl 1985:299). According to the pastor this program has an 86% effectiveness rate in preventing alcoholism. Smythe and Worl suggest that this program may partially account for the success of the church (1985:299). Fieldworkers in other villages have noted that representatives from the Barrow Assembly of God church (Elders accompanied by other members) visit other villages periodically. These visits often coincide with times of community troubles, as was observed in Point Lay in 1987 when delegation from the Assembly of God and Presbyterian churches came to give advice and consolation during an extended search and rescue operation (Point Lay Case Study, in draft). Trips by an Assembly of God delegation to Nuiqsut in 1984 were more in the nature of an attempt to win converts and establish relations with the Presbyterian congregation in Nuiqsut. On both occasions public testimonies played an important role in the services provided. Most testimonies centered around the part the church had played in solving the testifier's problems. These were frequently related to alcohol abuse. Another important aspect of Assembly presentations was music and singing. Singing and testimony are perhaps the two most important aspects of this church on the North Slope.

The Presbyterian church has exhibited somewhat of a movement towards the Assembly of God in terms of the content of their services. Presbyterian services are still more formal, given the hierarchical structure of that church, but now incorporate more singing than before and now even sometimes include testimonies from congregation members of a nature very similar to Assembly of God testimonies. It has been remarked upon in the past that Inupiat frequently made little or no distinction between different denominations in terms of doctrine, and that may be in operation here. Individuals certainly have a personal identity as a Presbyterian or Assembly of God member, but this identity is more often based upon family membership and socialization that religious doctrinal reasons.

This may or may not be the case with the other churches in Barrow, which are all smaller than the Presbyterian church or the Assembly of God church, are all different in terms of at least some doctrine, and are quite different in terms of the social characteristics of their congregations. The Episcopal church has been discussed above, and essentially split from the Presbyterian congregation. The Episcopalian deacon is quick to point out that a large number of his congregation did not attend the Presbyterian church with any regularity, since it did not really meet their needs, Rather, they went there because there was no other place to go. The Catholic church in Barrow is quite small and is made up primarily of Filipinos and other non-Inupiat. They have their own separate church, which they allow the Episcopalians to hold services in. A Catholic priest visits Barrow perhaps once a month and lay people lead the other services. The Baptist church congregation is almost entirely composed of Caucasian non-Inupiat. They have no building of their own and hold services in the teen center. Their congregation is small but fairly active in their support of the church. The Baptist minister has been on the North Slope for several years, but just recently

made the move from Wainwright to Barrow (another couple took over his church in Wainwright). There had been a previous Baptist church in Barrow, of a different doctrinal nature, which had gone out of business. The Baptist minister considered this an auspicious time for his branch of the Baptist church in Barrow and decided to attempt to build up the church there, where he considers the possibilities more promising than in the other villages, in any event. This assessment is shared by the Baptist minister in Point Lay as well.

### 3. Role of Religious Institutions in Sociocultural Systems on the North Slope

In addition to providing religious fellowship to the people of the Barrow and the rest of the villages on the North Slope, the Presbyterian and Assembly of God churches have played an important role in controlling alcohol abuse. As described above, the Presbyterian church has initiated an Alcoholics Anonymous group and the Assembly of God church has its own strict alcohol prevention program. The religious institutions on the North Slope have also been important in the whaling practices of the Inupiat, particularly in the form of prayer and "singspiration."

There has still been little research on the degree to which Barrow churches are training grounds for leaders or areas where relationships among influential people are established. Most prominent Inupiat belong to either the Presbyterian or Assembly of God church. Most senior NSB non-Inupiat employees attend the Presbyterian church when they attend church, or at least this was true in the past. The effect the recent Episcopalian services have had on this pattern is unclear, as no services were actually attended. Nearly all boat captains profess church membership and begin the whaling season with prayers and religious ceremonies (the exceptions would be a few young captains exerting their independence). Religion is an important institution in Barrow, but difficult to pin down as to exact significant.

## E. Infrastructure

### 1. Utilities

***Water***

Barrow has no community-wide public water system. In all the other villages on the North Slope, the NSB delivers water by truck from a local water supply. In Barrow, the NSB has built a Utilidor system which services part of the community. The system was built by the NSB but is operated by BUECI, the local utility cooperative. This complex and expensive system is scheduled for expansion and was intended to serve the entire community, but whether this will ever eventuate is now open to question. Such expansion as is envisioned will use less costly construction methods than the first phase. When the existing Utilidor system was built most residents who were able to hook up and receive service did so. Now, people are more aware of the expense of the system and fewer are prepared to initiate service. Those who do not receive their water from the Utilidor system get it from a private firm or haul it in on their own in the summer and melt it from ice in the winter (Alaska Consultants 1983:109). The problems with relying on trucked water is that it

is both inconvenient and thought to contribute to the spread of communicable diseases (Alaska Consultants et al. 1984601).

The NSB Capital Improvements Program (CIP) has phased expansion of the Utilidor planned through 1990, by which time all users within the developed area of town (excluding Block "B") should be connected (Alaska Consultants et al. 1984:602). However, several problems have prevented these plans from being implemented as written. One of those problems is how many older structures in Barrow which have no plumbing facilities can be economically connected to the Utilidor system. Another problem was the question of availability of enough water from the upper Isatkoak Lagoon, where the intake facility is located, to supply the community (Alaska Consultants et al. 1983:109-10,12). This problem of water supply has been solved for the immediate and foreseeable future. The water plant has the capability to "make" 120,000 gallons of a water a day (200,000 with minor modifications) while current demand is only 60,000 to 70,000 gallons a day. The water source still has reserves of a billion gallons and BUECI has never used the total level available from it. However, the Utilidor may never be complete in the form in which it was initially conceived. Construction proved to be much more expensive than budgeted for, so that a simpler technique is now being used. Also, the operating costs of the Utilidor are higher than anticipated. Even with a substantial subsidization from the NSB, use fees are still high enough to discourage a significant number of households who could physically hook up to the Utilidor from doing so. These people still rely on delivered water and let waste water run out on to the ground. Human waste is disposed of by the "honeybucket" method.

### *Waste Disposal*

Until the opening of the Utilidor, all waste in Barrow was picked up and hauled to a dump, except for a very limited sewage "system" for the hospital/BUECI/school complex of buildings. This waste water was merely dumped into an outfall lagoon very close to the water source. This outfall lagoon went into operation in 1964 and was closed in 1983 when the complex was connected to the Utilidor (Alaska Consultants et al. 1984602).

Utilidor construction began in 1981. In 1983, the users of the Utilidor system included ". .. 130 units in the Browerville addition (primarily the NSB 12-plexes and 8-plex plus some Borough single-family units); 29-unit apartment buildings, the North Slope Borough administration building and the old hospital/BUECI [Barrow Utilities and Electric Cooperative]/Fred Ipalook school complex" (Alaska Consultants et al. 1984:602). At present (1989), a substantial part of NSB housing in Barrow and a good portion in Browerville are serviced by the Utilidor. Substandard housing in Barrow is for the most part not connected to the Utilidor, and the most recently constructed NSB housing (mostly in Browerville, but a recent subdivision in Barrow as well) has not been connected as yet either.

Prior to recent times, the most common methods for the disposal of solid waste were by incineration or simply leaving it on the ice to be swept out to sea with the breakup. Since those times a dump was created. This proved to be an unsatisfactory situation because the solid waste was mixed with sewage from honeybuckets, and when left at the landfill created health problems. In addition, a shortage of gravel resulted in the garbage being left uncovered and exacerbated these problems. Garbage was blowing around the area, including the nearby beach. In 1983, the Alaska

Department of Environmental Conservation reported that the dump constituted an environmental hazard (Alaska Consultants 1983:303).

Some cleanup of the dump occurred when the lagoon was dredged. However, the state wanted that dump abandoned and a new landfill site, with a honeybucket trench, developed. In 1984, a trucked sewage incineration building was scheduled to be built. It has been built but never operated properly and is now unused. It is pointed out as one of the landmarks on the road from Barrow out to the end of Point Barrow. The landfill at this location is still used, as attested by the flocks of sea gulls that are always present there.

### *Gas and Electricity*

Until gas was discovered by the Navy in the NPR-4, driftwood or coal hauled in from a mine near Atqasuk was the primary fuel source. After the discovery of gas, the residents had to petition Congress in 1959 to be allowed to purchase the gas from the Navy. Installation of the gas distribution system to Barrow residents was carried out by Barrow Utilities, Inc. (BUI) and was in operation by 1%5. The BUI was later renamed the Barrow Utilities and Electric Cooperative, Inc. (BUECI). During this same period, an electricity distribution system was installed in Barrow by the Golden Valley Electric Association and later purchased by the BUI (Alaska Consultants et al. 1983:120, Alaska Consultants et al. 1984:605). Today, the BUECI is responsible for the generation and distribution of electricity throughout Barrow. BUECI is also involved in explorations aimed at discovering new gas reserves near Barrow, since the current gas field is nearing the end of its productive life.

The availability of "cheap" fuel to heat homes caused major social changes in Barrow. Prior to the availability of gas it was not uncommon for twelve to fourteen people to live in one household. One reason for this was the high price of fuel and the ability to save on heating costs. However, when cheap gas became available people enlarged their existing homes and sometimes families moved into separate houses (Alaska Consultants et al. 1984606). A housing boom was set into motion which was accelerated by the damages of a major storm and energy consumption in Barrow increased dramatically in the late 1960s (Alaska Consultants et al. 1984:606). After the formation of the NSB, the relatively low cost for home heating in Barrow was the incentive for the NSB to institute the program to subsidize the cost of heating oil in the outer villages. The rationale given was that settlement in the outer villages was to be encouraged, or at least not discouraged, and one way to do so was to minimize the economic penalty for living in an outer village (much the same reasoning which lies behind the NSB'S creation of jobs in the villages).

The demands on the electric power system, which is fueled by gas, reached peak loads of 1,850 KW in 1978. Peak load use reached 4,000 KW in 1982 (Alaska Consultants et al. 1984:608) and has continued to grow. Current generating capacity is 10,500 KW (three 3,000-KW generators and two 750-KW generator backups), which BUECI officials say is enough for the foreseeable future. The demand for more gas as Barrow continues to grow is coinciding with depleted reserves in the fields outside of Barrow (Alaska Consultants et al. 1984:609). According to findings by Coffman Engineers, Inc. (cited from Alaska Consultants et al. 1984:609), the ". . . peak monthly demand for gas supplies in Barrow will exceed supply by the third quarter of 1991 and that average annual demand will exceed the available supply by mid-1992." Alternative sources for gas are being

explored in the Prudhoe Bay/Kuparuk area but reserves have not been proven to be sufficient to meet community needs (Alaska Consultants et al. 1984609). This is probably because of the costs of getting the gas to Barrow from the Prudhoe Bay/Kuparuk area rather than because of a lack of gas. The Barrow gas field is currently being developed to extend the life of its reserves and new gas sources are being developed. The finds have been small, so that the supply of gas is still problematic for the future, but there is no immediate danger of running out.

A key difference between the villages and Barrow, and an issue that has been raised at the NSB level, is the management of utilities in Barrow by BUECI. AU other villages have their utilities run by the NSB. BUECI began about twenty-five years ago as a cooperative utilities company whose aim was to provide quality utilities to the community of Barrow, which had not been made available up to that time. BUECI was so successful that when the NSB was formed no attempt was made to incorporate it within the NSB. Rather, the reverse has been considered at least two times. There would be significant advantages if BUECI were to assume responsibility for all NSB utilities, but also several potential liabilities. Officials at BUECI see the benefits as a more efficiently run operation with improved service. The drawbacks would be that local hire would probably decrease with an emphasis on competency and reliability rather than local residence. BUECI officials explained this in terms of their experience with their Barrow work force of forty-one. About half is Caucasian, a quarter Inupiat, and the other quarter Mexican, Filipino, or Black. All are competent and hires are made when possible at entry-level training positions so that the broadest range of applicants can be considered. This also ensures that every employee receives the training required for his or her position. The nature of the job requires that every worker be very dependable and shows up for his shift on time, however, and this interferes with what BUECI officials perceive as the local Inupiat life-style. Subsistence activities which cause a worker to miss shifts create problems, and entry-level workers are assigned the least convenient shifts to begin with. The result has been that even though Inupiat workers are as competent as any others, that they tend not to stay at BUECI as long as non-Inupiat. BUECI officials feel that BUECI work rules select against local Inupiat because of the constraints that employment at BUECI places upon the use of one's non-employed time. This is of course not a conscious bias against Inupiat or anyone else, but is due to the nature of the demands of the work involved. BUECI officials also note that annual turnover in their labor force averaged 700% nine years ago, but is currently at 7 to 10%. This also makes increasing the Inupiat proportion of their labor force a somewhat more difficult and long-term goal.

### *Communications*

*In* the early 1970s there were less than 300 telephones in Barrow. The General Telephone Company of Alaska constructed a new central office in 1978. New underground cables were laid throughout the community and the old switchgear center was replaced with an automated digital system that precluded the-need for operators (Alaska Consultants et al. 1983:134). The new plant is capable of handling over 3,000 telephone numbers if expanded. In 1983 there were more than 2,000 telephone-s in Barrow, with about 1,100 lines in use (Alaska Consultants et al. 1984:613). Barrow residents have access to cable television through a private company, a state-funded education channel and a state-subsidized bush charnel (Alaska Consultants et al. 1984:614). Current levels of use are unknown, but expansion for business and the NSB has probably been

greater than for residential use. Many Inupiat households still do without telephone service, which is relatively easy to do with the community use of CB radios for local communication.

## 2. Transportation

Through the 1960s dog teams served as the primary mode of transportation, although roads for vehicular traffic first appeared in the 1940s. Snowmobiles began to phase out the use of dog teams. By the mid-1970s snowmobiles were the primary transportation vehicle (Worl and Smythe 1986x56). Today, they are used primarily for subsistence activities, as there is a public bus system in Barrow to service local transportation needs. The buses run seven days of the week until 1000 PM, and for the most part there is a bus every 20 minutes. There are two main scheduled routes, one through Barrow proper and the other through Browerville (Alaska Consultants et al. 1983:157). The old NARL complex is also serviced at more irregular intervals. Three-wheelers are used during the summer but they create and perpetuate a lot of dust. In addition, the number of privately owned vehicles in Barrow has grown substantially since the 1970s, attesting both to increases in the population and in the purchasing power of Barrow residents (Worl and Smythe 1986%6-67). In 1983,495 vehicles were registered in all of the North Slope Borough communities; 443 of these vehicles were in Barrow. Table 28-BRW gives the number of registered vehicles on the North Slope from 1979 through 1984 (Alaska Department of Motor Vehicles, cited from Worl and Smythe 1986:67). Most of these vehicles are located in Barrow. Current informants comment that traffic accidents are now not uncommon and that traffic itself is much heavier than ever before. Although vehicles and traffic have also increased in the outer villages, the only accidents that occur there are one-vehicle mishaps due to operator error. Owning a private vehicle is expensive in Barrow, both in terms of the initial cost and in maintenance. Such private ownership is on the increase, however, and Inupiat seem to outnumber non-Inupiat owners. This may be because of the more transient nature of non-Inupiat residence and the common access to work or business vehicles for many non-Inupiat.

Airplanes provide the major means of transportation of both people and freight into Barrow. Barges are used in late summer if the ice conditions permit passage (Alaska Consultants et al. 1983:147). People will use snowmachines to travel to and from Atqasuk on a regular basis, and to and from Wainwright and Nuiqsut on occasion. During the open water period in summer, boats are used to travel the full extent of the coast line, often in conjunction with subsistence hunting pursuits.

**Table 28-BRW**

**Barrow**
**Registered Vehicles**

| Year | All Vehicles |
|---|---|
| 1984 | 498 |
| 1983 | 443 |
| 1982 | 341 |
| 1981 | 259 |
| 1980 | 205 |
| 1979 | 188 |

Source: Alaska Department of Motor Vehicles.
Cited from: Worl and Smythe (1986:67).

3. Recreational Facilities

The City of Barrow is responsible for the recreation facilities and league sports in the community. The league sports that are administered by the city include volleyball, softball, and basketball (Alaska Consultants et al. 1983:102). These summer leagues continue to be very popular. The old school complex provided a recreation room and a gymnasium which was used extensively by the entire community ever since the NSB assumed control of the BIA's Barrow Day School (Worl and Smythe 1986:76). The new school complex has facilities for even more activities. There is a large swimming pool, a running track, a weight-lifting room, and an area for gymnastics and wrestling. The City of Barrow has also built a separate building for recreation which has a gymnasium, ball courts, showers and sauna, and other facilities. There is also a community center where bingo games are held on a regular basis. Although it was extensively remodeled in 1982, it is too small for its present uses. It also lacks flush toilets (Alaska consultants et al. 1983:104-5). The library for the continuing education program occupies the front portion of this same building. A teen center also operates in Barrow, but no information was gathered on this activity and no information exists in the literature. In addition, the city sponsors an annual spring fair and cooperates with the NSB on occasional cultural events (Elders' Conferences, Messenger Feast).

All of these programs are headed by the recreation director. It is his or her responsibility to work with various organizations and individuals in the community to schedule the school gymnasium or recreation center as needed. The recreation coordinator must also cultivate good relations with community organizations such as the Mothers' Club, Barrow Search and Rescue, and the Lions Club since they have made donations for playground equipment and guard rails in the past (Smythe and Worl 1985:234). This post is recognized as of great importance for the community at large

and has recently been occupied by energetic and respected individuals. Just prior to our field research the non-Inupiat director left for a NSB position. She has been a long-term resident of Barrow, writes a regular column for the local newspaper, and has held a series of responsible positions in Barrow. Her successor is an Inupiat man active in many community affairs, and with ties to many of the voluntary organizations who support the city recreation programs.

Besides the formal, organized sports facilities and leagues available in Barrow, people engage in informal recreation activities such as hunting, driving snowmachines, playing bingo, and visiting friends. None of these activities are specifically thought of as recreation by Barrow residents, but they involve the family and ". . . are tied in significant ways to the culture of Barrow's Inupiat people" (Alaska Consultants et al. 1984:102).

**4.** Issues

The City of Barrow, as the center of the NSB, is sometimes difficult to discuss as an entity separate from the NSB. Barrow is the only NSB village which does not have a village coordinator, for instance, since it is assumed that the City of Barrow is in close enough proximity to the NSB offices that such an office would be redundant. There are certain infrastructure issues that for one reason or another help make the distinction between the two entities clearer. Three that are obvious are how recreation is dealt with in Barrow (a city program as well as a NSB/school program), the issue of the creation and expansion of the Utilidor, and the operations of BUECI in general.

Barrow is the only community on the North Slope to effectively run a recreation program independent of the NSB and the school. It developed this program in response to a community perception that Barrow was too large for the recreational facilities provided by the schools. To some extent this was aggravated by the relatively large non-Inupiat population which until recently had few children in school. Compared to the outer villages, the schools in Barrow were underbuilt in relation to the population as a whole. The City of Barrow's course of action was to establish a department of recreation which established, at relatively low cost, a program of team competition in various sports, including softball (using a pre-existing field). Once the program was established a grant for the construction of a separate city recreation building was written and obtained, and once this building was constructed the city recreation program became a permanent Barrow fixture. Fees associated with the use of the building help defray costs and are reasonable, by Barrow standards. This building contains a weight room, a basketball court, several racquetball courts, showers, a sauna, and an indoor track. No information exists on the composition of the user population.

The Utilidor in Barrow was clearly intended as a showcase project. It is technically a very challenging project to provide sewer and water service to a community underlain by permafrost. The expense of doing so, both in terms of initial construction and operation and maintenance, has been greater than expected. This has resulted in delays in the expansion of the Utilidor to all areas of the community, a modification of the basic design of the Utilidor to make it simpler and cheaper to construct, and less of a demand for hook-ups than had been anticipated One aspect of the Utilidor that was not fully anticipated was that a connected household uses much more water than one that is not connected. This not only increases the cost to the consumer, but also

places a larger service burden on the utility. It also increases the distinction between the outer villages and Barrow. Some people in the outer villages still express the desire for flush toilets in their homes, but most realize that this would be unreasonably expensive. Clearly there is some envy of the convenience available to Barrow residents in this regard.

While not strictly infrastructure in the same way, the present NSB policy in relation to diesel oil prices is also pertinent to this Barrow-outer village self-comparison. Barrow is presently the only village which is supplied with natural gas. As a consequence, heating costs are much lower in Barrow than in the outer villages. This was perceived as an inequality based strictly on location, and the NSB early on made a policy decision to subsidize the cast of heating oil in the outer villages in an effort to equalize these costs. This program has been described in more detail in another section. There are still enough disadvantages to heating with oil, and the cost to the consumer is still enough higher even with the subsidy, that natural gas would still be preferred by most outer village consumers as a heating fuel. Several studies have been done in various villages on the feasibility of natural gas for those villages, and none have been very promising. The one which seemed to indicate that Nuiqsut could develop an innovative gas delivery system for between three and four million dollars was never acted upon and seems to have never been seriously considered.

Barrow itself has a serious problem with its gas supply. Demand has risen faster than anticipated, supplies have declined somewhat more rapidly than expected, and the exploration and development of new fields has been delayed. These three factors have combined to make it almost certain that sometime in 1991 BUECI will have to start generating electricity with diesel (a less cost efficient fuel for them) so that there will be an adequate supply of gas for residential use. The major user of natural gas in Barrow is BUECI, so that with a partial conversion to diesel by BUECI residential customers are really in no danger of being without gas. Electrical rates in Barrow may very well have to increase, however, as BUECI cannot absorb the cost increase as the NSB could in a similar circumstance. BUECI is a non-profit corporation with its customers as its shareholders, and cannot run a deficit.

The problems with the Utilidor and the gas supply both demonstrate the consequences of unanticipated rapid growth and the lack of planning adequate to incorporate the implications of that growth. Simple extrapolation from past information did not predict the true future demand levels for service, let alone provide a reasonable margin for error or factors not taken into account. In Barrow, most infrastructure problems can similarly be traced to the consequences of unexpected growth, unexpected demand for services, or both. Village infrastructure problems are very different, as will be seen in the outer village chapters. For the most part, outer village infrastructure is overbuilt (sometimes to the point of being very difficult for the village to maintain and support) and is sometimes inappropriate for the village. At the same time, outer villages may lack relatively low cost items (city buses, for example) upon which they place a very high priority.

F. Fire Protection

1. History of Fire Protection Activities

Unlike the other villages on the North Slope where fire protection services and the training of firefighters are managed by the NSB but executed under the auspices of the local volunteer force, in Barrow these services are contracted out to the City of Barrow by the NSB. The city then contracts these duties to the Barrow Volunteer Fire Department (Alaska Consultants et al. 1983:71; Alaska Consultants et al. 1984:579). These volunteers still receive the bulk of their training from NSB personnel and take direction on general policy from the NSB fire chief.

There are currently two fire stations in Barrow. The one located in Barrow proper was constructed in 1975. The second station was constructed in Browerville in 1979 and expanded in 1983. It housed the City of Barrow administration offices on the second floor for a time (Alaska Consultants et al. 1983:71), but the city has since constructed a separate city hall next to the city recreation building in Barrow proper.

2. Organization and Activities

In 1983 the Barrow Volunteer Fire Department maintained about thirty-five trained volunteers, fifteen of which are trained Emergency Medical Technicians (Alaska Consultants et al. 1984:579). This volunteer base is considerably larger now. The Alaska Department of Transportation and Public Facilities maintains a crash fire rescue truck and quick response vehicle at the Barrow airport maintenance shops for emergency response to plane accidents (Alaska Consultants et al. 1984:579).

There have been some serious fires in Barrow. Structures destroyed by fire include the old laboratory at NARL, one at the first Top of the World Hotel, Brewer's hotel, the old co-op building offices, the BUECI office, the former public safety building, and some residences. Between 1970 and 1977, fifteen Barrow residents died in fires. Between 1977 and 1983, there were not any fatalities (Alaska Consultants et al. 1983:72; Alaska Consultants et al. 1984:580). In general, the recent past has been relatively free from fires, except for some damage to the elementary school complex.

There are really no Barrow-specific Fire Department issues that are not also regional issues, and so are better discussed as part of the general Barrow-outer villages comparison as it appears in the regional chapter of this report. Barrow is the only Native community on the North Slope large enough to need more than one fire station to provide timely response to any fire in the community. Barrow is the only NSB community with paid Fire Department personnel (although most firefighters are still volunteers). Barrow is the only NSB community where the Fire Department and the Search and Rescue organization are clearly differentiated. All of these are related to Barrow's size and its position as the administrative seat of the NSB.

## G. Search and Rescue

### 1. Historic Regional Development

The search and rescue service in Barrow was administered by a formal NSB department, the NSB Search and Rescue (SAR) organization. When the NSB created the Department of Public Safety, it also included a Division of Search and Rescue which now administers this service throughout the North Slope. Each village (including Barrow) also has a Voluntary Search and Rescue (VSAR) organization which in most cases predates the NSB SAR organization. The VSARS conduct most searches. The Barrow SAR is primarily the mechanism by which the VSARS are funded and equipped, and also will provide air support when it is deemed useful (to search or to handle other emergencies). The NSB SAR will also handle or at least help coordinate the logistics for a lengthy or complicated search. The NSB SAR Department does employ several people full-time (pilots, a coordinator) while VSAR organizations do not pay members. Public Safety and SAR have coordinated closely since both were formed because of obvious mutual interests and responsibilities, as well as the recognition that in the outer villages especially, the PSO was/is often the person best able to manage the logistics of a search effort. This role of the PSO in searches has changed recently to more of a support role. The NSB Fire Department is organized in much the same way as the NSB Department of SAR. There is a small, centralized staff of paid employees in Barrow and each village has a Volunteer Fire Department, equipped and trained through the NSB Fire Department, to actually fight the fires. In the villages of the North Slope the members of the fire departments are generally the same as those of the Search and Rescue team. However, at the NSB (paid) level, these departments are separate and must justify their budget requests independently.

### 2. Organization and Operations

The Barrow Search and Rescue organization had 35 to 40 members in 1983 but grew more than 150% in the following year. Membership in 1984 was reported to be 105 persons (Smythe and Worl 1985:276). Smythe and Worl suggest that the large membership is related to the prestige that is attached to being a Search and Rescue volunteer. The Barrow Search and Rescue Department is housed in the NSB Search and Rescue administrative building. The Volunteer Search and Rescue department in Barrow also receives financial support from the Borough (Alaska Consultants et al. 1984580). At present the Barrow VSAR is one of the largest and best-supported organizations in the village, although exact membership figures are not available. The Barrow VSAR is of course the largest VSAR on the North Slope and because of its proximity to the NSB SAR Department has obvious logistical advantagea in terms of access to equipment and training. The Barrow VSAR is commonly called upon to assist in search efforts based in the outer villages where local manpower may not be adequate for a full-scale search (especially given the need to maintain village services at the same time).

Search and Rescue issues for the City of Barrow are discussed in the Search and Rescue portion of the formal institution section of the regional chapter of this document. That analysis covers the relationship between NSB Search and Rescue and the outer villages.

H. Public Safety

1. History

Until 1976, when responsibility for public safety was transferred to the NSB, the municipality of Barrow provided police services. The force then consisted of a police chief, two patrolmen, and some part-time jail guards but it had no vehicles or communications equipment. The police facilities were also inadequate. The building had been built in 1954 and remodeled in 1975 to provide additional space and a jail. The building still could not meet the requirements of the City for it was too small and lacked a plumbing system. In 1981 the NSB instructed a new public safety headquarters and jail facility (Alaska Consultants et al. 1983:67). The size of the force and the degree of professionalism has been constantly increasing. Currently there is a detective division which handles all investigations and a liaison with the NSB school system, as well as the patrol division. The Public Safety Department is currently pursuing the formal accreditation process and expects that this will assist in the continued improvement of the department.

2. Organization and Operations

Today public safety services are provided through the NSB Department of Public Safety. There is also an Alaska State Trooper stationed full time in Barrow. In 1983 the personnel of the public safety department included thirteen officers (including the department's director and his deputy), an investigator and eight correctional officers, and an administrative coordinator and eleven civilian support personnel who were responsible for records, dispatch, and maintenance. The new public safety building has 13,224 square feet. It houses five offices, locker room, a training room, temporary sleeping quarters for officers, a small lounge with a kitchenette, bathrooms, a jailer's office, and a nine-cell jail (Alaska Consultants et al. 1983:67). In 1988 the number of line officers increased to 20, with an additional five corporals, two sergeants, a captain, a commander, and a director. There were also an additional seven corrections officers serving in the jail and three civilian administrative aides in the central office. There were also fifteen other civilian support staff.

Officers in Barrow meet the training requirements of the Alaska Police Standards Council and are eligible for training at the State Police Academy in Sitka (Alaska Consultants et al. 1983:69, Alaska Consultants et al. 1984576). There are five patrol cars for daily operations and four support vehicles, each of which is equipped with a multi-channel two-way radio. However, the useful life of each ear is about two years because of the adverse weather conditions and lack of paved roads. This makes Public Safety maintenance rather expensive. The department has its own garage facilities for repairs. Some senior off-duty officers who are on 24-hour call are allowed to take department vehicles home so that they have reliable transportation in ease of emergency. The private ownership of automobiles in Barrow, whale increasing, seems to be more common among Inupiat than non-Inupiat. Many people rely upon access to work or business vehicles for their transportation needs.

Barrow is unique on the North Slope in terms of the working environment it provides for Public Safety Officers (PSOs). By policy, all PSOS are periodically assigned to Barrow. The ideal pattern

is for newly hired officers to be stationed in Barrow at least a year and then to assume their place in the standard rotation of two years in an outer village, a year in Barrow, two years in an outer village (perhaps but not necessarily the same one), a year in Barrow, and so on. How this works out in reality is discussed in the regional section, but at least in theory all PSOS share a common range of experience gained through duty in Barrow. Barrow is also the only duty station on the North Slope where PSOS have definite shifts when they are on duty. In the outer villages PSOS are on 24-hour call (although in theory, with two PSOS, each is only on 12-hour call). Life for a PSO can therefore be much more planned and scheduled than for a village PSO, and contains a good deal more routine. Proximity to the central Public Safety administration also tends to formalize public safety procedure. More paperwork is filed in Barrow and patrols and duties are more narrowly defined than in the villages. The Public Safety Department has been instituting a computer network system to connect all the PSOS in the villages with Barrow, with one of its goals being the standardization of incident reports and the compilation of an accurate data base concerning the department's work load and activities.

Barrow PSOS have always had a jail and thus always have had the option of taking a person into custody. This has not been the case in all villages until the very recent past. Enforcement has thus been somewhat more consistent and stringent than in the villages. Barrow PSOS generally have adequate support in terms of secretarial assistance and can obtain repairs or replacement of defective equipment in relatively short order. This also affects the way that the law is enforced.

Public Safety issues for the community of Barrow are discussed in the regional section of this report.

## I. Schools

### 1. Historv

The BIA constructed and ran the first school in Barrow. This school was built in 1%5 and consisted of what is presently the Barrow elementary school complex. However, at the time it was built, the complex included a multipurpose building, a secondary school building, and associated teacher housing. The elementary school wing was added later. Students who desired to go to high school had to leave Barrow and attend BIA-run schools in Sitka (Mt. Edgecumbe), Oregon, Kansas, or Oklahoma. Some students participated in a boarding home program and so were able to attend school on Anchorage or Fairbanks (Alaska Consultants et al. 1983:91).

As part of incorporation in 1972, the NSB was required to administer its own school district. In 1974 the Borough expanded its curriculum in Barrow so it was able, for the first time, to offer high school to local students. Through the CIP, the school facilities in Barrow were expanded and remodeled. A new high school complex was opened in the fall of 1983. This complex consists of five wings that house classrooms, recreation facilities, an auditorium, a vocational education unit, and a utilities structure (Alaska Consultants 1983:91).

2. Organization and Operations

Today there are two schools in Barrow, the Fred Ipalook Elementary School and the Barrow High School. There is also a vocational education unit. There is no summer school but there are a variety of special programs including continuing education for adults and youth programs to supplement the regular curriculum. The school district has also made an attempt to provide young students with instruction in Inupiat culture and language. For example, there is a special program to teach children about Inupiat culture called the Inupiat Cultural Heritage program. This program is funded by federal Indian education grants. Inupiat language instruction is required for children from Early Childhood Education through the sixth grade. Throughout high school Inupiat language courses are optionaL "In addition, references to the Inupiat culture have been incorporated into junior high and high school home economics courses and into vocational education classes" (Alaska Consultants et al. 1983:93). The school district in Barrow also maintains an Inupiat cultural resource bank containing books, films, slides, and other material (Alaska Consultants et al. 1983:93).

3. Issues

Barrow is the largest NSB community, with the most diverse population, and is the administrative center for the school district. Thus, it is natural that school district issues are more visible here than in the other villages. Most are only specific manifestations of issues that do exist in all the other villages but do not take the same form there because of a lack of critical mass or other local factors. These issue will be described here in the Barrow context, but comparative discussion is reserved for the regional section.

Perhaps the key issue for public North Slope education is one that is given little public discussion, and is not as noticeable in the outer villages as in Barrow. Several teachers in Barrow have observed that on the average non-Inupiat students seem to have more success in school than do Inupiat students. They do not attribute this to any intrinsic difference in ability (at least in principal), but point to the different expectations and support provided by the parents of the students as the primary factor. One primary measure such teachers mentioned was the interest parents displayed in talking to the teacher about how their child was doing. Non-Inupiat parents as a group display such interest much more than Inupiat parents. Those Inupiat parents who do display such an interest tend to have children who are successful in school. Again, we must stress that these are not the result of systematic study, but are the observations of a few informants. It may be that since nearly all teachers are non-Inupiat that Inupiat parents are not comfortable dealing with them. Nonetheless, the apparent differential achievement rates of Inupiat and non-Inupiat students in Barrow, if substantiated by statistics, would indicate a fundamental problem in the educational delivery system. Such statistics and records were not available for this project.

A second key issue concerns who should control the educational process. That is, people are concerned over who should make the decisions about what is taught in the public schools. At the NSB level this takes the form of who is elected to the regional school board, who is hired as district superintendent, the relations between the school board and the superintendent, and the degree to which the school administration listens to local (village) concerns about how the schools

are run. The last is of primary concern here. Barrow has a formal School Advisory Council, like all the other villages, which seines in an advisory capacity to the local school principal who in turn is supposed to voice these local concerns to the school board as a liaison for the village. This system has foundered in most of the villages because of a number of reasons - lack of local participation, the perception that the SAC is powerless and ignored, and the frequent impression that the local principal is using the arrangement to achieve his own agenda rather than the community's (to the degree that the principal is independent of the school board in any event). In Barrow, this has resulted in the impetus for the formation of a Parent-Teachers Association (PTA) so that the concerns of the parents and teachers can be more directly presented to the school board. While the PTA and SAC need not be rival groups, they have been assigned that status in Barrow. The situation was not resolved at the time of our fieldwork, and the situation is quite complex. Teachers are quite active in the PTA and have been accused of perhaps trying to dominate it in a political/policy power struggle with the central administration. There are no easy decisions to be made about how "Western" an education to provide, mode of instruction, and the extent of Inupiat cultural content to strive for. Unfortunately, these are the issues that need to be addressed if the public education system is to successfully seine its public, and there are no clear answers at present.

SECTION IV: CULTURAL ISSUES AND INFORMAL INSTITUTIONS

## A. Patterns of Change in Informal Institutions

The process of informal institutions becoming formalized can be seen in Barrow in the context of the Barrow Search and Rescue team, which appears representative of a traditional element in the Barrow community. Many of the members of the organization are older whaling captains who represent traditional elements of Inupiat culture (Smythe and Worl 1985:276). They sometimes act as community leaders and advisors both in Barrow and in other villages in the borough as illustrated by Smythe and Worl (1985:277). They relate that Barrow Search and Rescue had acquired a boat through a legislative appropriation grant and were bringing it up the coast from Kotzebue. On their way through Point Hope, Point Lay, and Wainwright the men offered advice to groups in those villages on how they too could receive similar funds. This example demonstrates that Barrow Search and Rescue is more than a search and rescue organization. Many of its members are esteemed residents of the community. The extent of their activities beyond search and rescue attest to this point.

## B. Subsistence

### 1. Organization of Subsistence Activities

To guide this discussion on the organization of subsistence activities, the ". . . four basic patterns of employment/subsistence strategies" discussed by Worl and Smythe (1986:196-209) will be used. They are:

> (1) direct relationship between the wage earner/hunter and the elderly/hunter, (2) intermittent employment, (3) weekend hunter, and (4) subsistence/commercial hunter. The first three strategies are the most common and the subsistence/commercial hunter the least prevalent.

These are general trends that seem to emerge from the way traditional subsistence activities articulate with the wage labor economy in Barrow. They are not necessarily conscious "strategies" adopted by people to allow for the coexistence of subsistence and wage labor employment, but certainly often seem to have that effect. These patterns are useful in an analysis because they illustrate the social and institutional changes that have occurred in relation to subsistence and the wage economy.

### *Wage Earner/Hunter Relationship*

This pattern typically involves one male member of a household who is financially supported by his kin so he is free to participate in subsistence activities. The wage earner maybe male or female, perhaps elderly, but it is he or she that supplies the equipment (e.g., snowmobile, boat, motor) and lends it to the hunter. The hunters, in turn, distribute their catches among the kin who made the hunt possible. Worl and Smythe found that many of the hunters falling into this pattern were often alcoholics and likely to be viewed by their families as individuals who cannot hold a job. Often these hunters had not graduated from high school. But despite these negative aspects, the men whose subsistence activities are supported by kin ". . . fill a vital role in harvesting subsistence resources for their household and interrelated households" (Worl and Smythe 1986:200).

### *Intermittent Employment*

Subsistence hunters following this pattern alternate between periods of employment and shorter periods of subsistence production. They usually participate in subsistence activities while unemployed but do not necessarily quit jobs to go hunting. This mixing of employment and subsistence has been occurring since wage employment first reached Barrow. Sonnenfeld (1957482-483, cited from Worl and Smythe 1986:201) reported that at the ARCON facility in the early 1950s, Inupiat employment was inconsistent, as Inupiat men worked 25 months out of the possible 87-month work period..

Many of the men who follow this pattern work in order to engage in subsistence activities. They may retain their jobs for any number of weeks or months and then go hunting. Others who work only intermittently are not able to hold a job because of acknowledged drinking problems. They will not necessarily spend all of their unemployed periods hunting. However, it is not uncommon for any of these men to sell their subsistence resources for additional income when not working. However, this trend may be changing, as suggested by Worl and Smythe. With the winding down of the major CIP spending in the mid-1980s, people are realizing that employment is becoming scarce.

### *Weekend Hunters*

Weekend subsistence hunters enjoy hunting on a regular basis but they do not compromise their employment to do so. Significant variations occur in the amount of time fully employed men spend in subsistence production. However, Kruse found that 60% of the Inupiat surveyed in 1977 reported they engaged in subsistence activities primarily on weekends and after work (1981, cited from Worl and Smythe 1986:204). Those who are avid hunters will take advantage of the flexible and liberal subsistence leave allowances offered by the NSB and other employers.

### *Subsistence/Commercial Hunter*

Sometimes Barrow Inupiat will sell their subsistence resources, although this is not a very common way of combining subsistence and wage labor. The practice of selling subsistence resources in Barrow also appears to be unique among the villages of the North Slope. However, it is important to note that this practice ". . . provides a vital service to the community in supplying resources which otherwise might not be accessible to some local residents" (Worl and Smythe 1986:207). Usually, households involved in selling subsistence resources are older couples, assisted in various ways by younger kin. This is because older people have few financial obligations, typically have a steady retirement or rental income, and have enough free time to engage in prolonged subsistence pursuits.

The most common subsistence food to be sold is whitefish, and it is sold at prices that appear to be below the cost of production. Subsistence resources that are sold commercially are done so through the large retail store in Barrow. Subsistence resources that are not sold commercially are sold through private homes to other Inupiat in Barrow. However, goods are sometimes sent to relatives in other villages who can then sell the fish or meat themselves. The local radio station in Barrow regularly announces the sale of these items over the air.

### *Inupiat Women and Subsistence*

The traditional roles of Inupiat women in subsistence production have changed for all except, perhaps, the older women. Women's primary contribution to subsistence production has always been in the area of clothing preparation, which included the butchering, flensing, and tanning of ugruk skins for parkas. The ugruk skins were also necessary for construction of the umiak used in spring whale hunting. Barrow spring whalers now use a mix of skin and other boats, so this use is still quite important. The sewing of the ugruk skins on the umiak was being done by ten older women in 198S but the quality of their work was apparently slipping because of the demand for their services and the fact that there were so few of them. Because of the shift to full-time wage labor jobs, which led to a fourfold increase in the female labor force between 1960 and 1977, women do not have as much time to devote to subsistence production as they had in the past (Kleinfeld 1981, cited in Worl and Smythe 1986:207). However, there are some who continue to process subsistence resources in addition to working at their full time-jobs.

There is an interesting phenomenon associated with degree of household subsistence participation which is represented in Table 29-BRW. One can see in the first box that those households which are most active in subsistence pursuits are not, on the average, the households with the highest annual income. This is true for both Inupiat and non-Inupiat, but for different reasons. In the case of Inupiat, this surprising correlation could be an artifact of the way the table is organized (see Tables 5-BRW and 7-BRW). On the other hand, while wage income would restrict the time available for hunting, it also allows the purchase of the best equipment so that the use of that time can be maximized. For non-Inupiat it may be that those households with the highest annual incomes are not permanent residents in the community, or at least do not behave as though they have a commitment to the village. Therefore, they may not participate in subsistence activities at the expense of employment.

## Table 29-BRW

### Barrow Household Characteristics -1988
### By Levels of Subsistence Participation

| | DEGREE OF SUBSISTENCE PARTICIPATION | | | |
|---|---|---|---|---|
| | MINIMAL | MODERATE | ACTIVE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $41,903 | $66,458 | $55,900 | |
| Non-Inupiat HHs | $72,416 | $87,708 | $80,300 | |
| All HHs | $61,761 | $70,000 | $59,651 | $62,043 |
| Cases: | 504 | 72 | 179 | 75s |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 3.5 | 4.2 | 4.4 | |
| Non-Inupiat HHs | 2.5 | 3.3 | 2.8 | |
| All HHs | 2.8 | 4.1 | 4.2 | 3.3 |
| Cases: | 562 | 79 | 217 | 858 |
| **Average Meat & Fish Csmptn from Own HH Subsistance (%):** | | | | |
| Inupiat HHs | 5.0% | 31.7% | 71.2% | |
| Non-Inupiat HHs | 1.6% | 28.4% | 71.5% | |
| All HHs | 2.8% | 31.1% | 71.3% | 22.7% |
| Cases: | 562 | 79 | 217 | 858 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 24.6% | 18.0% | 20.1% | |
| Non-Inupiat HHs | 3.1% | 9.5% | 4.0% | |
| All HHs | 10.4% | 16.5% | 18.0% | 12.9% |
| | 553 | 78 | 215 | 846 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 6.6% | 16.5% | 29.0% | |
| Non-Inupiat HHs | 1.7% | 15.8% | 18.7% | |
| All HHs | 3.4% | 16.4% | 27.7% | 10.7% |
| Cases: | 559 | 79 | 214 | 852 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 61.3% | 53.7% | 60.8% | |
| Non-Inupiat HHs | 35.8% | 34.9% | 40.2% | |
| All HHs | 44.4% | 50.6% | 58.2% | 48.6% |
| Cases: | 524 | 78 | 212 | 814 |

Notes: Degree of subsistence participation measured on the basis of how much HH meat & fish consumption was from the HHs own subsistence activities; where

MINIMAL: Under 20% meat & fish from own HH subsistence
MODERATE: 20-40% meat & fish from own HH subsistence
ACTIVE: Over 40% roes! &fish from own HH subsistence.

Total cases (households) = *968.*

Source: NSB Department of Planning and Community Services
Census of Population and Economy

2. Inupiat Subsistence Ideology

"Inupiat subsistence ideology" as it applies to Barrow is not a clear-cut topic, as community concerns blend with regional issues to an even greater extent than in the other villages of the North Slope. This is due to the fact that Barrow is the largest community on the North Slope, is the hub of the region in many different senses, and is the site of much of the political activity on the North Slope regarding subsistence issues. If some of the discussion carries beyond the concerns of the residents of Barrow, please bear in mind that Barrow is the largest community on the North Slope and contains a majority of the Inupiat population.

For a number of reasons, subsistence pursuits around Barrow are considered more difficult to pursue than in some of the other communities of the North Slope. In fact, former Barrow residents who are now living in other villages in the region often give as one reason for moving out of Barrow is that they wish to live where it is easier to hunt and fish. There are a large number of hunters in Barrow, and informants say that finding harvestable resources around Barrow is not all that easy. Two sorts of comments are especially telling. Informants from outer villages say that it is common for the "owners" of fish and hunting camps who live in Barrow to try and keep other people from using those sites and facilities. In the outer villages, they say, few people try to exert such prerogatives. Informants also say that there are now so many whaling crews and people in Barrow that even when a crew does catch a whale that a crew share is so small that it is only good "for a meal or two." Both these views address fundamental values of Inupiat subsistence ideology -- that an Inupiat should be allowed to hunt and fish wherever he wishes to on Inupiat land, and that subsistence harvests should be freely shared with anyone who needs the food, with proper respect being shown to the hunters and the animals. The "objective truth" of the informant assertions cannot be vouched for, but the perceptions which underlie them are clear. At least some people think of Barrow as a place where there is no longer free access to subsistence resources, and where one must be either selfish or lacking in Native food. Nuiqsut informants say that they do not use the Teshekpuk Lake area much from the Nuiqsut side, since this in one area that Barrow hunters use quite a bit. It is closer to Barrow, and there are generally areas closer to Nuiqsut for the same sorts of resources. When Nuiqsut hunters do go through the area, on their way to and from Barrow, they usually encounter too many Barrow hunters to be tempted to hunt themselves. Only if they need immediate food or supplies do they hunt on such trips (fur bearers maybe an exception).

Another common perception of Barrow (especially by those who live outside of Barrow) is that people from Barrow try to monopolize or control the North Slope position on those issues which affect NSB subsistence. In terms of Inupiat subsistence ideology, the organizations most pertinent here are the ICAS and the AEWC.

The ICAS is the Barrow-based regional IRA organization and is most commonly perceived by informants as being run by a group of "radicals." Each village, in theory, has a representative to the ICAS, but in practice most of these representatives are rather inactive. The only village with a substantial ICAS presence is Barrow, and even in Barrow most people do not give the organization much weight. In the past the ICAS took the point position on the protection of subsistence resources, contesting the rights of the state and federal governments to hold lease sales on Inupiat lands. These cases have been lost and the NSB has since then modified its stance on development to more of a compromise position. The ICAS, by maintaining its hard-line ideological

stance of Inupiat land rights has, in effect, been left out on its own. People are, of course, evaluating the NSB'S course as well, wondering if perhaps too many compromises with oil development have been made, but most fall closer to the NSB position than to that of the ICAS.

The AEWC has often been called a Barrow-dominated group, even though it is composed of villages outside of the NSB as well as the six whaling villages of the NSB. Given the reality of the quota system and the formal allocation of strikes by village, this is an extremely important perception. The total bowhead quota for 1990 has been set at 41 animals taken or 47 strikes. One speaker at the 1990 AEWC conference in Barrow suggested that the villages had up to this point been too interested in increasing the number of strikes for their village and not in seeing that as many villages as possible could whale. No communities were singled out as the subject of this remark, but Barrow has by far the largest number of whales allocated (15) and 42 of the total 140 whaling crews. Gambell and Savoonga, with perhaps 30 whaling crews between them, have only four whales each. These are clearly disproportionate. Other villages fall in between (Point Hope is allocated 6 whales, Wainwright 5, Nuiqsut 2, Kaktovik 2, Kivalina 2, and Wales 1). There was also a resolution introduced to define "residency" for purposes of defining who can whale as a recognized whaling captain out of a village. In essence, this resolution would make an individual live in a village for a year before he could outfit a crew and whale under the quota allocation for that village. No one would be allowed to live in one village and whale as a captain of a crew from another village. This was clearly seen as the larger villages protecting their quota allocations at the expense of the smaller villages with smaller (or no) quota allocations.

## 3. Issues

The establishment of a whale harvest quota by the International Whaling Commission (IWC) has decreased the amount of time spent whaling by Inupiat. Prior to the quota, it was not unusual for the spring whaling season to last as much as four weeks or longer. Today, this activity has been reduced to as little as four days, not including preparation time (Worl 'and Smythe 1986:155). Usually, fall whaling is not conducted out of Barrow because quotas are often met at the spring hunt and the conditions of fall whaling are much less pleasant than for spring whaling. Despite the decrease in the amount of time available for whaling, the costs incurred by whaling captains have increased sharply. In 1978, the average expense incurred by a whaling captain, and umialiq, was $10,361. In 1984 the umialiq's expenses were estimated to be $16,090 (Table 30-BRW).

**Table 30-BRW**

**Barrow**
**Captain's Expenses, Spring Whaling**

| | |
|---|---|
| Capital Investments | |
| 1 Skin Boat | 1,500.00 |
| 2 Shoulder guns @ $900 | 1,s00.00 |
| 2 Darting guns @ $700 | 1,400.00 |
| 2 Snowmachines @ $3,500 each | 7,000.00 |
| 2 sleds @ $400.00 | 800.00 |
| 1 CB, antenna and battery | 550.00 |
| 1 Tent | 400.00 |
| 1 Kerosene heater | 95.00 |
| 1 Line rope 600' | 115.00 |
| 6 Harpoons with lines @ $60 | 360.00 |
| 3 Tarps @ $60 | 18000 |
| | **$14,200.00** |
| Operating Expenses | |
| 10 Bombs @ $50.00 | 500.00 |
| 3 Drums of fuel | 300.00' |
| 1 Drum of kerosene | 90.00 |
| Food | 1,000.00 |
| | $1,890.00 |
| GRAND TOTAL | $16,090.00 |

* The stores offer a discount price during the whaling period. The normal price is $160 per drum.

Source: Worl and Smythe (1986:156).

## C. Traditional Sharing and Kinship Behaviors

### 1. Kinship Organization

Kinship organization in Barrow is discussed extensively in Burch (1975) and reviewed in Worl and Smythe (1986), but the main points will be noted here, especially as they relate to sharing. Prior to contact with non-Natives, Inupiat kinship provided the structural elements for settlements. These settlements were composed of a local family and two or more large, extended families living in closely situated, or interconnected dwellings. The domestic or nuclear family were the basic operating units within this system, but did not function independently of the larger "local families." Sleeping, eating, or working could occur in any of the dwellings and subsistence resources were shared among everyone.

Since about 1850 and the arrival of the whalers, Inupiat family units have become smaller in size and simpler in structure. Burch claims that the reasons for this shift are primarily demographic. Of particular importance in the demographic changes were increases in family size due to reduced infant mortality and improved health care (Worl and Smythe 1986:228). Despite the trend toward nuclear family households, the wide-ranging character and flexibility of traditional kinship organization continued to permeate Inupiat society. The basis for many social units and institutions in Barrow today are rooted on kinship ties. According to Worl and Smythe (1986:230), "The clearest expression of this structure occurs in the activities of hunting and dividing meat . .." This will be discussed below.

### 2. Formal and Informal Sharing

The basis for sharing subsistence resources is founded on a social relationship between two individuals and/or the perception of a potential recipient's need of an item. Social relationships are most often based on kinship, adoption, names, and partnerships. However, neighbors, friends, co-workers, or fellow church members may also provide the basis for receiving shares of subsistence resources. The formality of distribution of subsistence resources decreases from whale meat, to walrus or ugruk, to caribou and fish, which have the least formal rules for sharing. For whale meat, then, there is a very strict and formal system for distribution, which is based on the type and level of assistance rendered to the successful captain and crew (Worl 1978, VanStone 1%2, cited from Worl and Smythe 1986:290).

> The largest share goes to the boat which first struck the whale; the share is divided among the captain, crew, and the boat (the latter going to the boat owner if different from the captain). Much of this maktak and meat is redistributed extensively in the community during the celebration feasts and Nalukataq, Thanksgiving, and Christmas. Other boats which assist in landing the whale also receive shares. Finally, smaller shares are distributed to community members who help pull the whale onto the shore ice, participate in butchering it, or make contributions of food or money to the captain for maintaining his crew on the ice or at Nalukataq. (Worl and Smythe 1986:290-91.)

This seemingly complicated system also provides for secondary distribution of the meat that sometimes reaches related individuals in other villages and cities, and even out of state (Worl and Smythe 1986:291).

For sharing walrus, ugruk, and smaller seals, there are rules which are similar in structure to those applying to the distribution of whale meat. One share automatically goes to the captain or whoever is the owner of the boat. In the case of walrus, the "boat share" includes the head of the walrus. With ugruk, the "boat share" includes the skin. The rest of the catch is distributed among those who share in the butchering of the animal. Women have a large role in this aspect of subsistence production. In one unusually large catch witnessed by Worl and Smythe during their fieldwork, the entire group of hunters and butchers were close lineal relatives, or spouses of relatives, descended from two brothers. It is also not unusual for distribution to be based in part on a household's expected level of consumption (Worl and Smythe 1986:291-93).

The rules that apply to the distribution of caribou and fish are even more flexible and informal than those for the larger sea mammals. Usually these catches are shared only within families since one person or family on a fall inland camping trip is responsible for hunting them. The caribou and/or fish is divided upon the family's return to Barrow. After the hunters have provided a share for their family they will share any remainder "'with just about the whole family' (lagiit) and with people outside the family" (Worl and Smythe 1986:295).

There is one curious difference between sharing caribou and the larger mammals such as walrus, ugruk, and seal. While women who assist in butchering the ugruk and walrus are entitled to a share of it, this is not the case with the butchering of caribou. To receive a share of caribou, a woman must be a member of the family who hunted it or the caribou must simply be offered to her (Worl and Smythe 1986:295).

Other aspects of sharing can be gleaned from Tables 5-BRW and 7-BRW, which show the relationship between various household characteristics, and household size and household income respectively. Based upon Table 5-BR W, it appears that the largest households are most active in subsistence participation, more likely to both share and receive subsistence resources, and likely to spend more of their income in Barrow than smaller households. This at least holds true for Inupiat households. The likely explanation for this trend is that larger households are better prepared financially to support active participation in subsistence. This contention is supported by Table 9-BRW which shows that households in the highest income categories share more than those in lower income categories.

One also notices from Table 8-BRW that the highest income Inupiat households spend less of their incomes in Barrow than do lower income households. One explanation for this is that these wealthy Inupiat households are purchasing expensive goods such as outboard motors, boats, and snowmachines from outside of Barrow to be used in the village. This may not be the same explanation one would give as to why higher income non-Inupiat households do not spend as much of their income in the village. As mentioned above, not spending income in the village probably represents a lack of commitment to the village and the application of income to capital purchases or investments outside of the community. There is also a limited variety of goods to buy within Barrow.

3. Ideology of Kinship and Sharing

This topic has been treated in the discussion of the sharing of subsistence resources above. It is important to note that in Barrow, unlike other villages on the North Slope, the selling of subsistence resources is common. It is also important to note that the degree of the formality of sharing (and the consistency of sharing "rules") varies from specie to specie.

4. Issues

Barrow is the regional hub community. As such, most transportation routes funnel into Barrow. It is thus a natural gathering place for shared products (most importantly subsistence foods) and people traveling from one place to another. This is discussed in the regional chapter and that treatment is best not duplicated here. There are a few issues specific to Barrow that should be mentioned, but a full treatment is beyond the scope of this report since they are not treated in the literature and fieldwork was limited in scope.

Because of the great diversity of the Barrow population, sharing patterns and networks are often greatly different from those in other villages. Non-Natives are more frequently incorporated into such networks, and the resources they contribute may be different from those contributed by Natives. This has not been investigated. There are also extended Native household networks in Barrow which are very much like those described for Point Hope, as well as more confined networks. Diversity is perhaps the key descriptive word. Because of the size of the Barrow population, people sometimes complain about the decline of the sharing ethic in Barrow. This is perhaps exemplified best by the common complaint that crew shares have been so reduced in size because of the large number of crews. This is actually a sign that sharing is perhaps too much adhered to. Those who produce the harvest often in fact feel that they receive too little. The true extent of this feeling or perception is not clear, but it certainly contributes to the ebb and flow of population between Barrow and the outer villages.

Barrow is also the only village with special housing set apart for the elderly. This housing effectively separates them from the rest of the population, although it is near a bus line and within walking distance of a number of places. The housing is still located on the margins of Barrow and may contribute to the isolation of at least some of the people who live there. Again, this was not much investigated due to lack of time and is not treated in the literature.

D. **Attitudes Toward Development**

Barrow is in a somewhat different position with respect to development when compared with other villages on the North Slope. As the seat of the economy of the North Slope, there are many more direct benefits of regional economic development in Barrow than in the outlying villages. Although data were not systematically collected on this subject, it is obvious that Barrow attitudes toward development are shaped by the perception that to a significant degree Barrow is able to control the direction of development. In the other villages, a very significant factor in attitudes toward development is the feeling that there is not sufficient local control of either regional or outside

entities. In these communities, there is often a NSB/Barrow versus "us" dynamic; this element is missing in Barrow itself.

### E. Attitudes Toward Local Control of Schools

Barrow is in a unique position on the North Slope as the NSB School District is headquartered in the community. Through immediate access, and through political power borne of population proportion, Barrow is effectively able to assert local control over the school system. The Borough system is, to a large degree, the Barrow system. Barrow is the only community on the North Slope that has local control over its schools.

## F. Secularization

Community life in Barrow, as in all the NSB villages, has become more 'secular" through time. As the hub community, this is perhaps more noticeable in Barrow than in the other villages. There is a greater diversity of population and opportunities in Barrow than elsewhere on the North Slope, which seems to have reduced the feeling of community unity and role of religion in everyday life.

### 1. Public Celebrations

Because of its size, there are very few public celebrations that involve the entire community of Barrow. Many community members do not know each other, again because of the size of the community. Yet, most events must be organized so that community members who do not necessarily know each other can participate together. In this Barrow is different from all the other NSB Native communities, which are all face-to-face villages. Barrow is also the only NSB community to formally organize public celebrations of more than one day's duration that are explicitly designed to involve any community member (in some cases defined as the entire NSB) who decides to attend. In this sense, Barrow serves as a regional ceremonial focus. As expected, it is the NSB which sponsors most of these events.

The three main events of this nature are the spring festival, which includes dog races and various sorts of physical competitions, the Messenger Feast in January, and the Elders' Conferences which are held from time to time (generally not every year). Events are scheduled to take place where it makes the most sense to conduct them. NSB sponsorship generally favors no group over any other, and no group other than the NSB is really associated with either event. The Messenger Feast, and to some extent the Elders' Conferences, do have spiritual overtones, but these have not been explicitly examined in the literature and Inupiat are quite rightfully suspicious of any non-Inupiat statements about Inupiat belief systems and their relation to "traditional" and "Christian" traditions. We therefore do not try to address this question.

Other community-wide celebrations are held at Thanksgiving and Christmas, and perhaps Easter. These events tend to be associated more with churches than the events discussed above, in that people generally attend a feast organized by the church they normally attend. At Christmas there is a series of games organized on a community-wide basis. These are no longer 24-hour, around-

the-clock games, however, but are scheduled for the evenings to accommodate the many individuals employed during the day. Only some of the outer villages attempt to continue the tradition of 24-hour games. On all three of these days there are church services at all the churches and probably a majority of the Inupiat population attends at least one service.

One other class of celebrations should be mentioned. Whaling as an activity has been at least outwardly secularized to a great extent. Equipment, boats, and crews are still blessed before they go out, and thanks is given for every whale harvested, but overall whaling activities are operationally organized rather than explicitly ideologically. There is no religious competition in regard to whaling, Instead, the main churches take turns holding the main services. The feasts to distribute the products of the hunt held at various times during the year again are mainly secular in form. They start with a prayer of thanksgiving, but generally no denomination is stressed over any other. The main focus is on the distribution and sharing of the food which has been prepared in a more-or-less collective effort. When a whale is taken and the shares are being transported to the captain's house for the required open house, secular concerns seem to predominate.

2. Role of the Church in Everyday Life

There is still an overall community feeling that the church is important, and this is observable especially during public celebrations. However, this is more a general attitude than an explicitly expressed belief system (see above). In everyday life the church seems to have lost much of its relevance in Barrow. This may be partially due to the development of religious competition in Barrow. The Presbyterian church used to be the only church, and could thus serve as a community focus and a center to organize public celebrations. For the most part this is what occurred and Barrow was identified as a Presbyterian community. With the rise of the Assembly of God church in Barrow, and more recently the Episcopalian, Baptist, Catholic, and perhaps some other denominations, this unity has been fragmented. Many Inupiat (just as many other Christians) are not terribly interested. in the details of doctrine and find this religious diversity quite confusing.

There is some evidence that the development of this religious diversity is related to the development of residential ethnic diversity in the community. While leaders of the various churches often wish to downplay this aspect of their congregations, most community informants had little difficulty with the idea. Indeed, most volunteered that the Catholic church is mainly Filipino, the Episcopalian church non-Inupiat (white), and the Presbyterian church Inupiat (even though the pastors are non-Inupiat). The Assembly of God church also seems to be predominately Inupiat. At any rate, no longer is there a church in Barrow that serves as a community focus.

Attendance at church is also reported to be lower than in the past, except on special ceremonial occasions. Until recently, the non-Inupiat population did not attend church very often. Most church attenders still are Inupiat. It is only recently that the Inupiat population has become more residential and family-oriented in Barrow. Before, most non-Inupiat were single males, and while this category is still quite large, there is now also a fairly large group of professionals employed by the NSB with families. Barrow, as the hub of the NSB, can support such a subpopulation. The outer villages do not have the jobs or resources to attract a similar group, for the most part.

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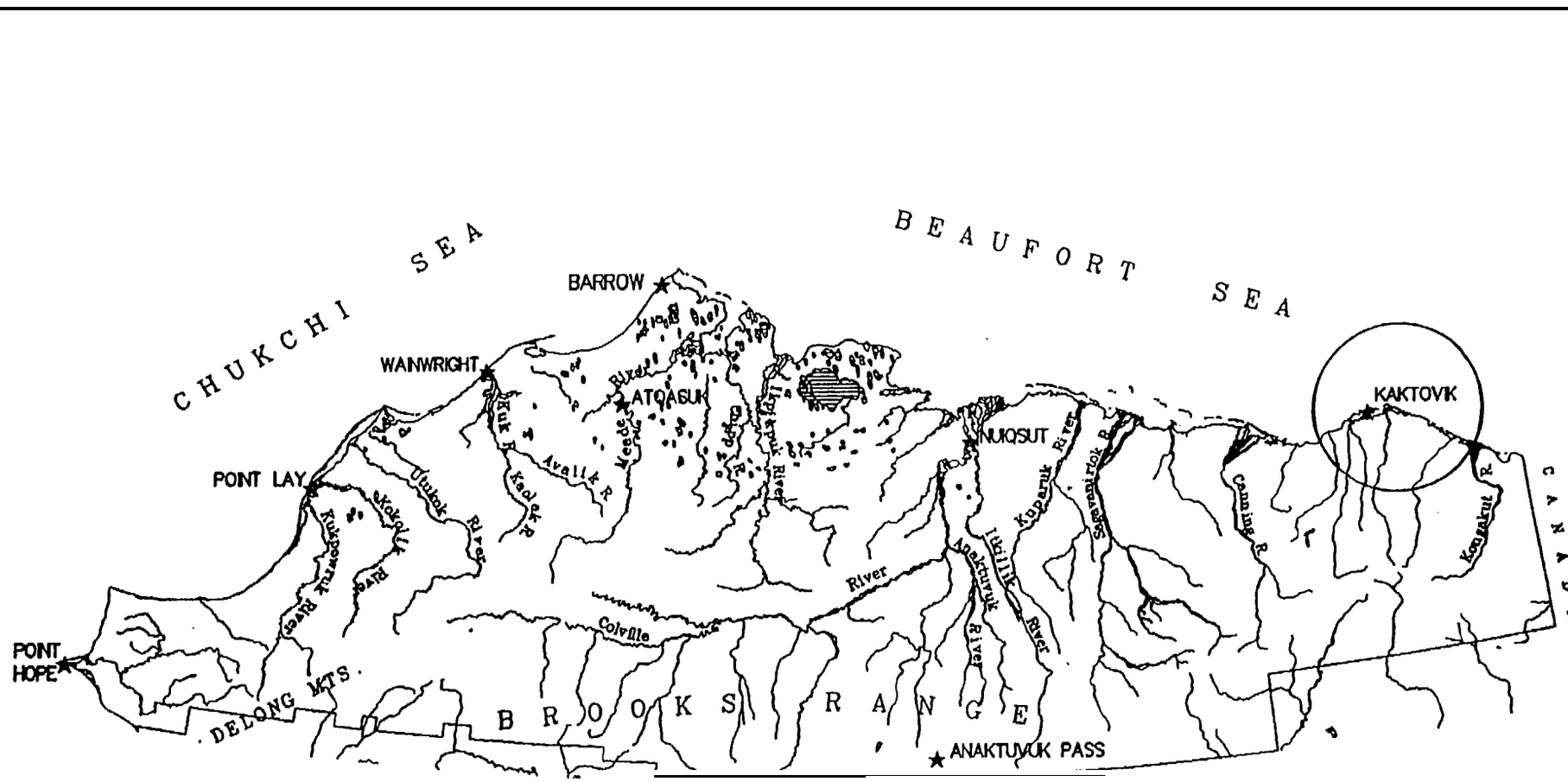
# KAKTOVIK

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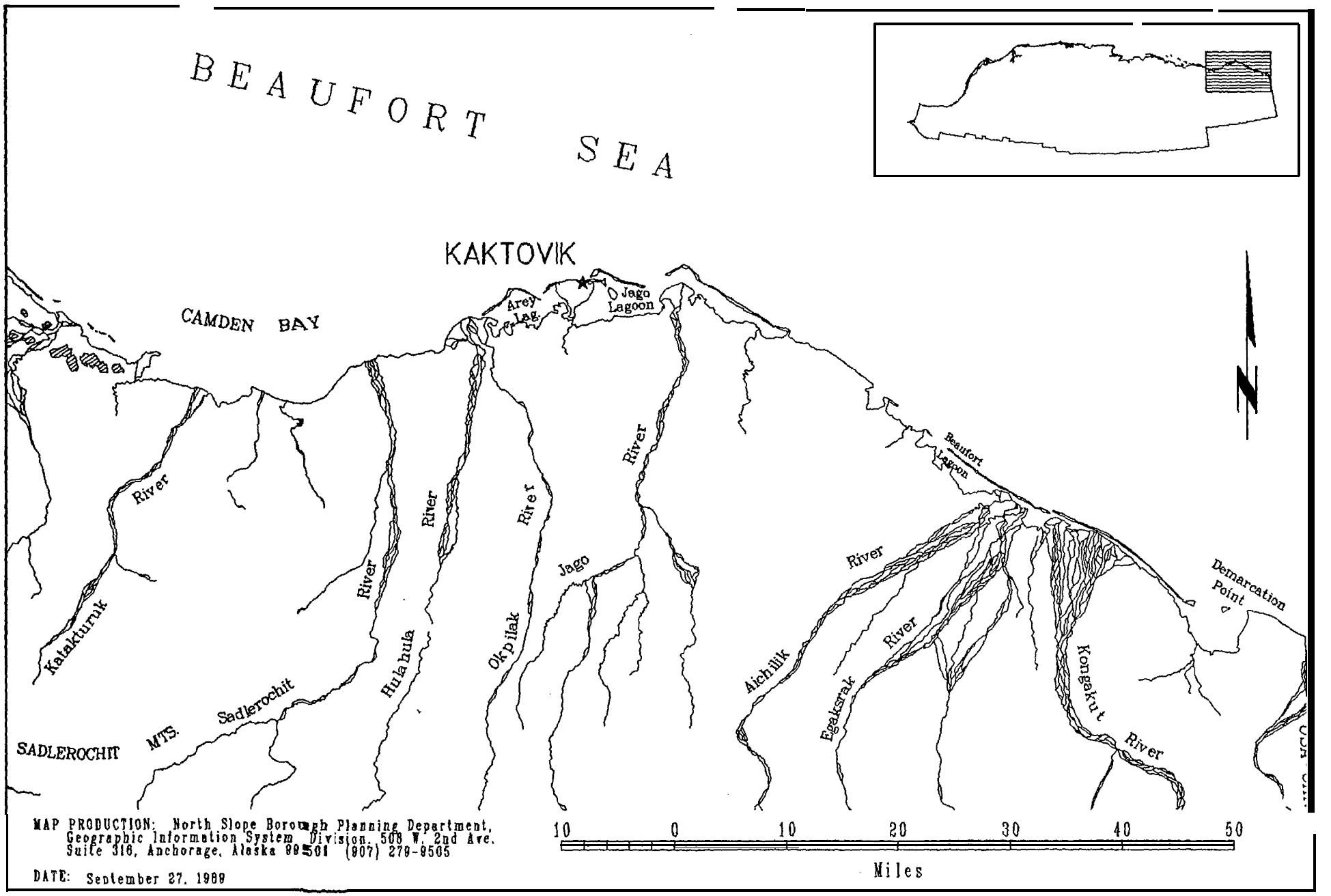


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DATE: September 27, 1989

# BARROW, ALASKA

*LEGEND:*

*NSB REAL PROPERTY*

1. *Mobil Equipment Storage*
2. *School Complex*
   - *a. Gymnasium*
   - *b. Library/Mechanical*
   - *c. 1964 Addition*
   - *d. 1980-81 Addition*
   - *e. 1982-83 Vocational Ed. Add.*
   - *f. Teacher Housing #1*
   - *g. Teacher Housing #2*
   - *h Teacher Housing #3*
   - *i. Teacher Housing #4*
   - *j. Teacher Housing #5*
   - *k. Garage*
3. *Water Treatment Fac./Generator Plant*
4. *Tank Farm*
5. *Public Safety Office*
8. *Fire Station*
7. *Health Clinic*
8. *Central Dial Office*

NSB PLANNING DEPARTMENT
GEOGRAPHIC INFORMATION SYSTEM
BARROW DIVISION
FEBRUARY 1989

**KAKTOVIK**


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# KAKTOVIK

## SECTION I: POPULATION

### A. Size and Composition

#### 1. Demographic Characteristics

This section addresses changes in the Kaktovik population over the period 1950 through 1989. Between 1950 and 1960, during which time the U.S. Air Force established the Distant Early Warning (DEW Line) radar network station, the total population increased from 46 to 120 (Wentworth 197992, Smythe and Worl 1985:119). This increase was due to three principal factors: (1) a slight increase in non-Inupiat workers and operators of the DEW Line; (2) a significant natural increase in Inupiat population; and (3) a high rate of Inupiat immigration resulting from the opening of the Bureau of Indian Affairs (BIA) school. The period 1960 through 1970 was one of relatively stagnant population growth with total population reaching only 123 in 1970.

Knapp et al. (1986:II,10) have compiled a summary table of population estimates from various sources from 1970-1984. Because estimates of population are based on inconsistent definitions of resident and non-resident, figures are not easily compared (Knapp et al. 1986:II,1). However, since 1970, population figures in all areas of the North Slope have been fairly well documented and allow for the analysis of general trends (Arctic Environmental Information and Data Center [AEIDC] 1978:15). Although there were fluctuations in the population, growth in Kaktovik during the early 1970s had been relatively slow compared to villages such as Anaktuvuk Pass, Wainwright, and Barrow. However, beginning in the late 1970s, Kaktovik's growth rate increased dramatically. Between 1977 and 1980 the annual average growth rate was 7.5% (Alaska Consultants, Inc. 1983:16). The July 1982 North Slope Bureau (NSB) census enumerated a total of 189 people, amounting to a 14.5% increase since 1980. In the mid-1980s, however, the population stabilized. The data from the 1989 NSB census show the total population of Kaktovik to be 227, representing a modest but steady 5% annual increase for the seven-year period.

The sex ratio statistics for Kaktovik indicate a preponderance of males. In 1970, males outnumbered females by a ratio of 59.3 to 40.6 (AEIDC 1978:20). Based on a locally conducted census in 1977, males comprised 57% and females 43% of the total population of 134 persons. The authors attribute this ratio to the out-migration of females from the community (see also Worl and Lonner 1982). This same sex ratio skew is evident in both the 1980 Alaska Consultants, Inc. (ACI) survey results and those of the 1989 NSB census. As Table 1-KAK (the ACI data from 1980) indicates, Alaska Native males constituted 59.1% and females 40.9% of the Alaska Native population. Table 2-KAK shows a total of 116 male and 94 female residents of Kaktovik in 1988. The majority of this disparity occurred in the 26 to 39 age bracket for both the Native and non-Native populations. There were almost twice as many Alaska Native males (24) as females (14) and almost three times as many non-Native males as females in 1988 (see Table 2-KAK). There are several possible explanations for this unusual male to female ratio, all of which may apply. Women might have left the village either to work or go to school in a city such as Barrow or Anchorage. Men are less likely to leave a village to work in a city because they lack the necessary

skills to obtain most administrative/clerical types of jobs and because they prefer not to take the types of jobs that women would accept in a city.

Between 1980 and 1988 there was also a slight shift in the ethnic balance of Kaktovik. In 1980 about 27.6% of the population was non-Native and 72.4% was Native, but in 1988 the number of non-Natives decreased to 20% of the total population (see Table 3-KAK). One would expect the Native population to increase at a faster rate than the non-Native population primarily because the non-Native population typically does not raise families in the village, eliminating population growth caused by a natural increase in the birth rate. Secondly, whatever jobs the NSB created in the village were more likely to be given to Inupiat because of the preference for local hire. The practice of local hire would encourage the growth of the Inupiat population instead of the non-Inupiat population. The ethnic composition of Kaktovik for 1988 is illustrated graphically in Figures 1-KAK and 2-KAK. Figure 1-KAK provides an age and ethnic breakdown for the population while Figure 2-KAK provides a sex as well as ethnic breakdown of the population. Specific data on the ethnic composition of Kaktovik for 1988 appear in Table 3-KAK and Figure 3-KAK.

**2.** Influences on Population and Structure

The first event to affect Kaktovik was the establishment of a trading post on Barter Island by a white man, Tom Gordon, in 1923 (Jacobson and Wentworth 1982:3). Previously, Barter Island was a seasonal destination for the ancestors of present-day Kaktovik residents. The trading post provided local Inupiat with a market for furs, a source for cash and Western material culture, and served to establish Kaktovik as' a permanent settlement (Nielson 1977b:2).

The population of Kaktovik increased slowly but steadily from then until the post-World War II military build-up (Wentworth 197990). A DEW Line system extending across the Alaskan and Canadian Arctic was established and a station was erected, literally, on the site of Kaktovik. As a result of the DEW Line, the population of Kaktovik increased both from non-Inupiat who moved in during construction and from families moving into the village from the surrounding area, many of whom were kin (Nielson 1977b:92, Chance 1966:82).

Contributing to the early growth of Kaktovik was the establishment of a school by Harold Kaveolook in 1951. In his essay Kaktovik on Barter Island A Brief History of Kaktovik and Its Schools, Kaveolook tells how at least five families returned to Alaska from Canada hearing that there was a school and jobs available at Barter Island. "This increased the population from 86 to 140-145 and the school population from 20 to 30" (Kaveolook 1951:8).

Kaktovik's growth slowed during the 1970s, unlike many other villages in the North Slope. This trend was reversed during the late 1970s and early 1980s when the population increased dramatically. The population gains can be attributed primarily to increased employment opportunities offered by the NSB Capital Improvements Program, especially in construction (ACI 1983:16). It appears, however, that population dynamics operate differentially by sex. The significant disparity in the male-female sex ratio in the 25 to 44 age bracket among Inupiat in 1980, for example, can be at least partially attributed to the availability of educational opportunities outside of Kaktovik that were sought by more women than men. It is also likely that at any given time more women are out of the village at school and erroneously classified as non-residents. In

addition, the out-migration of Inupiat women can be attributed to an increasing number of marriages to non-Inupiat men (Smythe and Worl 1985:123, cited from Bloom 1972).

## Table 1-KAK

Population Composition by Race and Age *
**Kaktovik - July 1980**

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 0 - 4 | 4 | 2 | 6 | 1 | 1 | 2 | 5 | 3 | 8 |
| 5 - 9 | 5 | 3 | 8 | 0 | 1 | 1 | 5 | 4 | 9 |
| 10-14 | 10 | 10 | 20 | 1 | 2 | 3 | 11 | 12 | 23 |
| 15-19 | 10 | 12 | 22 | 2 | 1 | 3 | 11 | 12 | 23 |
| 20-24 | 15 | 3 | 18 | 0 | 1 | 1 | 15 | 4 | 19 |
| 25-29 | 10 | 3 | 13 | 3 | 2 | 5 | 13 | 5 | 18 |
| 30-34 | 3 | 4 | 7 | 4 | 2 | 6 | 7 | 6 | 13 |
| 35-39 | 6 | 3 | 9 | 6 | 1 | 7 | 12 | 4 | 16 |
| 40-44 | 4 | 4 | 8 | 2 | 1 | 3 | 6 | 5 | 11 |
| 45-49 | 3 | 3 | 6 | 0 | 0 | 0 | 3 | 3 | 6 |
| 50-54 | 3 | 2 | 5 | 1 | 1 | 2 | 4 | 3 | 7 |
| 55-59 | 1 | 3 | 4 | 0 | 0 | 0 | 1 | 3 | 4 |
| 60-64 | 1 | 1 | 2 | 1 | 0 | 1 | 2 | 1 | 3 |
| 65-69 | 2 | 1 | 3 | 0 | 0 | 0 | 2 | 1 | 3 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL | 78 | 54 | 132 | 21 | 13 | 34 | 99 | 67 | 166 |
| Median Age | 23.3 | 20.0 | 23.0 | 32.8 | 27.2 | 31.5 | 2S.4 | 23.5 | 24.8 |

• Figures exclude a total of 26 persons (5 Alaska Native males, 2 Alaska Native females, 15 non-Native males and 4 non-Native males) for whom no age information was provided.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

Table **2-KAK**

## Age, Sex, and Race Composition of Population - 19SS
## Kaktovik

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | | | % |
|---|---|---|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | TOTAL |
| UNDER 4 | 9 | 10 | 19 | 0 | 0 | 0 | 9 | 10 | 19 | 9.0% |
| 4 - 8 | 10 | 12 | 22 | 2 | 1 | 3 | 12 | 13 | 25 | 11.9% |
| 9 - 15 | 6 | 8 | 14 | 1 | 3 | 4 | 7 | 11 | 18 | 8.6% |
| 16 - 17 | 2 | 2 | 4 | 0 | 1 | 1 | 2 | 3 | 5 | 2.4% |
| 18 - 25 | 13 | 13 | 26 | 5 | 2 | 7 | 18 | 15 | 33 | 15.7% |
| 26 - 39 | 24 | 14 | 38 | 8 | 3 | 11 | 32 | 17 | 49 | 23.3% |
| 40 - 59 | 17 | 15 | 32 | 8 | 5 | 13 | 25 | 20 | 45 | 21.4% |
| 60 - 65 | 3 | 1 | 4 | 3 | 0 | 3 | 6 | 1 | 7 | 3.3% |
| 66 + | 5 | 4 | 9 | 0 | 0 | 0 | 5 | 4 | 9 | 4.3% |
| TOTAL | 89 | 79 | 168 | 27 | 15 | 42 | 116 | 94 | 210 | 100.0% |
| % | 42.4% | 37.6% | 80.0% | 12.9% | 7.1% | 20.0% | 55.2% | 44.8% | 100.0% | |

NUMBER OF MISSING OBSERVATIONS 17

TOTAL POPULATION 227

| | AVERAGE AGE (years) |
|---|---|
| ENTIRE POPULATION | 392 |
| MALE | 31.1 |
| FEMALE | 2s.3 |
| INUPIAT | 27.8 |
| NON-INUPIAT | 34.6 |

Source: NSB Census of Population and Economy, 1989.

## Table 3-KAK

### Ethnic Composition of Population -1988
### Kaktovik

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 97 | 83 | 180 | 79.3% |
| OTHER AK NATIVE". | 1 | 1 | 2 | 0.9% |
| WHITE | 29 | 14 | 43 | 18.9% |
| AMERICAN INDIAN | 2 | 0 | 2 | 0.9% |
| TOTAL | 129 | 98 | 227 | 100.0% |
| % | 58.8% | 43.2% | 100.0% | |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 0 |
| TOTAL POPULATION | 227 |

Source: NSB Census of Population and Economy, 1989.

Fig-are **1-KAK**

**Inupiat** and Total Population in 1988,
**Kaktovik**

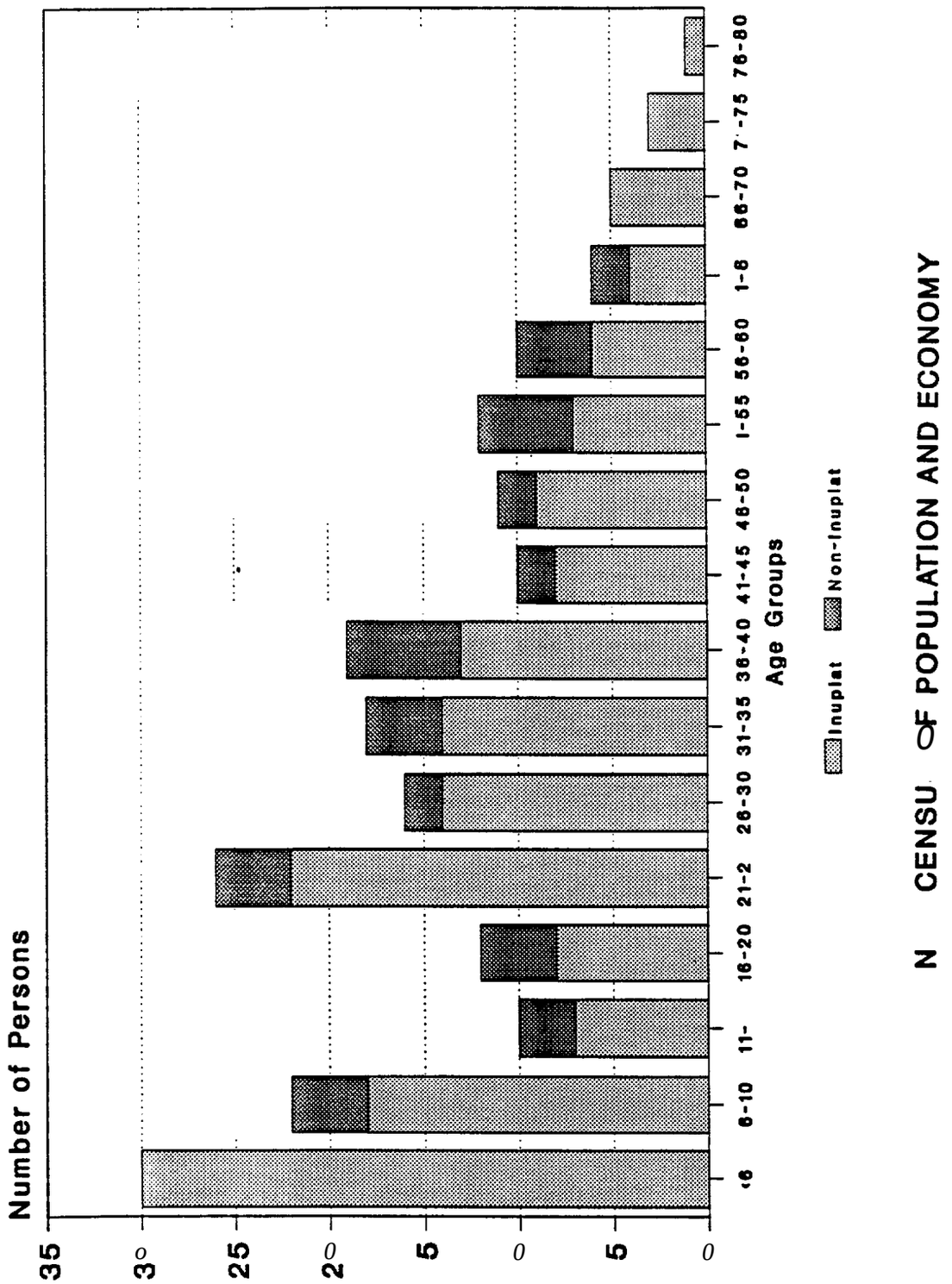


Figure **2-KAK**

**Kaktovik** Population Characteristics -1988

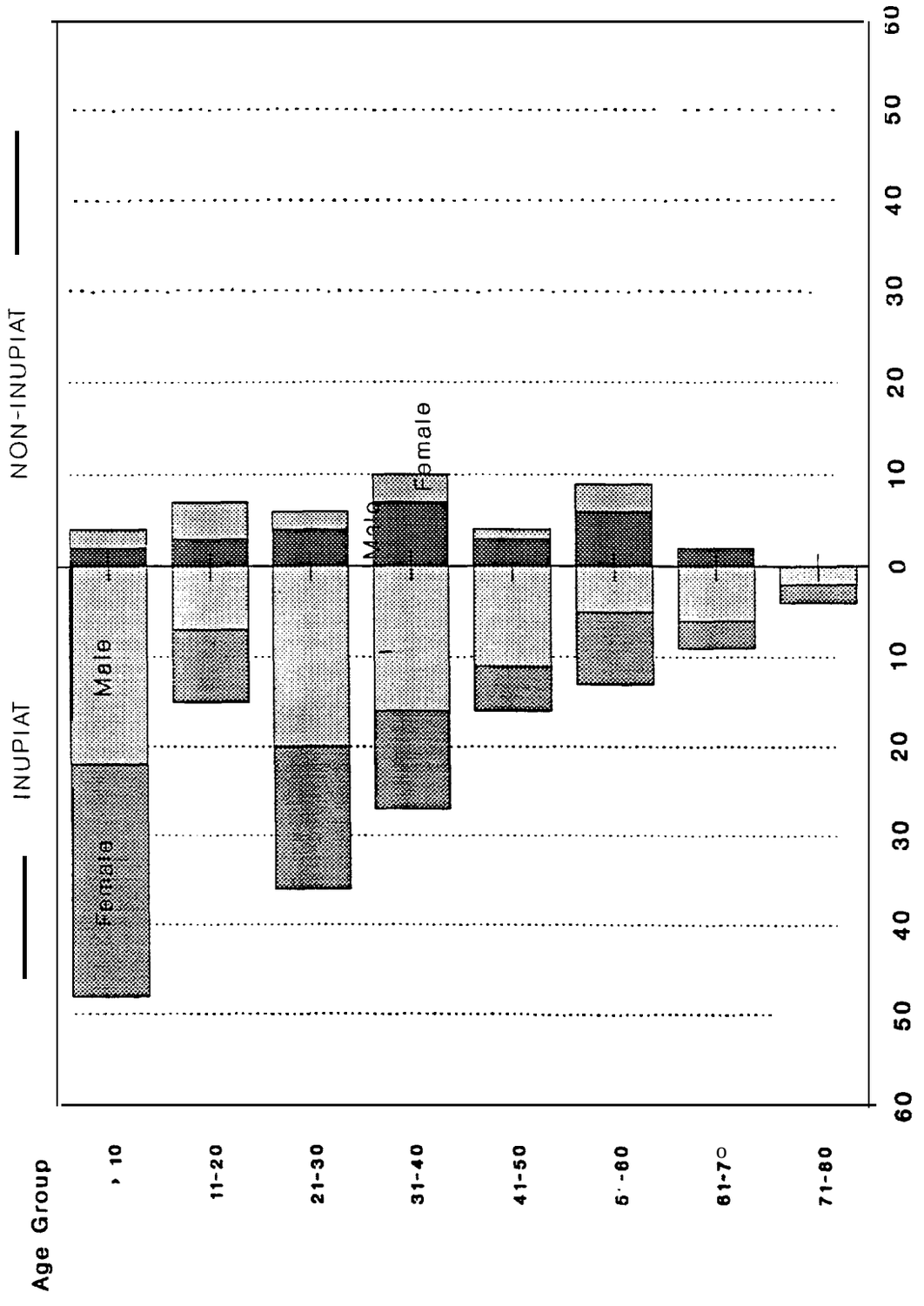
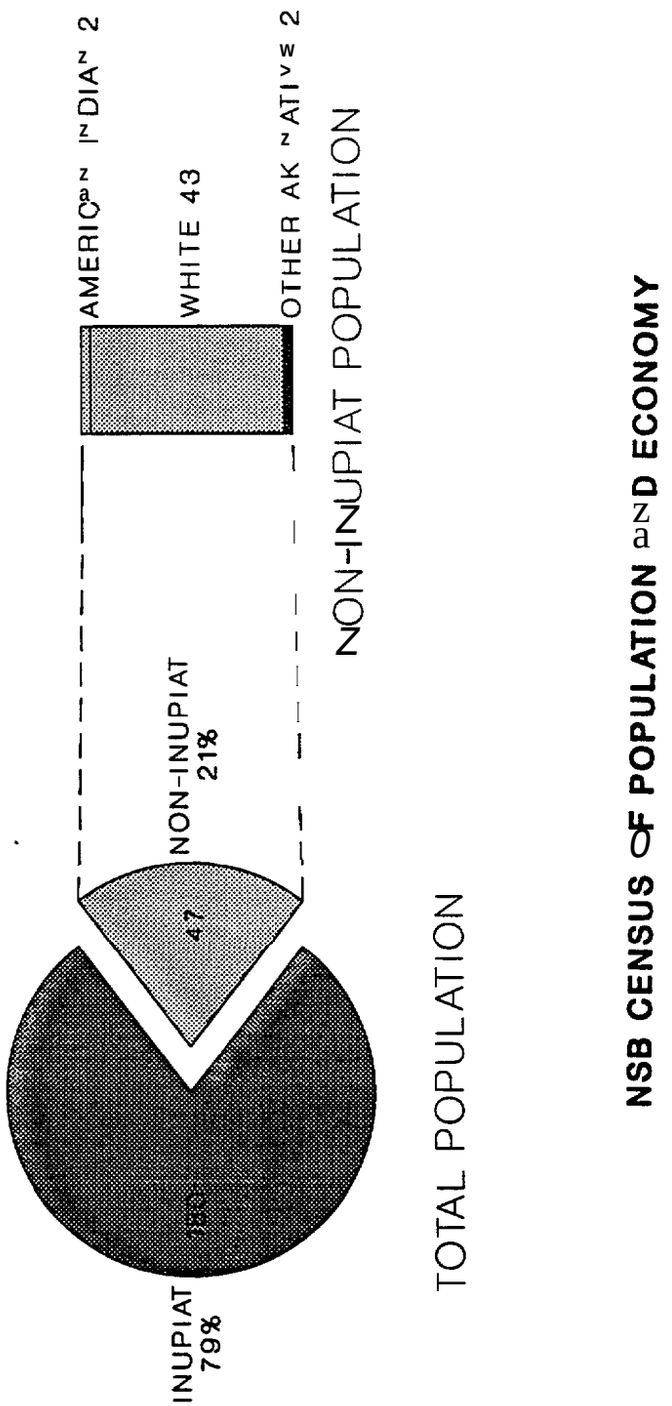


**Figure 3-KAK**

**Ethnic Composition of Kaktovik Population - 198S**



B. Household Size and Composition

1. Characteristics of Households

As depicted in Table 4-KAK, "Household Size - Kaktovik" for 1988, the size and structure of households in Kaktovik correlates with the ethnicity of its members. Within the Inupiat population, 54% of the households (29 out of 54) consist of three or fewer members while 46% consist of four or more members (25 out of 54). For the non-Inupiat household, 75% consist of three or fewer members (9 out of 12) and 25% consist of four or more members (3 out of 12). Not only do non-Inupiat households typically contain fewer people but its members are commonly unrelated. The opposite holds true for Inupiat households. The same general household size ratios were apparent in 1980 as shown in Table 5-KAK, compiled from Alaska Consultants (1980:100-102). Within the Inupiat population, 41% of the households had three persons or fewer, 53% had between four and seven persons, and 6% had eight or more persons. Within the non-Inupiat population, 77% of the households had three persons or fewer, 23% had between four and seven persons, and there were no households with eight or more persons (ACI 1980101). These data are consistent with Smythe and Worl's (1985:122, Table 10-1) finding that a large majority of the Inupiat households are made up of nuclear families while the larger households, which include approximately 25% of the total, also contain adult children, a surviving grandparent, and/or grandchildren.

The distribution of household incomes in Kaktovik, which are displayed graphically in Figures 4-KAK and 5-KAK, is noteworthy because of the lack of disparity that is revealed in comparing the two- and three-person households and the wide disparity that exists ($20,000-$40,000) in comparing the one- and four-person Inupiat and non-Inupiat households. It is also noteworthy that there were no Inupiat households, but at least two non-Inupiat households that earned more that $50,000 annually in 1980. Data for 1988 are presented in Table 6-KAK. Of important comparative note is the fact that for Inupiat households, the largest number fall in the lowest income bracket with decreasing numbers of households in each successive higher income category; for non-Inupiat households the pattern is reversed, with the largest number of households falling in the highest income bracket and decreasing numbers of households in each successive lower income category.

2. Recent Trends in Household Size and Composition

The NSB census of 1989 reveals a trend toward smaller Inupiat households. This is shown in Table 4-KAK where, currently, a small majority, 54%, of Inupiat households contain three or fewer persons, versus 41% in 1980 (see Table 5-KAK). The 1989 data show little change in the composition of the non-Inupiat households, with 75% living in households of three or fewer members (versus 7796 in 1980).

## Table 4-KAK

## Household Size- 1988
## Kaktovik

| NUMBER OF PERSONS | NUMBER OF HOUSEHOLDS: INUPIAT | NON. INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| 1 | 10 | 2 | 12 | 18.2% |
| 2 | 11 | 6 | 17 | 25.8% |
| 3 | 8 | 1 | 9 | 13.6% |
| 4 | 10 | 1 | 11 | 16.7% |
| 5 | 2 | | 2 | 3.0% |
| 6 | 8 | 1 | 9 | 13.6% |
| 7 | 4 | | 4 | 6.1% |
| 8 | | 1 | 1 | 1.5% |
| 9 | 1 | | 1 | 1.5% |
| 10 | | | 0 | 0.0% |
| 11 | | | 0 | 0.0% |
| 12 | | | 0 | 0.0% |
| TOTAL OCCUPIED HOUSEHOLD | 54 | 12 | 66 | 100.0% |
| AVERAGE HOUSEHOLD SIZE | 3.6 | 2.9 | 3.4 | |

**Source:** NSB Census of Population and Economy, 1939.

## Table 5-KAK

### Age of Head of Household for Alaska Natives* **, Non-Natives*** ****, and All Groups Kaktovik, July 1980

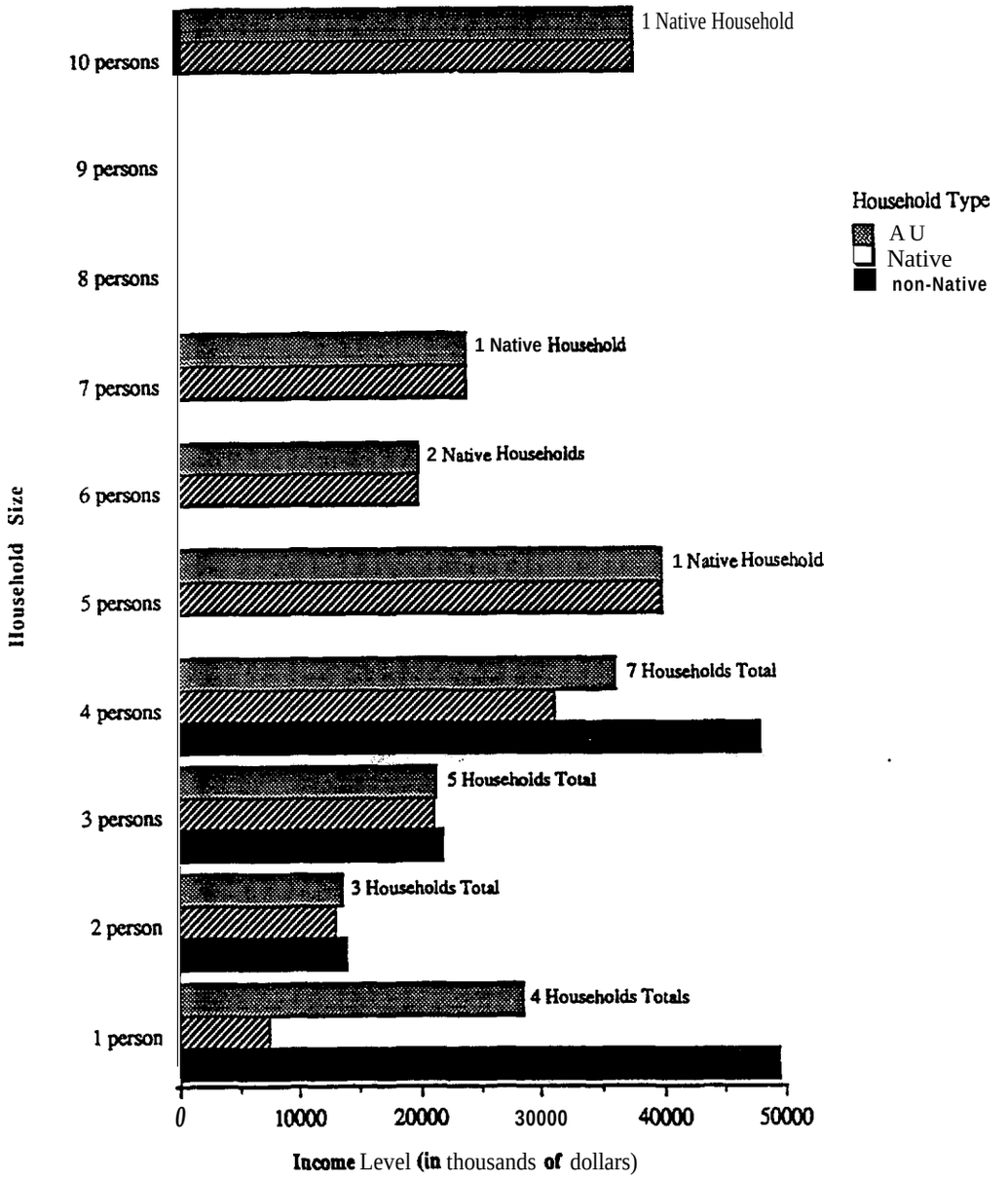
| Household Size | 14-24 | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total |
| 1 person | 1 | 0 | 1 | 1 | 2 | 3 | 0 | 0 | o | 1 | 2 | 3 | 0 | 0 | 0 | 3 | 4 | 7 |
| 2 persons | 1 | 0 | 1 | 4 | 1 | 5 | 1 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 10 |
| 3 persons | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 2 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 6 |
| 4 persons | 0 | 0 | 0 | 3 | 1 | 4 | 1 | 2 | 3 | 1 | 0 | 1 | 2 | 0 | 2 | 7 | 3 | 10 |
| 5 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 2 |
| 6 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 4 |
| 7 persons | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 4 |
| 8 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | |
| 11 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ‘ o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | o | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 2 | 0 | 2 | 9 | 4 | 13 | 10 | 7 | 17 | 8 | 2 | 10 | 3 | 0 | 3 | 32 | 13 | 45 |

• For purposes of the housing survey, the” adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.
• • Figures exclude 2 heads of household for whom no age information was obtained.
• • • Figures exclude 3 heads of household for whom no age information was obtained.
• • • • Includes two unita used as group quarters.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 19S0.

Figure **4-KAK**

**Average Household Income Distribution* ****
**Native*** and non-Native Households by Household Size**
**Kaktovik, July 19SO**



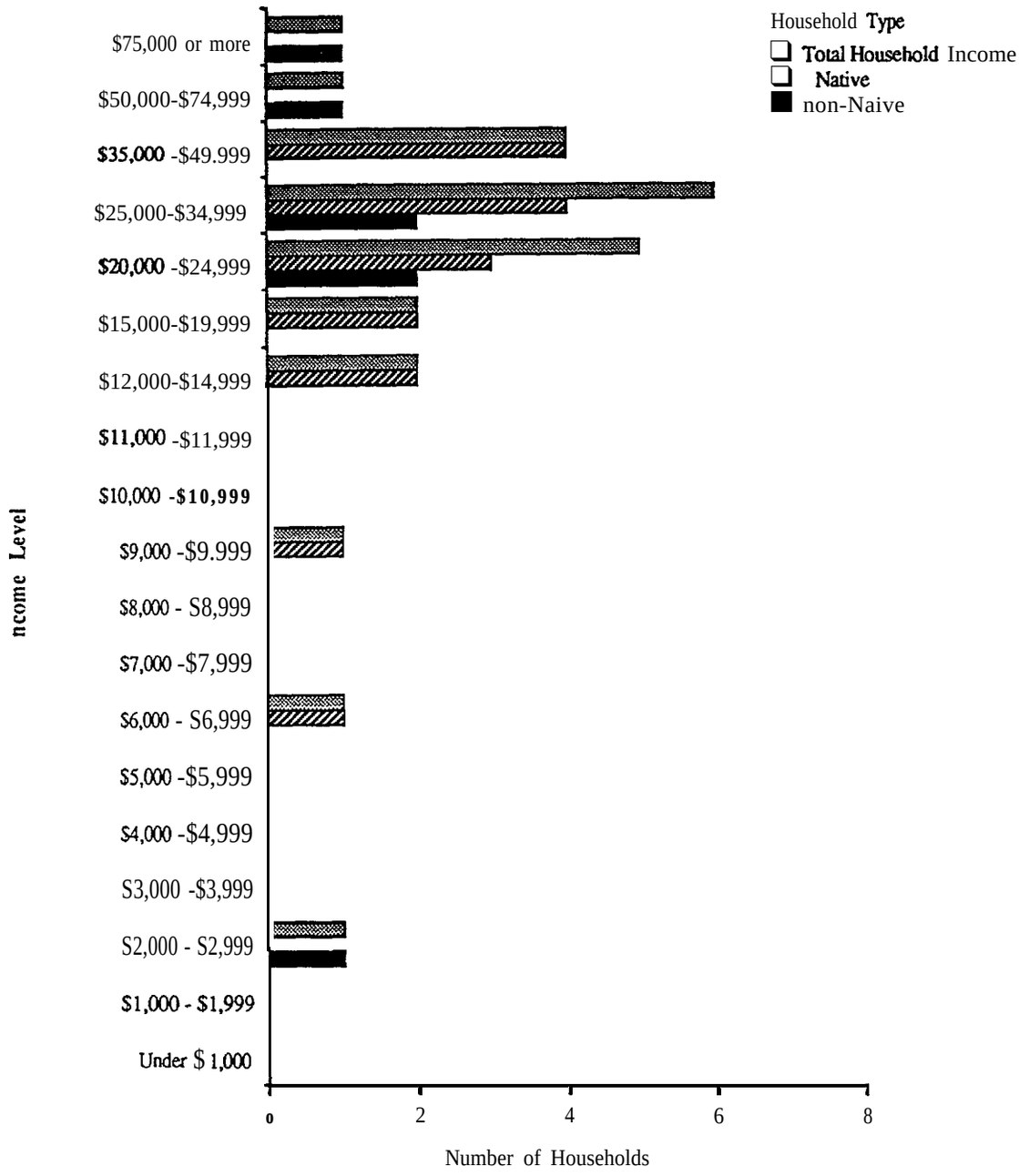

Total Number of Households: 24
Mean Household Income:
All: S27390
Native: S24.2S6
Non-Native: S35,000

* Includes two units used as group quarters.
** Figures exclude 26 households (17 Alaska Native and 9 non-Native) for whom no income information was obtained
• *o For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of households.

Note: Due to she Kaktovik sample, the number of Native and non-Native households could not be disaggregated from its original source.
Source Alaska Consultants, inc. North Slope Borough Housing Survey.
Prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Figure 5-KAK

### Average Household Income Distribution*'
### Kaktovik, 1980




* Figures exclude 26 households (17 Alaska Native and 9 non-Native) for whom no income information was obtained.

Source Alaska Consultants, Inc. North Slope Borough Housing Survey.
Prepared for the North Slope Borough Public Works Department. Anchorage, September 19S0.

Table **6-KAK**

## Household Income and Spending -1988
## Kaktovik

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 13 | | 13 | 24.1% |
| $20,000 - $40,000 | 12 | 1 | 13 | 24.1% |
| $40,000 - $60,000 | 11 | 3 | 14 | 25.9% |
| $60,000 & ABOVE | 7 | 7 | 14 | 25.9% |
| TOTAL | 43 | 11 | 54 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 12 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 66 | |

| | FOR ALL VILLAGE HOUSEHOLDS MEDIAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $42,500 | $47,593 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 70.0% | 62.0% |
| MONTHLY HOUSING PAYMENT (2) | $114 | $227 |
| MONTHLY HEATING COSTS | $187 | $292 |
| MONTHLY ELECTRICITY COSTS | $50 | $75 |

Notes: (1) For food, doting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1969.

The following table, Table 7-KAK, presents information on Kaktovik household characteristics in 1988. In 'this table, household sized is correlated with a number of different descriptive characteristics. Under average household income, for example, it appears that both Inupiat and non-Inupiat household income is positively associated with household size. It is likely that this is the case with Inupiat households. However, there is an inconsistency for non-Inupiat households. Because the small household size has 31 cases, there is more reason to believe that, most often, the smaller non-Inupiat households are virtually the wealthiest as well. It is likely that the average $200,000 annual income for the large household size category is rather anomalous.

**3.** Influences on Household Size and Composition

There are several influences on household size and structure. The NSB policy of providing separate housing for all nuclear families has shaped change in household size and composition profoundly, Although families had traditionally lived in extended family households, planners assumed that adults should have a separate household apart from their parents despite the prevailing residence pattern. An increasing number of single-parent households headed by females has been observed in other communities of the North Slope. It has been observed in other communities that no stigma is attached to single Inupiat females having children (Smythe and Worl 1985:124). This observation was confirmed in the fieldwork for this study although there are indications that attitudes are beginning to change, at least in Kaktovik.

Another influence on households in Kaktovik is the preference of adult offspring to live with their parents (Smythe and Worl 1985:124). This conclusion is based on the large number of dwellings that have remained vacant in Kaktovik despite their obvious availability. This is confounded by the frequently expressed desire for "new" housing to accommodate these older children. This reasoning is further confounded by the latest NSB census (1989) which shows that households have tended to decrease in size.

Finally, educational and non-local economic opportunities have had a pronounced effect on the size and composition of households. This is especially true for women. Women have had increasing opportunities to enter post-secondary schools and to work outside of their homes or in other communities. This affords them additional opportunities to encounter future husbands and further reduces the likelihood of returning to their home community.

Table **7-KAK**

## Kaktovik Household Characteristics -1988
## By Categories of Household Size

| | HOUSEHOLD SIZE | | | |
|---|---|---|---|---|
| | SMALL | MEDIUM | LARGE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $29,957 | $37,031 | $78,125 | |
| Non-Inupiat HHs | $90,313 | $61,250 | $200,000 | |
| All HHs | $43,306 | $39,722 | $102,500 | $47,593 |
| Cases: | 31 | 18 | 5 | 54 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 1.9 | 4.9 | 7.5 | |
| Non-Inupiat HHs | 2.0 | 5.0 | 9.0 | |
| All HHs | 2.0 | 4.9 | 7.8 | 3.4 |
| Cases: | 37 | 22 | 6 | 65 |
| **Average Meat & Fish Csmptn from Own HH Subsistence (%):** | | | | |
| Inupiat HHs | 33.8% | 46.1% | 55.0% | |
| Non-Inupiat HHs | 17.9% | 15.0% | | |
| All HHs | 30.3% | 43.0% | 55.0% | 36.6% |
| Cases: | 32 | 20 | 4 | 56 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 34.3% | 18.2% | 7.5% | |
| Non-Inupiat HHs | 5.0% | 2.5% | | |
| All HHs | 28.1% | 16.7% | 7.5% | 22.5% |
| Cases: | 33 | 21 | 4 | 58 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 29.3% | 25.8% | 10.0% | |
| Non-Inupiat HHs | 17.4% | 2.5% | | |
| All HHs | 26.8% | 23.6% | 10.0% | 24.5% |
| Cases: | 33 | 21 | 4 | 58 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 69.8% | 68.9% | 83.8% | |
| Non-Inupiat HHs | 19.0% | 35.0% | 0.0% | |
| All HHs | 58.3% | 65.5% | 67.0% | 61.2% |
| Cases: | 31 | 20 | 5 | 56 |

Notes: Household size categories measured as follows:
SMALL: Under 4 persons per household
MEDIUM: 4-6 persons per household
STRONG: 7 or more persons per household.
Total cases (households) . 66.

Source: NSB Department of Planning and Community Services
Census of Population and Economy

C. **Educational** Characteristics

1. Current. Educational Levels

One of the more striking patterns in the North Slope has been the change in patterns of educational achievement. In the interviews presented by the Institute of Social and Economic Research (ISER) (1983:1), one resident, who was 59 years old at that time, stated that he had "never been to school in his life." Another man, who was 44 years old at the time of the interview, stated that he had a grade school education. These two men are typical of Inupiat born before about 1932 who had a median of less than four years of education (Kruse 1981:24). And, "... while more than 70% of adults 35 and older had less than 8 years of education in 1977, 70% of those 18-34 had graduated from high school". It is also interesting to note sex differences in levels of education. In the age groups 25 and over, in 1977, a woman was more likely to have completed high school than a man but a man having completed high school was more likely than a woman to continue on to college.

The same general pattern of educational attainment are revealed in the findings of the 1989 NSB census (see Table 8-KAK). Of those between the ages of 18 and 39, 76% have completed their high-school or General Education Diploma (GED) curriculum and, of those, 28% (18 of 63) have gone on to college or additional vocational training. This is seen by community members to be a "double-edged sword"; the higher the education level, the greater the likelihood the individual will live elsewhere. While anecdotal information appears to support this contention, the NSB census collected only information on current residents and thus this hypothesis could not be tested.

2. Social and Ethnic Differences in Educational Levels

It was claimed and observed, although not statistically verified, that the offspring of non-Inupiat and mixed Inupiat/non-Inupiat families were more likely to pursue post-secondary education than were children of Inupiat families. It should also be noted that there are no non-Inupiat children in Kaktovik under the age of six. Discussions with the non-Inupiat residents of the community also revealed distinctly different long-term expectations with respect to such education. Non-Inupiat parents expressed less concern over the "applicability" of college education than Inupiat parents. Inupiat parents expected their children to take courses of direct and immediate application to existing community or regional occupations, whereas non-Inupiat parents had largely adopted an attitude that the child should take courses of their own choosing. Non-Inupiat parents also expressed a greater commitment to matriculation as an end in itself while Inupiat families looked primarily to the instrumental value of the education.

## Table 8-KAK

### Highest Level of Education Attained by Age Group
### Inupiat Residents, Kaktovik -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | 3 | 9 | 7 | 19 |
| 4 - 8 | | | | | | 22 | | | 22 |
| 9-15 | | | | | 1 | 13 | | | 14 |
| 16 - 17 | | | | | 1 | 3 | | | 4 |
| 18-25 | | 2 | 1 | 17 | 6 | | | | 26 |
| 26-39 | 1 | 2 | 0 | 22 | 10 | | | 3 | 36 |
| 40-59 | 1 | 3 | 0 | 2 | 21 | | | 5 | 32 |
| 60-65 | | 0 | | 0 | 2 | | | 2 | 4 |
| 66+ | | | | | 3 | | | 6 | 9 |
| TOTAL | 2 | 7 | 1 | 41 | 44 | 41 | 9 | 23 | 168 |
| % | 1.2% | 4.2% | 0.6% | 24.4% | | 24.4% | 54%. | 13.7% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 17

TOTAL POPULATION (Inupiat) 1s6

Source: NSB Department of Planning and Community Services
Census of Population and Economy, 1969.

**Table 8-KAK (continued)**

Highest Level of Education Attained by Age Group
**Non-Inupiat Residents, Kaktovik** -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | | | | 0 |
| 4-8 | | | | | | 3 | | | 3 |
| 9 - 15 | | | | | | 4 | | | 4 |
| 16 - 17 | | | | | | 1 | | | 1 |
| 18-25 | | 5 | | 2 | | | | | 7 |
| 26-39 | 1 | 5 | 1 | 4 | | | | | 11 |
| 40 - 59 | 8 | 1 | 1 | 1 | 1 | | | 1 | 13 |
| 60 - 65 | | 1 | | 1 | 1 | | | | 3 |
| 66 + | | | | | | | | | 0 |
| TOTAL | 9 | 12 | 2 | 8 | 2 | 8 | 0 | 1 | 42 |
| % | 21.4% | 2s.6% | 4.s% | 19.0% | 4.8% | 19.0% | 0.0% | 24'?6 | 100.0% |

NUMBER OF MISSING OBSERVATIONS 0

**TOTAL POPULATION (Non-Inupiat)** 42

**Source:** NSB Department of Planning and Community Services
Census of Population and Economy, 1989.

Ethnic differences in attitudes toward education also are apparent in parent decisions about their children's education. For Inupiat who lived in the region before it became a permanent village, the existence of a small school served as the catalyst for immigration. Later, after Kaktovik became a permanent village but before there was a high school, those children who wanted to go to high school could attend a BIA school outside of the North Slope, typically at Mt. Edgecumbe in Sitka. After the Molly Hootch decision, which required the state to provide municipalities of a minimum size with a high school, most Inupiat children stayed in the village through 12th grade. Very few attended college and most of them did not graduate.

Non-Inupiat families in Kaktovik, as elsewhere on the North Slope have a contrasting approach to toward their children's education. These families usually have come to the community based on a particular occupational opportunity, and are not permanent residents of the village. What typically initiates their move out of Kaktovik is either the accomplishment of their financial goals or their oldest child(ren) reaching high school age. In a pattern seen in other North Slope villages as well, most non-Inupiat parents are content to send their children through the primary grades in the village school, but prefer to have their children receive their high school education in a larger school for the broader opportunities offered there and a more college-preparatory focus. Not infrequently it is this desire that dictates the timing of the emigration of non-Inupiat families from the village.

### 3. Education and Employment Opportunities

Kaktovik has historically had a small school relative to some of the other villages on the North Slope. At the time of field research (March 1989) Kaktovik did not have any high school students attending school in the village. Those few individuals from Kaktovik of high school age elected to go elsewhere for school. According to local sources, when the high school population dipped below the point where they could field a basketball team, the major form of group recreation for this age group, the remaining students opted to go elsewhere. Clearly, other peer group dynamics beyond a team sport would be at work in such a situation as well. It would appear that when a lower threshold was reached, there was no longer a "critical mass" of persons of high school age, such that those remaining preferred to go elsewhere rather than stay in the community with a very small age-peer group. Kaktovik is the only village on the North Slope where all potential high schoolers have chosen to go outside of the community for their education. What effect this phenomena will have for future employment opportunities of this individuals in Kaktovik is not clear at this time.

## D. Marriage patterns

### 1. Characteristics of Marriage

The choice of marriage partner has varied considerably between villages. Based on his interpretation of Spencer's data (Spencer 1959), Chance concludes that "In some communities such as Point Hope, Kaktovik, and Wainwright, parallel or cross-cousin marriage was preferred; while at Barrow, marriage between first cousins was much less common"(1966:49). Today, the patterns of marriage do not follow consistent kin-based criteria. None of those interviewed in Kaktovik

acknowledged a continuing preference for a particular marriage pattern, but several were able to verify the traditional preference. One informant noted, correctly, that "most everyone in the village is related in some way" and that virtually all local marriages would probably involve related individuals (i.e., cousins). However, a number of both male and female residents expressed the opinion that spouses are most likely to come from outside of the community. No one is certain if this sentiment is actually the beginning of a new trend or whether the traditional pattern of marrying in the village will remain. Current marriage statistics are presented in Table 9-KAK.

2. Influences on Marriage Patterns

Norman Chance (1966:49) observed that many young people did not marry until they had children, much to the chagrin of conservative elders and local church leaders. He suggested that this was due in large part to: (1) economic demands that marriage makes on many young Inupiat men; and, (2) reluctance of some young men to marry when there already exists quite a latitude of sexual liberty outside marriage. There is some indication from other villages that the age of marriage is declining (Pt. Lay Case Study, in draft). There is also some evidence that, in Kaktovik, the number of teenage women bearing children prior to marriage is declining although the data are insufficient to substantiate this assertion. Based on observation and interview data, it also seems that the frequency of inter-ethnic marriages has increased, though there is no statistical basis for this claim either.

## E. Migration Patterns

1. Characteristics of Migration

Since the traditional seasonal round of Kaktovik residents no longer exists, migration is almost exclusively related to economic or educational opportunities. As Knapp et al. (1986:II,22) observe, "non-Inupiat in particular are likely to move into North Slope villages as new jobs become available or leave as job opportunities decline. In fact, the non-Inupiat resident population of the borough appears to be very closely tied to employment." We have, with some exceptions, found this to be the case in most North Slope communities. However, based on discussions in Kaktovik, the number of long-term non-Inupiat residents, and the duration of their stays, has increased significantly over the last ten years. Nonetheless, few of those interviewed consider themselves permanent residents or indicate an interest in residing permanently in the community. "When I retire," "when we move home," and "when we move south" are concepts common to most, if not all, longer-term non-Inupiat residents of Kaktovik.

Table **9-KAK**

## Marital Status by Ethnicity
## Kaktovik -1988

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % ( X TOTAL |
|---|---|---|---|---|---|---|---|---|
| NOW MARRIED | 24 | 29 | 53 | 18 | 8 | 2 6 | 79 | S3.7% |
| WIDOWED | 3 | 1 | 4 | | | 0 | 4 | 2.7% |
| DIVORCED | 2 | 2 | 4 | 2 | | 2 | 6 | 4.1% |
| SEPARATED | | 1 | 1 | | | 0 | 1 | 0.7% |
| NEVER MARRIED | 35 | 15 | so | 4 | 3 | 7 | 57 | 38.8% |
| TOTAL | 64 | 48 | 112 | 24 | 11 | 35 | 147 | 100.0% |
| % | 43.5% | 32.7% | 76.2% | 16.3% | 7.5% | 23.8% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | 2 | |
| TOTAL POPULATION (age 16+) | | | | | | | 149 | |

**Note:** Figures include persons age 16 and above,

**Source:** NSB Department of Planning and Community Services
Census of Population and Economy, 1969

In contrast, migration among the Inupiat population has been as much a function of social as economic conditions. Inupiat decisions to relocate normally can be shown to involve kinship links. Inupiat residents are reluctant to move from one community to another without such ties. This is one of the principal reasons why Inupiat workers are uncomfortable, if not unwilling, to sustain long-term employment at Prudhoe Bay or other remote work sites. However, Inupiat have in the past migrated from Kaktovik in response to severe economic hardship and it is possible that similar patterns could emerge. With respect to employment, however, one pattern is clear: Kaktovik residents are heavily vested in the monetized economy of the North Slope and it is difficult to conceive of the community "going back" to a subsistence lifestyle. This community, as a whole, has a lengthy and very strong commitment to the wage economy and will strive to retain its access to jobs and paid labor. In this, they will have the continued support of the NSB government. The NSB is committed to the creation of enough jobs (beyond those required to provide basic services) to maintain the village economy. Locals have no doubt that the NSB will be able to do so for the foreseeable future. There is little perceived need, or desire, to leave Kaktovik in search of work. At present, those who are unemployed in Kaktovik can still get by. If, and when, the NSB revenues from oil production taxes no longer support this system, the situation will change, but little systematic thought has been given to this possibility. Kaktovik people have moved in the past, and would probably move in the future if required. There is no anticipation of such a need in the near term.

2. Influences on Migration Patterns

In the late 1970s and early 1980s, there was substantial migration to Kaktovik by those hoping to take advantage of construction employment opportunities offered by the NSB housing improvements program. Many of those people were Inupiat who had left the North Slope for Anchorage or Fairbanks in the 1960s and returned because of improved economic opportunities (Knapp et al. 1986:II,15). Prior to that, Inupiat men were hired to assist in the construction of the DEW Line, many of whom were from outside Kaktovik. Since its construction, a small number of Kaktovik men have been employed at the DEW Line as maintenance and repair men. In 1%2, over half of the Inupiat men in Kaktovik were employed at the DEW Line (Chance 1966:17). Specific statistics on migration patterns for Kaktovik do not exist. However, for the North Slope as a whole, about 85 more Inupiat moved to the area than moved away between 1970 and 1977 (Kruse et al. 1981:21).

Seasonal moves from Kaktovik occur every year for subsistence hunting. In the spring many men leave the village to hunt bowhead whales for anywhere from a few days to a few weeks (Wentworth 197992). Some individuals are working in Anchorage, a few in Prudhoe Bay, and some work for the Arctic Slope Regional Corporation (ASRC) projects like the one in the Aleutian Islands. There are a number of variables that influence the decision to work in one place or another, including the wage scale, qualifications, social or political ties to the project, how the job relates to desired long-term employment opportunities, distance from the community, and so on.

### 3. Community History

The history of Kaktovik can be roughly divided into three stages based on two events that, in modem times, significantly have changed the face of the community. The first was the establishment of a trading post on Barter Island in the early 1920s. Previously the site had been used for subsistence and a seasonal home for hunters of caribou, sheep, sea mammals, fib, and fowl (Nielson 1977a:1, Wentworth 197990), and as an important periodic meeting and trading site for Canadian Eskimos heading west to Neglik on the Colville River and for Nunamiut heading toward the coast. It is estimated that the population of the arctic coast between Pt. Hope and Demarcation Point was between 1,500 and 2,000 in the 1830s (Nielson 1977b:20). In 1923 a white trapper and trader named Tom Gordon moved his trading post from Demarcation Point to Barter Island, according to his daughter Nora Agiak, because of its proximity to family, the Hula-Hula River, and the mountains for hunting and fishing (Libbey 1983:9-10). Once the trading post was established, Kaktovik became a year-round settlement. The second event to affect Kaktovik was the construction of the DEW Line. The DEW Line not only brought in many Inupiat and non-Inupiat outsiders, but it caused the physical relocation of the village three times in 17 years (see education section for additional historical information).

Despite their access to goods from non-Inupiat, the Inupiat of Kaktovik were relatively isolated. While Europeans had first visited the area in the mid-eighteenth century, interactions with outsiders were by no means continuous, nor were populations settled. As late as the early twentieth century, many residents of the area had not seen a white person. In July 1947, however, the Air Force began construction of a 5,000-foot airstrip and hanger facility on the island which was to be part of the DEW Line radar network stretching across the Arctic. "For the Inupiat residents of Kaktovik, the decision of the Air Force to begin construction at this location (Nelsaluk) had drastic and irrevocable consequences, for the engineers had selected their old village site for their runway and hanger facilities" (Nielson 1977b:2-3).

Residents were forced to move as bulldozers hauled their sod and driftwood structures and several frame buildings 1,650 yards up the beach to the northwest where the village was relocated. Eventually, the people of Kaktovik adapted to the presence of the Air Force personnel and several villagers became employees at the DEW Line site. In 1951, the Air Force assumed control of the entire surface area of Kaktovik, including the village cemetery. This order gave the Air Force the right, in 1953, to relocate the village. The second relocation was made because of changes in the layout of the facility (Nielson 1977b:5).

The village remained at that site until 1964 when the Air Force again ordered Kaktovik's relocation to provide room for the expansion of the facility. In contrast to the other two moves of the village, this one was favored by the village residents. However, it was made clear to them that their options for the location of the new site were subject to approval by the Air Force. The new site was officially named "Kaktovik" and a U.S. Post Office trailer was established.

In 1971 Kaktovik was one of the original North Slope villages awarded land under the Alaska Native Claims Settlement Act (ANCSA). The land that was formally controlled by the Air Force would be managed by the Kaktovik Inupiat Corporation. However, because of the absence of development and expansion opportunities available from the military and the existence of the Arctic Wildlife Refuge abutting the village, Kaktovik's options for land selection and conveyance were complicated. "Moreover, the most suitable land was that within the Air Force reserve" (Nielson 1977b:8).

SECTION II: ECONOMY

**A. Historical Overview**

Archaeological evidence (that is reviewed in detail by Libbey 1983, Jacobson and Wentworth 1982, Libbey and Hall 1981, and Nielson 1977a) indicates that the ancestors of present-day Kaktovik residents were nomadic hunters. Trade routes probably were established in the 1700s with Russians but the basic subsistence economy of the Eskimos of the Beaufort Sea region persisted almost unchanged until commercial whalers arrived in the mid-1800s.

Detailed and specific accounts of the history of the earliest non-Inupiat explorations and trade routes along the Beaufort Sea are available in Libbey (1983), Jacobson and Wentworth (1982), and Chance (1966). Although the first European contact occurred in about 1740, the first written account of the area was John Franklin's report from his 1826 voyage west from Hudson Bay in search of a Northwest Passage. On board were two Inupiat that acted as interpreters in speaking to the local inhabitants about trade with people to the west:

> The information we obtained from them confirmed that which we had received from the last party, namely, that they procure the iron, knives, and beads, through two channels, but principally from a party of Esquimaux who reside a great distance to the westward, and to meet whom they send their young men every spring with furs, seal-skins, and oil, to exchange for those articles; and also from the Indians, who come every year from the interior to trade with them by a river that was directly opposite our encampment...
>
> Our visitors did not know from what people either the Indians or the Esquimaux obtained the goods, but they supposed from some Kabloonacht (white people), who reside far to the west. As the articles we saw were not of British manufacture, and were very unlike those sold by the Hudson's Bay Company to the Indians, it cannot be doubted that they are furnished by the Russian Fur Traders, who receive in return for them all the furs collected on this northern coast. Part of the Russian iron-work is conveyed to the Esquimaux dwelling on the coast east of the Mackenzie (Libbey 1983:4-5).

Further information on the trade routes is provided by a ship's doctor, John Simpson, in the years 1852-1954. He describes how Asian goods were traded from the Siberian Eskimo to those of Norton Sound to Eskimo near Kotzebue. It was from Kotzebue that inland Eskimo from the Noatak and Kobuk Rivers obtained goods of Asiatic origin in exchange for items such as deer skins for fur, feathers for headdresses, and arrows.

This complex trading network was halted when commercial whalers entered the north Bering and Chukchi Seas beginning in 1848. They were able to transport goods on their ships, precluding the

need for the prior trading network. The whalers were primarily interested in baleen which was then used for buttons and corset stays. Whaling was so profitable that several Eskimo entered into business for themselves (Chance 1966:13-14)

The advent of commercial whalers changed the Inupiat way of life considerably. Probably the most profound change was in whaling technology. The adoption of explosive harpoons meant that the crew would no longer have to follow and wait for the whale to tire in order for them to lance its vital organs.

The subsequent depletion of the whale population coincided with a decline in the demand for baleen and by around 1915 commercial whaling had ceased. With the abrupt economic decline brought about by the departure of whalers, Eskimo social organization was severely disrupted. This was combined with the effects of diseases to which the Inupiat were not immune, such as measles, smallpox, influenza, and tuberculosis, which in some cases decimated entire villages. These factors, combined with the consequences of importation of alcohol "disrupted and demoralized village life" (Chance 1966:15). These devastating impacts on Eskimo society along the north coast of Alaska prompted the U.S. government to arrange for the importation from Siberia of herds of reindeer in hopes of economically rectifying the situation (Chance 1966:15).

By about 1920, fox fur became the primary means of income for Eskimo who had previously only supplemented their income with trapping. To tap the local trade, Tom Gordon from Barrow and his wife decided to found a trading post in the area. With the help of his wife's brother, Andrew Akootchook, a site that came to be identified as Kaktovik was chosen on Barter Island. A few families settled nearby, and Kaktovik became a gathering place for Inupiat of the region, especially during Christmas and Fourth of July celebrations. The fur market, which was strong following World War I, began a precipitous decline with the beginning of the Great Depression in 1929. By the 1940s the Gordon store and other small posts at Beechey Point, Brownlow Point, and Debarkation Point were being abandoned. In the mid-1940s a small store run by local Inupiat was opened at Kaktovik and was supplied by small boat from Barrow.

While World War II itself had little immediate impact on Kaktovik residents, the post-war years introduced far-reaching changes to the Kaktovik economy. The U.S. Coast and Geodetic Survey began mapping the Beaufort seacoast in 1945, bringing some wage employment opportunities to the area. More important to the Kaktovik economy, however, was the selection of Barter Island for the DEW Line, which gave jobs to many Inupiat and encouraged migration from outlying villages. In 1%2, over half of the Eskimo men at Kaktovik were earning salaries of $600/month or more at the Barter Island site (Chance 1966:17). By 1989, only one permanent, long-term Inupiat employee still worked at the site. However, three whites employed there were married to Inupiat women in the village.

Passage of ANCSA and the creation of the NSB have had a more profound long-term impact on the local economy than the construction of the DEW Line. By 1989, from a total working population (18-65) of 107 persons, 57 worked for the NSB government, local government, or school, and 17 more worked for the Inupiat corporation or an affiliate. These statistics (described in greater detail below) vividly convey the pervasive economic and lifestyle impact of the NSB.

Subsistence has played a profound role in traditional social and cultural patterns in Kaktovik and continues to play an important role in the lives of current residents. It is important to note, nonetheless, that the strong subsistence ethic in Kaktovik has been influenced by employment decisions since the founding of the contemporary village.

The most profound regional level change affecting the North Slope is related to the shift from a high-profile, high-expenditure construction economy to an "operations and maintenance" commercial economy. This change took place at the point at which the borough recognized that: (1) it had built everything in the communities that was really needed; (2) it was beginning to run out of funds to continue its unparalleled construction activity and (3) it began to recognize the increasing costs of operating and maintaining the facilities (which created over $928,000,000 of debt) it had constructed. The cut in capital improvements funding was also made in recognition of the fact that existing facilities were not created with strict energy efficiency criteria. The buildings were very expensive and not particularly efficient for the services they were to provide. As these facilities continue to age and degenerate, the costs of operating and maintaining them will increase, possibly beyond levels maintainable by the community. These continuing high costs contribute toward local perceptions of economic dependence on the NSB and on the oil revenue that is the basis for the North Slope economy.

## B. The Public Sector

### 1. Organization

The public sector can be divided into NSB, state, and federal government employment. Examples of NSB employment are: construction worker, health aide, Public Safety Officer, municipal service worker, housing administrator, wildlife management person, employees in the mayor's office and assembly, or for the Rural Employment and Living Improvements (RELI) program and the Mayor's Job Program (MJP) (NSB Census 1989). The NSB is financed primarily from revenues on oil production facilities located within the NSB. Since the formation of the North Slope Borough, the provision of most public programs and utilities, including village housing improvements (hence the construction jobs), has been the responsibility of the borough. And because the villages within the NSB do not have their own industries or exports, the bulk of employment is within the auspices of the borough itself. As discussed in greater detail below, employment for the state of Alaska has been, and continues to be, non-existent in Kaktovik. Federal government employment includes the outside employees working directly for the Department of Fish and Wildlife, indirect local seasonal hires, and local resident employees of the DEW Line site.

### 2. Employment

The classifications of employers in the public sector, and especially the occupations that are classified under them, are left undefined in most previous studies, making precise comparisons difficult. Kruse et al. (1981:35) provide percent distributions of jobs held by Kaktovik workers for the year between October 1976 and September 1977. Employees of the NSB constituted 52% of the total employment of Kaktovik. The Arctic Slope Regional Corporation (ASRC) constituted 26%, state and federal government constituted O%, and local government constituted 18% of

employment in Kaktovik. More recent data provided by Alaska Consultants (1981:42) give numbers of jobs held by workers in 1980 and these are shown in Table 10-KAK, "Composition of Employment by Race and Sex - Kaktovik". In addition, a sex and ethnic group breakdown for each "employment sector" is given. Within the total population, 47 out of 98, or 48%, of employment was categorized as local government. Of those, 78.7% were Inupiat (37 out of 47) and 21.3% (10 out of 47) were non-Inupiat. Sixty eight percent of the local NSB jobs (32 out of 47) were held by men and 32% by women (15 out of 47). State and federal government made up 24.2% of total Government employment (156 out of 62). Within this category, 33.3% were Inupiat and 66.7% were non-Inupiat.

Other interesting data are provided by Alaska Consultants (1983:43) on the composition of employment by age, race, and sex for 1980, as shown in Table 11-KAK. Although the numbers are small, there were proportionally far more high school age Inupiat than non-Inupiat in the work force (7 Inupiat versus 1 non-Inupiat between the ages of 15-19). In the 20-24 age group there were 11 Inupiat and no non-Inupiat employed in Kaktovik. These data may reflect the tendency of non-Inupiat families to either move when a child reaches high school age or to send their child outside of the village to attend college.

Alaska Consultants (1983:1 1) also provides employment data for 1982. However, these data do not indicate a breakdown by sex or ethnic group. The local government constituted 51.5% of the workforce in 1982 while state and federal government employment constituted 4.5%. It is probably safe to assume, though one cannot know for sure without definitions from the authors, that Alaska Consultant's definition of "local government" is consistent with Kruse's "North Slope Borough" classification. If this is the case, employment by the NSB has historically constituted half of total employment. It should also be noted that "contract construction" was not included in the public sector figures. This characterization of construction employment can be disputed on the grounds that most construction projects are ultimately financed by the NSB, although they may be contracted out to private construction companies. Including this employment category in the tally of all public sector employment further increases the level of NSB subsidization of the economy.

The 1989 NSB census data are fairly consistent with the above trends (see Table 11-KAK on the industry composition of Kaktovik). In 1989, the NSB government was directly responsible for 67.3% of the total employment in Kaktovik - 72% of which was held by Inupiat (52 out of 72) and 28% of which was held by non-Inupiat (20 out of 72). Six more (5.6%) local jobs were related to local government employment, and another four (3.7%) jobs related to federal government employment (U.S. Fish and Wildlife Service [USFWS]). The KIC (and its subsidiary organizations) constitute quasi-public sector entities. This sector of the economy accounts for another 17 (16%) employment positions. Thus, public sector employment accounts for over 76% of total employment in Kaktovik. Of the remaining jobs, three are listed as construction, three in recreation/tourism (primarily hotel employees), one in business, and one in mining. Within the public sector, the MJP and RELI program account for 49% (28 of 57), and municipal services account for 30% (17 of 57) of the NSB government employment in Kaktovik. Inupiat constitute about 70% of the NSB workforce in all areas except education, where 73.3% (11 of 15) are non-Inupiat and 26.7% (4 of 15) are Inupiat. Non-Inupiat teachers make up 35.5% (11 of 31) of the total non-Inupiat employment positions in Kaktovik, while 19.4% (6 of 31) work in municipal services or public safety, 13% (4 of 31) work for the federal government (USFWS), 9.6% (3 of31) in recreation and tourism, and 6% (2 of 31) in construction.

## Table 1O-KAK

### Composition of Employment by Race and Sex * **
### Kaktovik - July 1980

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 3 | 0 | 3 | o | 0 | 0 | 3 | 0 | 3 |
| Contract Construction | 4 | 0 | 4 | 12 | 0 | 12 | 16 | 0 | 16 |
| Tranaportation, Communication, and Public Utilities | 2 | 0 | 2 | 6 | 2 | 8 | 8 | 2 | 10 |
| Trade | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Finance, Insurance, and Real Estate | 3 | 1 | 4 | 0 | 0 | 0 | 3 | 1 | 4 |
| Services | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| Government | | | | | | | | | |
| Federal | 3 | 2 | 5 | 7 | 3 | 10 | 10 | 5 | 15 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local | 25 | | 37 | 7 | 3 | 10 | 32 | | 47 |
| Construction | (18) | (3 | (22) | ( 0) | ( 0) | ( 0) | (18) | (; | (22) |
| Non-Construction | (7) | (8) | (15) | (7) | (3) | (lo) | (14) | (11) | (25) |
| TOTAL | 41 | 17 | 58 | 32 | 8 | 40 | 73 | 25 | 98 |

* Employment was not necessarily full-time or permanent. People were asked onfy to fiit their employer or major source of income.

•• Employment figures exclude 5 Alaska Natives (3 males and 2 females) who listed various forms of assistance, primarily Social Security, as their major source of income. Employment figures also exclude 37 Alaska Natives (16 males and 21 females) and 7 non-Natives (2 males and 5 females) aged 16 and over for whom no employment information waa provided or who claimed to be unemployed.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

**Table 11-KAK**

**Composition of Employment by Age, Race, and Sex ***
**Kaktovik - July 1980**

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 3 | 4 | 7 | 1 | 0 | 1 | 4 | 4 | 8 |
| 20 - 24 | 10 | 1 | 11 | 0 | 0 | 0 | 10 | 1 | 11 |
| 25-29 | 6 | 1 | 7 | 3 | 2 | 5 | 9 | 3 | 12 |
| 30-34 | 1 | 4 | 5 | 4 | 2 | 6 | 5 | 6 | 11 |
| 35-39 | 5 | 3 | 8 | 5 | 1 | 6 | 10 | 4 | 14 |
| 40-44 | 4 | 2 | 6 | 2 | 0 | 2 | 6 | 2 | 8 |
| 45-49 | 3 | 1 | 4 | 0 | 0 | 0 | 3 | 1 | 4 |
| 50-54 | 3 | 0 | 3 | 1 | 1 | 2 | 4 | 1 | 5 |
| 55-59 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 60-64 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 75 and wer | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 4 | 1 | 5 | 15 | 2 | 17 | 19 | 3 | 22 |
| TOTAL | 41 | 17 | 58 | 32 | 8 | 4 0 | 73 | 25 | 98 |

• Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

## C. The Private Sector

### 1. Organization

Private sector industries would include oil company, mining, transportation, communication, public utilities, and Inupiat corporation employment. Currently, there are three formal private enterprises in Kaktovik. One is the Waldo Arms, which is currently under bankruptcy and being maintained by the Internal Revenue Service (IRS). Another is the Kikiktak Store, the village corporation store. In addition, a non-Inupiat resident has a small store which appears to be the only private enterprise by a local person. Informally, a number of craft skills are used as a source of income. People make sleds, boots, parkas, hats of skin, and ivory and baleen carvings. Wood carvings and masks of driftwood are made rarely. These craft items are sold on special occasions at the store or at Barrow or Fairbanks craft shops. Sometimes hikers in the Arctic National Wildlife Refuge come in and buy craft items.

Because the sources for statistical employment data are again inconsistent with regard to how industries and employers are defined and classified, it is only possible to make broad generalizations about trends in the private sector.

## Table 12-KAK

### Industry Composition of Employment by Sex and Ethnicity
### Kaktovik - 198S

| | INUPIAT | | | NON-INUPIAT | | | TOTK | % OF |
|---|---|---|---|---|---|---|---|---|
| INDUSTRY GROUP | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| PRIVATE SECTOR | | | | | | | | |
| FISHERIES | | | 0 | | | 0 | 0 | |
| | 1 | | 1 | | | 0 | 1 | |
| CONSTRUCTION | 1 | | 1 | 2 | | 2 | 3 | |
| TRANSP/COMM/PUBLIC UTIL | | | 0 | | | 0 | 0 | |
| TRADE | | | 0 | | | 0 | 0 | |
| FINANCE/INSUR/REAL EST | | | 0 | | | 0 | 0 | |
| BUSINESS/REPAIR SERV | | | 0 | 1 | | 1 | 1 | |
| ENTERTMT/REC/TOURIST SERV | | | 0 | 2 | 1 | 3 | 3 | |
| HEALTH, SOCIAL, & EDUC SERV | | | 0 | | | 0 | 0 | |
| SELF-EMPLOYED | | | 0 | | | 0 | 0 | |
| NATIVE CORP & AFFILIATE | 11 | 6 | 17 | | | 0 | 17 | |
| OTHER | | | 0 | | | 0 | 0 | |
| SUBTOTAL | 13 | 6 | 19 | 5 | 1 | 6 | 25 | 23.4% |
| NSB GOVERNMENT | | | | | | | | |
| HEALTH | | 2 | 2 | | 1 | 1 | 3 | |
| PUBLIC SAFETY | | | 0 | 2 | | 2 | 2 | |
| MUNICIPAL SERV | 11 | 2 | 13 | 4 | | | 17 | |
| FIRE DEPT | | | 0 | | | 0 | 0 | |
| SEARCH & RESCUE | | | 0 | | | 0 | 0 | |
| HOUSING | 1 | | 1 | 1 | | 1 | 2 | |
| WILDLIFE MGT | 1 | | 1 | | | 0 | 1 | |
| RELI & MJP | 21 | 7 | 28 | | | 0 | 28 | |
| LAW OFFICE | | | 0 | | | 0 | 0 | |
| ADMIN & FINANCE | | | 0 | | | 0 | 0 | |
| PLANNING | | 1 | 1 | | | 0 | 1 | |
| INDUSTRIAL DEVELOPMENT | | | 0 | | | 0 | 0 | |
| HIGHER EDUCATION CENTER | | | 0 | | | 0 | 0 | |
| MAYOR'S OFFICE & ASSEMBLY | | 1 | 1 | | | 0 | 1 | |
| OTHER NSB | | 1 | 1 | 1 | | 1 | 2 | |
| SUBTOTAL | 34 | 14 | 46 | 8 | 1 | 9 | 67 | 533% |
| NSB SCHOOL DISTRICT | 1 | 3 | 4 | 6 | 5 | 11 | 15 | 14.0% |
| NSB SUBTOTAL | 35 | 17 | 52 | 14 | 6 | 20 | 72 | 67.3% |
| OTHER LOCAL GOV'T | 1 | 4 | 5 | | 1 | 1 | 6 | 5.6% |
| STATE GOV'T | | | 0 | | | 0 | 0 | 0.0% |
| FEDERAL GOV'T | | | 0 | 3 | 1 | 4 | 4 | 3.7% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| SUBTOTAL ALL GOV'T | 36 | 21 | 57 | 17 | 8 | 25 | 82 | 76.6% |
| GRAND TOTAL | 49 | 27 | 76 | 22 | 9 | 31 | 107 | 100.0% |
| % OF TOTAL | 45.8% | 25.2% | 71.0% | 20.6% | 8.4% | 29.0% | 100.0% | |

Notes:

(1) Figures equal to number of persons employed, including part-time, temporary, and full-time employment.

Source: NSB Census of Population and Economy, 1989.

2. Employment

According to an early study by Kruse (1981:35), private business was the employer for 18% of jobs held by Kaktovik workers in 1977. Alaska Consultants (1981:42) provides data indicating that, by 1980, 36.7% of employment (36 out of 98 jobs) were in classifications other than government (refer to Table 1O-KAK). However, in that study Alaska Consultants elected to classify "contract construction" as non-government employment This classification is debatable since most construction projects are funded by the NSB (though they may be contracted out to private construction companies). Without contract construction in the figure, the percentage of private employment drops to 20.4%. The ethnic breakdown for non-public sector employment for that period indicates that 44.4% of total jobs were held by Inupiat and 55.6% were held by non-Inupiat. A subsequent Alaska Consultants study for 1982 shows 44% of the total employment was not within the public sector (ACI 1983:11). Again, "contract construction" was included as private sector employment. After reclassifying such employment, 33.6% of workers in Kaktovik were employed in the private sector in 1982 (ethnic breakdowns were not provided).

The NSB census for 1989 (see Table 12-KAK above) reveals a very different picture. Only three individuals identified their occupation as "construction," and two of these were non-Inupiat. Thus, it is evident that construction no longer plays an important role, nor is it likely to regain its prominence in the foreseeable future since the NSB Capital Improvements Program (CIP) construction phase is over and the entire region has entered an operation and maintenance phase. More importantly, even if we elected to treat local Inupiat Corporation employment as "private," total private sector employment would amount to only 23.4% of the total employment. If such employment were classified more in keeping with locally perceived categories, Inupiat Corporation jobs would be viewed more as "public" sector than as "private" sector employment, given the underlying public process utilized to identify potential employees and to fill available positions. If this view was adopted, total private sector employment falls to 7.5% (8 of 107) of total employment. Only two of these eight jobs are held by Inupiat residents; Inupiat private sector employment amounts to only 1.8% of total employment (2 of 107). This, we feel, is an accurate reflection of the role of private enterprise in Kaktovik and, in fact, several other North Slope communities. Most, if not all, of these eight jobs, in turn, could be shown to be directly dependent on NSB expenditures or subsidies.

The NSB has been responsible for employing a majority of its workforce through three different programs. The first program was funded for capital improvements (CIP). As funding for capital improvements waned, the Mayor's Job Program (MJP) provided employment for many Inupiat. The current program, which is replacing levels of employment previously maintained by the CIP and the MJP, is the Rural Employment and Living Improvements (RELI) project. Two programs, the RELI "weatherization" and the "windows" programs, served as the employer in Kaktovik in 1988-1989. The first program was designed to weatherize Kaktovik homes by installing new sealant, new doors, and new windows produced by the RELI windows manufacturing operation. It also involved improving the existing kunnichuks. Until November 1988 this program provided employment to between 21 and 25 Kaktovik residents. However, because of borough budget cutbacks, the labor force was first "split-shifted." This meant that everyone's hours were cut back a certain percentage. Eventually, all but four workers were laid off. Today (March 1989) these four workers (one carpenter, two carpenter's helpers, and one electrician's helper) continue to provide minor repairs under the RELI program and the community has submitted a request to the

NSB for additional support for the "bedrooms" project (borough-subsidized bedroom additions to existing houses) and for renewed support for the kunnichuk plumbing, and livingroom-upgrade projects. It is anticipated that this money will be authorized in May 1989 and that Kaktovik will again be a full employment community. In addition to the four current employees of the program, it is anticipated that 6-12 workers will be hired for the bedroom addition program and another six workers will be rehired for the plumbing upgrade project.

The RELI windows project was designed to fabricate an improved (German) design to weatherproof windows for installation into homes in Kaktovik and other North Slope communities. The factory is set up in a large building owned by the school and previously used for vocational training. It occupies a relatively small space on the lower level of the building and a very large space on the second floor. Once it was decided that the RELI program should be implemented and RELI funds had been secured, potential employees were recruited. Since operations started during a period of full employment for men, unemployed women comprised the primary applicant pool. This has been a very successful process and has created a new sense of economic security in the community. Thus, until the latter portion of 1988 there was "overemployment" in Kaktovik given that a significant portion of the work force consisted of individuals normally outside the labor force.

When the RELI upgrade program activity level began to decline in November 1988, the windows project nevertheless retained the female trainees and has continued with the project unchanged. It was decided that these new labor force entries should not be terminated to provide jobs to the male workers being terminated from the RELI upgrade projects. They had been specially trained for their jobs, were dependable, and had demonstrated their abilities and work capabilities. In addition, assuming that the more qualified recently laid-off personal were used to replace the newly-hired women, it was felt that once more remunerative and appropriately classified jobs became available that these individuals would wish to change again. Thus, the windows project retained its existing staff.

Kaktovik is appropriately recognized by residents in other North Slope communities, by government representatives, and borough staff as a community of motivated employees. They are considered highly job-oriented, willing to sacrifice to obtain and retain wage employment positions and, if necessary, forego subsistence opportunities in order to meet their occupational obligations. In this respect, they are also noted for their ability to plan subsistence and other non-employment activities around their job requirements, planning their vacations to coincide with whaling activities, subsistence hunting, travel to Barrow, etc.

### 3. Revenues

Asset and expenditure information for private sector businesses on the North Slope is typically very difficult to obtain because local proprietors are reluctant to release it. In Kaktovik, however, we were able to establish that the two hotel/motel enterprises were either breaking even or operating at a slight loss. One, the Waldo Arms hotel/restaurant is under IRS bankruptcy control and is being managed by an outside firm and the other, owned by a local individual, was being refurbished at the time of our fieldwork, March 1989, but was anticipated to at least break even

for the summer season. Financial information on the KIC is considered confidential so we are unable to provide information about its revenues.

## D. Economic Issues and Concerns

### 1. Emergence of a Regional Economy

Workshops held among the researchers on this project identified two major, though in some ways countervailing, regional and interregional trends. On one hand, it is evident that the borough has become the principal focus of both the local and regional economy -- and Barrow has become " synonymous with the NSB in many ways for those residents of the outlying villages. Virtually every aspect of local activity, every major economic decision, organizational decision, etc., is influenced to some degree by local perceptions of what the borough will or won't do in response or support. On the other hand, the structure of the borough has allowed Kaktovik to influence regional-level decisions in a way that would have been inconceivable twenty years ago. Community representation on regional boards, generous transportation and participation subsidies, community-based audiovisual support equipment, telefax machines, etc., combine to allow direct and frequent input into all major regional-level decisions. The NSB, for its part, perceives the relationship as imbalance because of the seeming "indifference" of local representatives, their casual participation on key decisions, their inconsistent presence at regional meetings, and resistance to the "obvious" needs of the larger region. The community, on the other hand, sees the borough as overbearing (though rarely malevolent), interfering in even the most mundane local processes. Thus, a delicate state of equilibrium has been established in which the borough responds to the requests of the most vocal or ardent communities of the region while local communities accept or tolerate perceived interference in exchange for proffered benefits.

### 2. Effect of Wage Economy on Other Institutions

While difficult to quantify, local informants agree that a number of changes have occurred that appear to be related to increased involvement in the wage economy and associated wage labor activity. Among the most frequently expressed "observations" of local informants are: (1) the reduced frequency of inter-household visiting, (2) the increased dependence on, and involvement with, television; (3) the increased importance placed on financial stability; (4) the increased consideration of costs of long-term education for their children; (5) the increased willingness to forego recreational or subsistence pursuits in favor of job security and (6) the apparent willingness to risk long-term environmental consequences in order to promote shorter-term employment opportunities. Obviously, the degree to which these changes are associated with wage employment varies considerably.

While informants were uniformly of the opinion that subsistence product exchange with other communities, primarily Anaktuvuk Pass, is a strong and enduring institution, some reported that they had not actually participated in such exchange in several years because of low supplies of whale meat. However, informants agreed that exchange would resume when supplies increase. In the meantime, residents of Anaktuvuk Pass send extra dry caribou and sheep to compensate for

shortages of whale meat in Kaktovik. Such non-commercial exchanges are not, however, without expenses. It costs about $1.25 per pound to ship whale to Anaktuvuk Pass.

3. Role of Subsistence in the Market Economy

The work schedules of many employed Inupiat impose considerable obstacles to the pursuit of subsistence hunting. Unlike some other communities, there is little formal effort to tailor local employment opportunities to the seasonal subsistence cycle. The NSB positions, however, are relatively flexible and formally allow ten days per year for subsistence activities. The use of these days, however, ranges considerably among Kaktovik residents. Some individuals will take off a day early or return a day or two late from a weekend outing, but otherwise most subsistence activity has come to be tailored to the work environment. The opposite is true in most other North Slope villages -- the work environment has been tailored to allow for subsistence practices. Smythe and Worl observed in 1986 that the KIC employed four full-time individuals, not all of whom were required at all times and so were allowed to go subsistence hunting when they wanted to (Smythe and Worl 1985:170). They also observed that this informal pattern was an exception to the general rule. A major exception to the rule, however, is whaling. Jobs, construction projects, road or building repairs, etc., are institutionally set aside to accommodate whaling activities.

That there has been some change in the traditional orientation to subsistence activities cannot be questioned. Whether these changes represent institutional change or a natural variation in these patterns is open to debate. In a discussion of the dynamics of the Kaktovik "subsistence economy," Michael and Cynthia Wentworth eloquently describe their view of the articulation of subsistence and the market economy in the community

> It is important to point out that even though Kaktovik people now participate in a cash economy, they do so with values and attitudes derived from an age-old subsistence economy. These values differ markedly from non-Inupiat values towards the earning and spending of money. As a result, Inupiat economic decisions about how to earn a livelihood and what to do with their money often differ from the non-Inupiat viewpoint. The Inupiat people have a tendency to use money and modem technology in order to fulfill age-old subsistence objectives. Thus, one of the most important reasons for earning and spending money is to buy better subsistence equipment to be a more successful subsistence hunter, a very important cultural value (1979104).

This observation is no doubt accurate. The question, however, is first whether the associated behavioral patterns have undergone change and, if so, whether these changes represent normal variation or incipient institutional change. This is a fine line. We might attempt to make such a distinction, however, by examining whether, given limited resources, an individual used his money to obtain subsistence-related items (as implied above), to purchase household goods or appliances, to support travel or vacation, or to underwrite a child's post-secondary education. From our interviews in the community we were impressed with the local commitment to jobs and to wage

labor. It seemed clear that they were willing to give up considerable freedom to pursue subsistence resources in exchange for stable long-term employment.

Another interesting effect of increased exploration, field surveys, hunting, fishing, and other recreational activities in the Kaktovik area, especially in the Arctic National Wildlife Refuge, has been capitalization of subsistence skills. Rates have been established for guided inland tours, coastal hunting, and fishing trips; establishing camps; snowmachine; boat, and aircraft excursions; and many kinds of support services requiring subsistence skills.

4. Trends in Employment

Population, labor force, and employment for Kaktovik are shown in Figure 6-KAK for 1980 and 1988. Also, these variables are projected to the year 1994. The figures for 1980 and 1988 show that while village population increased from 192 to 227, the labor force (employed and unemployed persons age 16 to 64 that were willing and eligible to work) increased only slightly from 101 to 108, and total village employment increased from 98 to 105. The rate of unemployment (the number of persons unemployed divided by the labor force) in Kaktovik remained low, at about 3% during this time period. A signit.leant increase in direct NSB government employment in the village contributed to the positive employment setting. Between 1980 and 1988 NSB government employment increased nearly threefold from 25 to 72. These figures, however, understate NSB government contributions to village employment because they do not include employment expansion in other public sector categories as well as in the 'private sector" brought about by NSB-funded projects and programs. Private sector employment and indirect NSB government employment are depicted in the bar labeled "Total Employment" (and have been discussed in greater detail above).

There are no unemployed non-Inupiat residents of Kaktovik (please refer to Table 13-KAK). Three non-Inupiat individuals were identified as being "underemployed" (i.e., the number of persons that worked part of the year but would have worked more if additional jobs had been available). This compares with three unemployed and twenty underemployed Inupiat residents. In summary, 2S.3% of the Inupiat population are considered underemployed versus 10% of the non-Inupiat population. This pattern was common to all North Slope communities, though Kaktovik has somewhat lower rates than most of the others. Total community unemployment was 2.8% while total underemployment was 21.1%.

Another trend that is continuing from the 1980s is the sex differential in occupational groups which can be seen in Table 13-KM. While women comprise about 47% of the Inupiat population (79 out of 168, see Table 2-KAK), they represent only 34% of the Inupiat work force (26 out of 76). In addition, the occupational groups that women do occupy are underrepresented by men. These are the administrative support, service, and technical occupations. These jobs are typically year-round positions. The jobs that men are most frequently employed in are craftsman, laborer, and operator/mechanic. These jobs often only offer seasonal employment.

The sex differential in occupational groups exists for non-Inupiat, too. However, the types of jobs held by both non-Inupiat men and women are less concentrated in a few occupational groups, as is the case for Inupiat employees.

Table 14-KAK "Kaktovik Household Characteristics by Levels of Household Income" displays another important economic trend. It can be seen that the average household income in Kaktovik is $47,593. For purposes of discussion here, a very important set of data is the information on average proportion of household income spent in the village. Income spent in the village, of course, translates into employment and income for other village residents -- in effect, the dollars earned and then spent in the village are recycled into the community for the mutual benefit of all residents. Examining Inupiat households, one can see that there is a negative correlation between amount of household income spent in the village and size of that income. That is, those households with incomes below $20,000 spend the most in the Kaktovik. The same pattern holds true for non-Inupiat households.

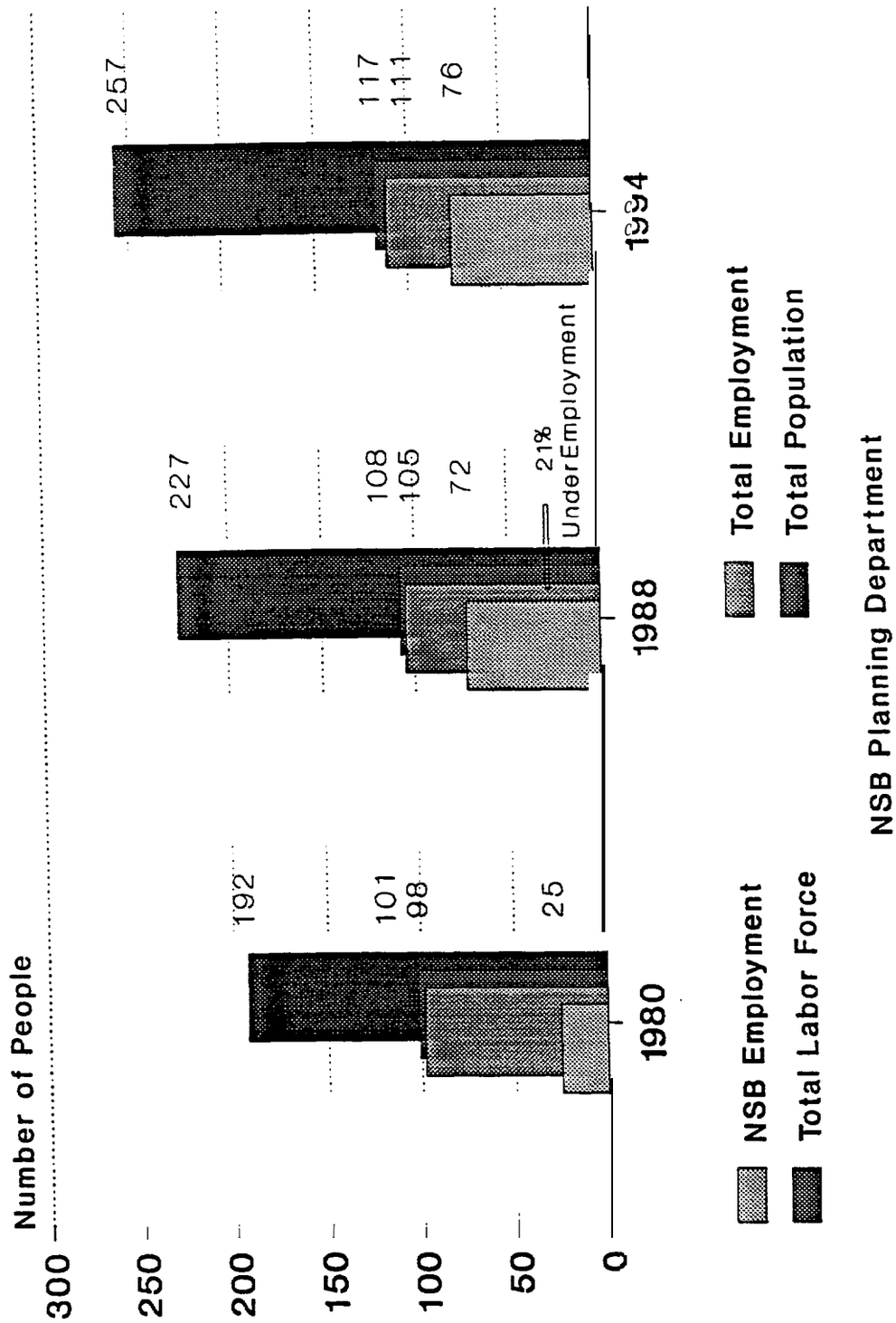
Figure 6-KAK also shows projected levels of population, labor force, and employment in 1994. The assumptions used to make these projections are:

- Recent historic rates of village population growth would continue into the future;
- Village labor force would change according to natural shifts in the age distribution of village population;
- The rate of village unemployment would be held at 5%; and
- The ratio of NSB government employment to total village employment in 1988 would prevail in 1994.

Application of these assumptions leads to increases across the board. Village population would increase to 257 in 1994. The village labor force would experience modest growth from 108 to 117. In order to hold unemployment to 5%, total employment would increase from 105 to 111. NSB government employment required to support this level of total employment would increase by only two persons.

Figure 6-KAK

Population Labor Force, and Employment
Kaktovik: 1980, 1988, and 1994 (Projected)



## Table 13-KAK

### Occupation Composition of Employment by Sex and Ethnicity
### Kaktovik - 19SS

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % OF |
|---|---|---|---|---|---|---|---|---|
| OCCUPATION GROUPS | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| EXEC. ADMIN. MGR. | 5 | 2 | 7 | 3 | | 3 | 10 | 9.4% |
| PROFESSIONAL | | | 0 | 2 | | 2 | 2 | 1.9% |
| TEACHER | | 1 | 1 | 3 | 3 | 6 | 7 | 6.6% |
| TEACHER AIDE | | | 0 | | | 0 | 0 | 0.0% |
| TECHNICIAN | 3 | 4 | 7 | | 2 | 2 | 9 | 8.5% |
| ADMIN. SUPPORT | | 7 | 7 | | | 0 | 7 | 6.6% |
| SERVICE | 2 | 6 | 8 | 5 | 4 | 9 | 17 | 16.0% |
| OPERATOR/MECHANIC | 11 | | 11 | 3 | | 3 | 14 | 13.2% |
| PILOT | | | 0 | | | 0 | 0 | 0.0% |
| LABORER | 11 | 6 | 17 | 1 | | 1 | 18 | 17.0% |
| CRAFTSMAN | 17 | | 17 | 4 | | 4 | 21 | 19.8% |
| ARTISAN | | | 0 | | | 0 | 0 | 0.0% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| TRAPPER/HUNTER | | | 0 | | | 0 | 0 | 0.0% |
| OTHER | 1 | | 1 | | | 0 | 1 | 0.9% |
| TOTAL EMPLOYED | 50 | 26 | 76 | 21 | 9 | 30 | 106 | 100.0% |
| % OF TOTAL | 47.2% | 24.5% | 71.7% | 19.8% | 8.5% | 28.3% | 100.0% | |
| LABOR FORCE | 51 | 28 | 79 | 21 | 9 | 30 | 109 | |
| % OF TOTAL | 46.8% | 25.7% | 72.5% | 19.3% | 8.3% | 27.5% | 100.0% | |
| TOTAL UNEMPLOYED | 1 | 2 | 3 | 0 | 0 | 0 | 3 | |
| UNEMPLOYMENT RATE | 2.0% | 7.1% | 3.8% | 0.0% | 0.0% | 0.0% | 2.8% | |
| TOTAL UNDER-EMPLOYED | 16 | 4 | 20 | 2 | 1 | 3 | 23 | |
| UNDER-EMPLOYMENT RATE | 31.4% | 14.3% | 25.3% | 9.5% | 11.1% | 10.0% | 21.1% | |

Notes: (1) Total employed includes part-time, temporary, as well as full-time employment.
(2) The occupation category "OTHER" includes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.
(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.
(4) Labor force = employed + underemployed + unemployed.
(5) Unemployment rate = persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services Census of Population and Economy, 1989.

## Table 14-KAK

### Kaktovik Household Characteristics -1988
### By Levels of Household Income

| | HOUSEHOLD INCOME CATEGORIES | | | | |
|---|---|---|---|---|---|
| | BELOW $20K | $20-40K | $40-60K | ABOVE $60K | ALL HHs |
| **Average HH Income ($):** | | | | | |
| Inupiat HHs | $9,038 | $27,083 | $49,773 | $76,429 | |
| Non-Inupiat HHs | | $27,500 | $50,833 | $123,571 | |
| All HHs | $9,038 | $27,115 | $50,000 | $100,000 | $47,593 |
| Cases: | 13 | 13 | 14 | 14 | 54 |
| **Average HH Size (# Persons per HH):** | | | | | |
| Inupiat HHs | 2.8 | 3.3 | 3.3 | 6.0 | |
| Non-Inupiat HHs | | 1.0 | 3.3 | 3.4 | |
| All HHs | 2.8 | 3.1 | 3.3 | 4.7 | 3.5 |
| Cases: | 13 | 13 | 14 | 14 | 54 |
| **Average Meat & Fish Cemptn from Own HH Subsistence (%):** | | | | | |
| Inupiat HHs | 33.8% | 54.2% | 35.9% | 50.0% | |
| Non-Inupiat HHs | | | 48.3% | 1.7% | |
| All HHs | 33.8% | 54.2% | 38.8% | 27.7% | 38.3% |
| Cases: | 13 | 12 | 13 | 13 | 51 |
| **Average Meat & Fish Cemptn from Other HH Subsistence (%):** | | | | | |
| Inupiat HHs | 30.8% | 25.8% | 29.7% | 7.1% | |
| Non-Inupiat HHs | | | 11.7% | 0.8% | |
| All HHs | 30.8% | 25.8% | 25.9% | 4.2% | 21.7% |
| Cases: | 13 | 12 | 14 | 13 | 52 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | | |
| Inupiat HHs | 33.5% | 33.3% | 25.3% | 13.6% | |
| Non-Inupiat HHs | | | 41.7% | 0.3% | |
| All HHs | 33.5% | 33.3% | 28.8% | 7.5% | 25.7% |
| Cases: | 13 | 12 | 14 | 13 | 52 |
| **Average Proportion HH Income Spent in Village (%):** | | | | | |
| Inupiat HHs | 77.7% | 71.3% | 69.5% | 70.0% | |
| Non-Inupiat HHs | | | 33.3% | 14.7% | |
| All HHs | 77.7% | 71.3% | 61.8% | 42.4% | 62.7% |
| Cases: | 13 | 12 | 14 | 14 | 53 |

Note: Total cases (households) = 66.

Source: NSB Department of Planning and Community Services
Census of Population and Economy

Several informants expressed the opinion that there were "too many boards, committees, and meetings" to attend and that they had simply "given up." Others noted that "a few people make all the decisions." Still others expressed the view that "very few people" attend the public decision-making functions and that "no one wants to take responsibility" for elected positions and that such positions go to those "least opposed" to the jobs. Clearly, all of these attitudes are the logical outcome of the interaction of: (1) the proliferation of organizational and bureaucratic structures; (2) the increased and ever-broadening decision-making responsibilities of these organizations; (3) a fixed and small number of capable leaders and organizers; (4) a very limited number of willing candidates for leadership position; and (5) the inevitable burnout of these individuals.

The community of Kaktovik, prior to incorporation, had little formal organization. The traditional council acted only in local matters and reportedly often was unable to implement its decisions. However, since the incorporation of the NSB, the number of formal institutions has increased remarkably in the villages. The number of formal institutions and responsibilities in the village is far out of proportion to the size of the village. Consequently, there are many organizations and committees being run by the same few leaders. Leadership recruitment is problematic in Kaktovik as it is in all of the villages on the North Slope, Even for those individuals who have assumed leadership roles, the obligations have often expanded beyond their expectations, which has created difficulties.

Kaktovik is typical of NSB villages in displaying this pattern, but Kaktovik is unique because non-Inupiat have assumed leadership roles on the village council and in the community with the same frequency as Inupiat. They have also been subject to the pattern of leadership burnout described above. The reasons for this are unclear, given our limited field time and a lack of published information. It is clear, however, that non-Inupiat are not likely to retire in Kaktovik. Some are much more active community members than others, having lived in Kaktovik twenty or more years. Yet, all are seen as non-Inupiat and, thus, different. At the same time, Kaktovik always has had a basically non-Inupiat institution as an organizational focus and as the reason for its being a settled place. First there was Thomas Gordon's trading post, then the school, and then the DEW Line. This organizational feature of the community may explain its uniqueness.

## A. Government

### 1. Organization and Scope of Operations

***Federal and State Agencies***

There are no permanent representatives of state agencies located in Kaktovik. Numerous state agents, of course, visit Kaktovik on a regular basis but only remain in the community until their specific task has been completed. The United States Fish and Wildlife Service (USFWS) of the federal government maintains a large permanent facility in Kaktovik. This facility serves as the headquarters for ANWR and has become an increasingly important focus of both local and national interest. While this study is not designed to critically examine the activities surrounding ANWR

(for which considerable information already exists), the level of local concern and involvement with this issue must be raised in this report.

The first formal local government in Kaktovik was the village council, established during the 1950s. However, it wasn't until 1%5 that the village council adopted a constitution and bylaws. According to Smythe and Worl (1985:127-128), this action established Kaktovik as the Inupiat Village of Kaktovik 'under the authority of the federal Indian Reorganization Act (IRA) of 1934, as amended in 1936 to extend to Alaska." According to BIA officials in Fairbanks, however, Kaktovik does not have an IRA council, but a traditional council. Apparently the council was never officially recognized as an IRA council by the BIA or the Department of the Interior, which makes it similar to Wainwright's council. The traditional council restricted its activities primarily to domestic issues but often had a difficult time enforcing issues of social control. The problem of enforcement was one example of the erosion of traditional methods of social control (Chance 1966, cited from Smythe and Worl 1985:128).

After the passage of ANCSA in 1971, Kaktovik became a second class city. This action required the establishment of a city council. "The city council became the primary governing body in the community and acted on behalf of the village council (Worl 1982)" (cited from Smythe and Worl 1985:136). However, there were two main differences between the village council and the city council. Membership in the village council was restricted to local Inupiat and every new council member had to be approved by the other members. To be qualified to serve on the city council, one only needed to have been a resident of Kaktovik for 30 days and a resident of Alaska for one year. The two councils also differed in their judicial powers. Until Kaktovik became a second class city, the traditional council was both the legislative and judicial body for the village. Under state laws, which applied since the passage of ANCSA and Kaktovik's subsequent incorporation, the city council could only act as the village's policy and legislative body. Judicial power resided with the state. Based on data collected in the field, it would appear that the traditional council, which has lacked contact with the BIA for many years, has few functions. Apparently in Kaktovik, as in the cases of Wainwright and Point Hope, the traditional council (or IRA council) effectively ceased to function at the time of municipal incorporation. While there have been subsequent incentives for reactivation of this body, at the time of formation of a city council the continuation of a traditional council would have appeared to be an effort in redundancy. There is no indication that the traditional council has addressed sovereignty issues as has been the case elsewhere in Alaska.

The mandate of the city council was primarily to act "on behalf of the community and promote its interest' (Smythe and Worl 1985:142). For example, the city council was very active in its campaign against Beaufort Sea Outer Continental Shelf (OCS) development. Regular city services such as the provision of public safety, education, and subsidized housing were managed by the North Slope Borough headquartered in Barrow.

Although the NSB has authority over many of the institutions in Kaktovik, the city council retains a close working relationship with Barrow. The NSB has a representative in Kaktovik whose title is village coordinator and whose responsibility it is to strengthen the ties between the NSB and Kaktovik (Smythe and Worl 1985:157).

## 2. Overlaps in Authority and Conflicts Among Institutions

In a document published by the Institute of Social and Economic Research (ISER 1983), there are interviews that indicate points of conflict between the NSB and other state, federal, and local agencies. For example, one resident suggested that while the NSB tries to give the people of Kaktovik help with some things, they "always stop us." He cites, particularly, litigation regarding OCS development (ISER 1983:12). Another resident echoed the mixed feeling regarding the NSB. He stated that the main problem Kaktovik has is in communication with the borough: "We've got the coordinator that is supposed to be the communication person between the NSB and us, but we never hear anything, just what you read in the paper" (ISER 1983:8).

One informant expressed titration about the lack of educational services available in Kaktovik compared to Barrow. To paraphrase: "There is a band at Barrow, but no music or art at all here in the school. Barrow children also have far greater opportunities to travel than those here in Kaktovik. In Kaktovik they need an arts and crafts teacher, if nothing more."

According to the United States Fish and Wildlife Service (USFWS) personnel in Fairbanks, problems similar to the ATV access difficulties in Anaktuvuk Pass and the Gates of the Arctic National Park are not found in Kaktovik with the Arctic National Wildlife Refuge (ANWR). The only problem reported for ANWR is indeed with ATV access, but the problem is not nearly as volatile an issue as in Anaktuvuk Pass, for several reasons. Foremost among them are the recency of the problem, the intensity of use, and low potential for damage noted to date. Recent efforts in Kaktovik by USFWS personnel have indicated that there are only five people who have indicated they would be interested in obtaining permission to access inholdings if permits were to become required. ATV damage is a problem that surfaced for the first time in the summer of 1989. The vehicle technology varies between Kaktovik and Anaktuvuk Pass as well. There are no "Argos" in Kaktovik, as that is a mode of transportation that is common only in Anaktuvuk Pass and is dictated by the conditions there. In ANWR the access is via three- and four-wheeler types of ATVS, and the USFWS has indicated that they would grant future access permission only to the bigger four-wheelers. According to USFWS personnel, however, the vast majority of land access and resource utilization is on the beach or on lands not in the refuge, and thus is not a big problem. At the time of field research (March 1989) the USFWS was in the process of gathering information for the first time on this topic, and it is not anticipated that this will be ready in draft form by late 1989. Upon preliminary analysis, it appears that a couple of the sites where some tundra damage has occurred are fishcamps and/or camping places. There are no plans to issue permits for general hunting access. According to senior USFWS personnel in Fairbanks, there are between 140 and 175 allotments in ANWR. The vast majority of these are held, not by individuals from Kaktovik, but by people to the south. There are between 20 and 25 inholdings by Kaktovik residents. The number is difficult to specify, because there are many allotments in various legal statuses. Some have been claimed but are not yet finalized, while others are disputed.

One of the problems in Kaktovik with the USFWS has nothing to do with limiting access, but rather concerns the research program. According to one USFWS official who is the liaison between the community and the Service, "We go up there with 60 people and just inundate the village. What really has the people ticked is the fixed-wing aircraft (not so much) and the helicopters we bring up there. They feel that it scares the caribou away from the areas near the village. That is really the only bone of contention in the community." According to one USFWS

official, "We do not need any more studies in the area. They were just put through the NSB census. The subsistence practices have been documented, and I have not seen anyone use that information for anything. So they get 200 caribou in a good year, a hundred in not so good a year, and none in a bad year, or whatever. So what? What does that information change, what can be done?"

One USFWS official, commenting on the utility of various governmental studies in the area, was concerned about the implied paternalism in the reports.

> The people of the village are adults and can make their own decisions. They are firmly behind development in the refuge. The mayor, the council, the corporation. It is not like they do not know what they are getting into. They have all seen Prudhoe, and they have been seeing it for 15 years. They know exactly what they are getting into. Maybe it would be different if they had not been exposed to development before, but the attitude of [Alaska Department of] Fish and Game, for example, is very paternalistic, which is wrong. They understand they are making choices for themselves and for their children. They know you can't hunt caribou in an oil field, and that is the decision they are making. They now have a life that working people can't approach. The new houses that went in there are $330,000 houses. They pay minimal rent, if any. Same with fuel and power. They know where that stuff comes from. You can say that they are being bought by the oil companies -- I have been there when people were flown to Prudhoe for lunch in a Lear Jet -- but they know what they are getting into. The Eskimos are 'skookum' people in their own way.

**B. Native Corporations**

1. Organization and Scope of Operations

The Kaktovik Inupiat Corporation established under ANCSA has attempted to become a profitable business enterprise but has encountered innumerable difficulties. The corporation operates a fuel supply service and a sales unit for snowmobiles and parts; it likewise manages the cooperative store. The corporation has obtained some, and is avidly seeking more, joint-venture contracts through its business manager charged with negotiating such contracts. It has a subcontract with the RELI program to upgrade plumbing in village houses and is seeking a NSB contract to renovate a gravel road. The corporation appears to be struggling to maintain itself. One complaint is that it does nothing realistic to create jobs. Another is that the representatives are unimaginative in developing potential investment opportunities.

**2. Overlaps in Authority and Conflicts Among Institutions**

Overlapping authority and conflicts between village corporations and federal agencies has emerged regarding oil and gas development in ANWR. In Kaktovik there also has been increasing conflict

with the USFWS representatives. The USFWS maintains a very large and modem ANWR headquarters, as well as housing facilities, in the community. Many residents spontaneously expressed dismay at the presence of the agency in the community. For some the dismay was related to the thought that the presence of the agency would limit subsistence pursuits. Others felt that the presence of the USFWS would encourage overuse of ANWR. There was some criticism of particular individuals, and still others were critical of the agency for "opposing" ANWR development while almost the same number felt the opposite, that the USFWS was "environmentalist" in their approach. Discussions with the resident USFWS representative indicated that, as is normally the case, some members of the unit worked hard to integrate into the community life while others were indifferent to local social and political activities, and a few were opposed on principal to the idea.

Intercommunity organizational disagreements and conflicts are endemic to small community life in rural Alaska. The North Slope and, in particular, Kaktovik are not exceptions. Several informants noted that, in the past, disagreements between different community organizations had resulted in some enduring intergroup hostility. Most, however, felt that these prior disagreements had long since passed into the background and that conflict, at least on an organizational level, was not a serious problem.

**3.** Current Issues and concerns

Perhaps the most volatile issue in Kaktovik concerns proposed oil development in ANWR. The controversy is complicated by Kaktovik's location within ANWR and a series of land exchanges stemming from land entitlements under the terms of ANCSA. In short, ANCSA provided 92,162 acres of land to KIC. However, this could not be one contiguous area because Kaktovik was adjacent to the preexisting ANWR. The KIC was given 69,120 acres of land surrounding Kaktovik and the rest were "in lieu of" lands for entitlements beyond this acreage. In 19S0, a new provision was passed called the Alaska National Interest Lands Conservation Act (ANILCA), which allowed the KIC to trade its "in lieu of" land for land within ANWR. However, the KIC use of lands selected within the refuge were to be subject to the laws pertaining to the national refuge lands, and the U.S. government has first right of refusal in the event the KIC decides to sell its holdings. ANILCA also allowed the Arctic Slope Regional Corporation to obtain subsurface rights to land selected by KIC in ANWR if it was ever opened to oil and gas development within 75 miles of village-selected lands (Smythe and Worl 1985:172).

ANWR has become the focus of national interest. This has increased the number, length, and scope of recreational visits to the community. It has increased the political pressures on the community from regional, state, and national levels. It also has created a serious schism between residents that favor exploration and development of the refuge and those who don't. Under considerable pressure from regional and state sources, and faced with a wide range of viewpoints, the previous mayor polled the entire community to determine whether the "community" should "support" or "oppose" development of ANWR. On the basis of this poll (taken two years earlier), the city came out "in favor of development." Unfortunately, once this position was announced, many who had originally registered no opposition (nor explicit support) became openly hostile to the decision and to development of ANWR. It should be pointed out, as well, that even those

who remain open to the idea acknowledge the validity of many community concerns and fears regarding development.

The principal, if not sole, argument verbalized in favor of development is "jobs." They see ANWR-related development as a potential substitute for lost NSB jobs, for the decline in Major's Job Program support, and what they see as the inevitable termination of the RELI program jobs. Had the ANWR issue emerged during the height of CIP activity, there is little doubt that it would have been strongly opposed. Since our presence in Kaktovik coincided with the initial days of the *Exxon Valdez* accident, we were able to witness a renewed surge of opposition to potential ANWR development. If and how sentiments will change as the *Exxon Valdez* becomes "old news" is not assessable at this point.

There are three additional factors underpinning community support for development. These include: (1) Native Corporation ownership of potentially extremely valuable land in or near ANWR; (2) the relatively weak economic status of the corporation itself; and (3) the technical results of the joint venture with ASRC and Chevron to conduct exploratory tests of land in ANWR (the result of which is a tightly guarded secret). Without development of ANWR, the economic viability of the local Inupiat Corporation is in serious question. However, the conflict of interest issue goes even deeper. It applies even at the level of the individual. The problem is that even though most (if not all) community members are opposed to any additional risk to their environment, traditional subsistence and recreational areas, and other aspects of their lifestyle due to oil development, they, more than almost any other community in Alaska, are economically vested as individuals in the outcome of the development decision. Thus, they are burdened with the personal decision of arguing in favor of their personal anomie interests, represented by development, or the continued preservation of basic elements of their way of life, represented by no development in ANWR.

## C. Health and Social Services

### 1. Organization and 'Operation of Institutions

A complete description of social services available in Kaktovik is found in the North Slope Borough regional discussion. There are no services available in Kaktovik other than those provided by, or administered by, the borough.

One of the external institutional links with the Kaktovik traditional council was the Alaska Indian Health Service. This was the organization responsible for providing health care services in Kaktovik. During the early years, while a health facility was not established in Kaktovik, residents became quite familiar with institutions providing health care. In the 1940s Kaktovik was visited periodically by a traveling public health nurse (Chance 1966:61). By 1958, over 90% of the adult villagers had at least one contact with a physician each year and many had been to the public health service hospital at Barrow.

Responsibility for Inupiat health care programs was transferred from the BIA to the U.S. Public Health Service (PHS) in 1955. In 1974 the residents voted to transfer this responsibility to the North Slope Borough, and by 1977 this action was completed between the Indian Health Service (IHS) to the Borough Health and Social Services Agency. A primary institutional mechanism for

delivering primary health services to the community continues to be the Community Health Aides (CHA) program (ACI 1983:52).

Today there are a variety of health and social services available and these are described in the regional section. Most of the services are run from Barrow but the health clinic in Kaktovik is supplied with a telehealth machine. In addition, a dentist and an eye doctor visit the village every year. Emergency loans for airline tickets to leave Kaktovik are available, but they must be repaid. If one goes at his/her own volition, insurance pays 80% of the bill, not including hotel or other expenses.

The Kaktovik health clinic is a state-of-the-art facility constructed at a cost of over $10 million. According to residents, this facility, and the availability of many new services on a local basis, has had a marked impact on illness and well-being in the community. The presence and easy access of these services have resulted in a greater number of calls, a lower severity of presenting symptoms, and more thoroughgoing medical attention than was previously possible. According to the itinerant doctor present in the community at the time of our visit (March 1989), who was familiar with regional changes in health care, the Kaktovik clinic has a design and facilities superior to those in Barrow. In addition, the health clinic is reportedly maintained and operated in a more professional manner than the one in Barrow.

2. Health Problems

In the early 1950s tuberculosis was a major killer of the Kaktivigmiut (the people whose land use area was around Kaktovik) and a public health campaign was launched by the United States PHS to decrease its spread (Chance 1966:30). According to Chance, 25% of the adult population had been hospitalized for periods of almost two years for tuberculosis and 90% had at least one contact with a physician each year.

As elsewhere in the NSB, the excessive consumption of alcoholic beverages and the use of illegal drugs are regarded as two major social and health problems in contemporary life. It is of interest here that Kaktovik is the only "wet" community on the North Slope, and this is discussed further under public safety. In the comparatively recent past, one airline consistently imported alcoholic beverages. However, it went out of business and was replaced in the spring of 1989 by an airline having a policy against this traffic. To further stem the importation of intoxicants into Kaktovik, the village held a special election in 1987 to determine whether to ban the importation of alcoholic beverages, but the issue failed. A second special election was to be held in May 1989, and the general feeling was that prohibition was a realistic possibility since one young woman was doing such an effective job leading the campaign for prohibition. This campaign was said to be superior to that launched previously. However, most persons who addressed the issue did not feel that a dry vote would make a great deal of difference because those who desired intoxicants would manage to obtain them despite the law.

## D. Religion

### 1. History of Churches

In the late nineteenth century, as Christian churches in the United States became concerned with the welfare of Inupiat Alaskans, northern coastal communities were allocated to Presbyterian missionary From the Presbyterian mission center at Barrow, the Inupiat of the region gradually became converts. When Tom Gordon founded his trading post at Barter Island in 1923, he was accompanied by his wife from Barrow and her brother, Andrew Akootchook, who was a lay pastor. Andrew emerged as the primary church leader working along the northeast coast, a position he held until his death in 1951. He was succeeded by another lay pastor, Herman Rexford, who had been raised in Barrow but moved to Kaktovik in 1941. When Herman retired in 1988, he was replaced by a man who was born near Kaktovik and raised in the village. This individual was the local Presbyterian lay pastor at the time of field research in 1989.

### 2. Contemporary Churches

In the late 1940s and 1950s church services were held in a quonset hut that also served as a community hall. In 1966, however, a church was built and dedicated. Today, out of a total Inupiat population of 168 in 1989, about 50 are church members. Two services are held each Sunday, but there is no Sunday school. On a typical Sunday as many as 20 people attended service, some young, some old, but usually the same individuals. On Wednesday evenings a Bible study group meets. During the summer months when comparatively few people are in the village, services might not be held at all.

The church is administered by a Presbyterian Parish council centered at Barrow. This council is responsible for appointing village pastors. While some communities, such as Barrow and Nuiqsut, have ordained pastors, this is not been the case at Kaktovik. Thus, the village is disadvantaged because the local lay pastor cannot perform communion and marriage services. He can conduct burial services, but the pattern has been to rely on a pastor at Barrow or Fairbanks to perform these as well as other formal ceremonies.

The local church is administered by six elders elected each year. In 1989 four women and two men served in this capacity. The elders are respected individuals in the community whose advice is sought after for both major events and personal consultation (Smythe and Worl 1985:178). They also provide moral support for whaling expeditions by "giving talks" during activities associated with whaling and they are responsible for sharpening whaling knives. The church organization is built largely around this small core of strong supporters, and comparatively few individuals have been elders. It was reported in 1985 by Smythe and Worl that the elders' influence encompasses more than the church domain. 'The elders act not only as spiritual leaders, but also as cultural and political leaders. They are heavily represented on the city council and in the village corporation" (Smythe and Worl 1985:180). While, for the most part, this continues to be the case, more and more young people have begun to assume leadership positions in the community. The village church also has deacons and a treasurer. Offerings pay for electricity and fuel. In addition, a house built for a pastor, which they do not yet have, is rented as a source of church income.

Consultation with two prominent church elders indicated that the church once played a far more prominent role in village life. They suggested that secularization of village life can in part be attributed to the importance of TV viewing and of sports events held in the school gymnasium. Yet in this general context it seems worthy to note that bingo games and pull-tabs, major social activities in other NSB communities, are managed by the local church. In Kaktovik these activities are managed by a recreation director who works for the city. This appears to be one reason why the church is a leas viable institution in Kaktovik, at least in a social context.

## E. Infrastructure

The Arctic Environmental Information and Data Center (AEIDC) reported in 1978 that electrical power was available from the NSB to all houses from two 30-kw diesel generators. Electrical rates were $0.12/kwh. The school received its power from the nearby DEW Line station but also maintained a 35-kw generator for standby purposes. Heating oil costs at that time were $1.00/gal. Also at that time, capital improvements included two 90-kw diesel generators and one 55-kw diesel generator, an electrical distribution system, and streetlights by 1978-1979.

As late as 1975, there was no phone service in Kaktovik and council minutes at that time indicated that in one instance, a runner had to be dispatched to the DEW Line during an emergency to make a phone call. After that, the council requested that RCA install a telephone in the community. In that year, a phone was installed in a small shed at the center of town. In 1979, council requested the Arctic Slope Telephone Association Cooperative to provide telephone service for the community. It was not until 1982 that phones were installed in individual homes.

Kaktovik has the same basic infrastructure as the other NSB villages, described elsewhere in this report. There is little in the literature that discusses the development of this infrastructure in terms of timing, but it may be assumed that was similar to that of other villages. Kaktovik has a large modem school, the standard NSB village clinic and fire hall, and a USDW building. The power plant has been recently upgraded (1990). The water plant includes a washeteria with showers, washing machines, and dryers. It is now about four years old. Waste disposal in Kaktovik is accomplished primarily by use of the "honey bucket." Exceptions are found at the Waldo Arms roadhouse, the school, and the health clinic.

The community center (built by the city with grant funds rather than through the NSB) houses the city office, the village coordinator, and the NSB teleconference coordinator, as well as functioning as a social center in the evenings. The village corporation has its offices in a newly constructed building and runs its fuel operation and hardware store out of the old corporation building. In addition, the general grocery store is operated in a third building. There is one privately run store in the village, which is open two hours a day. There is also a privately owned hotel and restaurant which, in the absence of a NSB- or village corporation-run camp, is used by many of the non-residents who pass through the village. The USF&WS has two large buildings which they use to house and support the many research people they have in and around Kaktovik in the summer. The postal service has a separate Post Office and residents now have individual post office boxes. The NSB Department of Public Safety has a standard-sized building.

There is a joint-use air strip at Kaktovik that both civilian (commercial and private) as well as military (DEW-Line) planes use, and the DEW-Line has responsibility for its maintenance. The DEW-Line has a large hanger by the airstrip, but villagers and commercial airlines do not have access to this. As of March 1990, there is a small terminal at the airstrip for the use of the commercial flights, but it is little more than a place to wait out of the wind.

Kaktovik is served by air from Prudhoe Bay/Deadhorse and directly from Fairbanks. The weather in Kaktovik is reported to be the most unpredictable and changeable on the North Slope, so that travel to and from the village is subject to delays. The frequency of scheduled flights is also variable. The Fairbanks flights are less frequent than those to Deadhorse, but are canceled less often. First class mail comes directly from Fairbanks and fourth class through Deadhorse. Unless a person has business in another NSB community, however, the flight to Fairbanks is greatly preferred (and to get to one North Slope community, Anaktuvuk Pass, one must go through Fairbanks in any event). The DEW-Line plane comes relatively infrequently (every two weeks or so) and is used to supply the base and for shift rotations. The DEW-Line has a bus that meets the DEW-Line planes. Regular commercial planes are met by an assortment of trucks from the village. Those passengers who have no other transportation can usually get a ride into the village with the local airline agent.

There is no other public transportation of note in Kaktovik, although there is a village transit bus (in this case, a school bus which is also used for the general public). Kaktovik also has a Senior van, to be used for the transportation needs of the Elders and disabled individuals in the village. There are no taxis. Snowmachines, four-wheelers, and boats are all used during the appropriate seasons for transportation in and around the village.

**F. Fire Protection**

Until 19S3 there was no organized trained volunteer or paid firefighting force in Kaktovik. Today there is a volunteer Fire Department that is run through the NSB Fire Department. The NSB Fire Department is in charge of training the volunteers and maintaining equipment, facilities, and maintaining a certain level of competence among the volunteers (ACI 1983:47-49).

As of 1983 there were two fire trucks in Kaktovik, and since that time an ambulance has been obtained. They have a combined capacity of 5,000 gallons of water for an initial response to a fire. After that amount is depleted the availability of more water will depend on how much is in the village's storage tank. For fires occurring in the school building complex extra water will be taken from the school's pool. It was reported in 1983 that two major fires had occurred in the previous five years, neither of which involved personal injury or death. One was the building that housed the school power generation plant and one was the borough-built housing unit.

G. Search and Rescue

Prior to 1982, search and rescue operations were organized locally on a situational basis. Searches are still sometimes carried out on an informal basis and without the required approval from the Search and Rescue Office in Barrow, but for the most part search and rescue efforts have become

institutionalized. In 1982 the Kaktovik city council was advised to compile a list of volunteers for search and rescue training in Barrow under the auspices of the NSB Division of Search and Rescue. Part of their agenda was to provide support for the Alaska state services. By 1983, approximately 30 men were equipped with pagers to be worn 24 hours a day and left on at night to allow for response to emergency calls (Smythe and Worl 1985:181). There are two snowmachines and a boat equipped with an outboard motor stored in the fire station available for search and rescue operations.

## H. Public Safety

### 1. History

Police protection was provided by the City of Kaktovik with backup by the Alaska State Troopers until 1976, when the NSB assumed legal jurisdiction over the area. The NSB then stationed a Public Safety Officer permanently in Kaktovik. This was increased to two officers in 1979, cut back to one in 1982, and then one was added again in 1983 (ACI 1983:43).

### 2. Organization and Operations

There are two public safety officers in Kaktovik and they are "on call" at all times. The officers are part of the NSB Department of Public Safety and hence their jurisdiction covers the entire borough. Police equipment in 1983 included, "one snowmachine, one 3-wheeler and one 4-wheel drive vehicle. The Public Safety Department is projecting that the latter will have a life of two years, versus the one-year life currently being experienced for the snowmachines and 3-wheelers. The present communication system includes both telephone and radio equipment" (ACI 1983:45).

### 3. Issues

The primary law enforcement problems are related to alcohol abuse. Alcohol actions are carried out under Title 47, the "protective action" provisions of Alaska State Statutes. That is, being drunk in one's own home is perfectly legal and thus, an individual who is reported to be drunk and disorderly in his own home, if he is not physically abusing or threatening someone else or does not pose a threat to his own safety, is perfectly within his rights and cannot be removed. The Public Safety Officer is forced to make a problematic tactical decision in such cases.

If the PSO makes a determination that the individual poses a risk to his own safety, he can be taken into "protective custody." The officer can then place the individual in the "detox" facility at the Public Safety building until he/she is sufficiently sober to return home. If the offense occurs in someone else's home, where the incident can be logged as a trespass, an arrest can be made or the individual removed for detox. While under the protection of the PSO, however, the individual must be monitored at least every 15 minutes to assure that he/she is safe and has not "drowned on his own vomit." However, once this decision is made and the individual has been removed from his home, he cannot be taken to anyone else's home (e.g., to the home of a relative) because the state has assumed full responsibility for his or her welfare and anything that would

happen as a result of transferring the individual to someone else's custody would be the state's responsibility.

There has been a dramatic decline in alcohol-related incidents in the community since July 1988 when a particular air earner went bankrupt. This has reportedly had both an effect on the amount of drunkenness occurring in the community and the number of alcohol-related incident reports generated by the PSOS in the community. This carrier was the only air transport service to the community that allowed the commercial shipment of alcohol to the community aboard its planes. The present primary air carrier to Kaktovik, Cape Smythe, at the urging of many communities, established a rigid policy against shipping of alcohol either as stored baggage or within one's personal hand-carried bags on their aircraft. Another earner to Kaktovik will not usually commercially ship alcoholic products but will allow individuals to carry as much alcohol into the community as desired as personal baggage.

The PSO emphasized that during the preceding year, 1988-1989, there was one month in which there was an alcohol-related service call every night. Now, calls are recorded primarily on weekend nights, and holidays. It should also be emphasized that the PSO reports only "about three or four families" are responsible for 90% of the alcohol-related incident reports and were well recognized in the community as a primary source of problems.

Kaktovik is the only "wet" community on the North Slope. Whether this will continue or not will be decided later on this year when there will be a borough-wide election and the local decision of whether to go "dry" or not will be decided. A petition was circulated in 1988 and signed by as many as 80% of the community urging Cape Smythe airlines to discontinue shipments of alcohol to the community and this is felt to have had the desired effect. Many in the community believe that the vote in May 1989 will result in a "dry" community. Others are more pessimistic, arguing that there are many people who do not want to acknowledge their dependence on alcohol and will vote the issue down.

The PSO also independently asserted that the people of Kaktovik have a particularly strong "work ethic" and will "put away subsistence activities for work-related activities" and that this was "the same for whaling," that they will rather take legitimate leave from work than abruptly abandon their work like people in Barrow to go whaling. These people are "much more responsible" in that way than other communities of the slope.

There were only three weapons calls in all of 1988, each of which involved inebriated individuals who confronted PSOS with weapons. According to the PSO, drugs don't cause the outward confrontation effects of alcohol. There are very few "family disputes" while individuals are on marijuana. Individuals take on more of a "lay back" attitude. The Kaktovik PSO, however, did note that cocaine was available in the community but was unaware of who exactly uses it, and did not perceive of cocaine as a PSO problem as far as disrupting the community. Again, alcohol is the major problem. The PSO also related that his office had between three to five calls for "domestic confrontations" in the last year, all related to alcohol in the home, though none resulted in assault charges. Were anyone to be hurt or injured during one of these interactions, the guilty party would be prosecuted. However, the PSO noted that, to his knowledge, this had never really happened. According to this PSO, spousal abuse or child abuse would not be tolerated in this

community. Kaktovik is a very child-oriented, education-oriented community. There is little punishment and considerable freedom allowed, particularly to children under 12 years of age.

## I. schools

### 1. History

The source for the following history of the schools in Kaktovik was the essay written by Harold Kaveolook called "Kaktovik on Barter Island: A Brief History of Kaktovik and Its Schools". The availability of education in Kaktovik has played an important role in the history of the community. At the end of World War II, with the construction of an airstrip at Barter Island (1947) and the deployment of as many as 100 personnel at the associated Air Force camp, and the opening of U.S. Coast and Geodetic Survey mapping stations along the coast (1945), the availability of goods, services, and periodic employment at Kaktovik increased dramatically. Inupiat were attracted to jobs as guides and workers, and the Inupiat population of the island grew rapidly from 12 in 1939 to 46 in 1950. Out of concern for the families of these Inupiat residents, the Air Force contacted the Civil Service Center at Ladd Field (now Fort Wainwright) with a request for a teacher. A teacher was dispatched in 1948 and the first classes were held in a vacant house until 1949. The following year the teacher was called back to active duty and no classes were held. Then, in 1950, the BIA reopened the school with a new teacher who lasted only four months before returning to Fairbanks. Finally, in 1951, Harold Kaveolook was recruited to teach in the one-room Kaktovik school (where he continued to teach until 1964). This was the effective beginning of standardized education in Kaktovik. The construction, in 1954, of the DEW Line site at Kaktovik, and associated jobs and activity, resulted in another spurt of population growth, and associated elementary school enrollment. Elementary school enrollment increased from about 20 in 1951 to 30 in 1953 (out of a total population of 86). Enrollment during the period 1958 to 1%3 fluctuated considerably with much movement of residents between Barrow and Kaktovik, with a peak enrollment of 46 students and population of 140. During this period, the seventh grade students were all sent to Chilocco (Oklahoma) and Chemawa (Oregon). In 1964 a two-room school was constructed with teachers' quarters, and warm and cold storage. This school operated until 1%7, when the entire village had to be moved due to frequent flooding. A succession of teachers followed Kaveolook, including John and Barbara Ricketts (1964-1%5), Charles and Doris Moody (1%5-1%7), Harold Kaveolook (1%7-1970), Mr. and Mrs. Sydney Williams (1970-1974), and Mr. and Mrs. Larry Meier (1972-1975).

In 1975 a high school program was initiated for the Borough. In addition to the local school, the NSB operates a Teleconference Center, initiated during 1987, in space rented from the city council. The program has a moderator who is responsible for setting up conferences. In the spring of 1989 classes were being held for four students. The center has an electronic blackboard, not yet installed, and soon expects to receive two additional computers more powerful than those they have at present.

High school enrollment increased significantly and by 1978 a total of 31 students were enrolled in grades 7-12. As depicted in Table 15-KAK, total high school (7-12) enrollment remained fairly constant from 1978 through 1983 but has fallen dramatically over the last five years from 32 in 1984 to 5 in 1989. This is the crisis currently faced by the community and the school. The major

portion of the high-school aged students graduated last year, leaving only two high-school aged youths. This is an insufficient number of students to warrant a full-time teacher. Thus, these two children must either be educated in the community at excessive cost, be included in lower grade level classes with disruptive consequences, or be moved to other communities with larger high school student populations. This will continue for at least the next three years unless there is an influx of high school aged students into Kaktovik, which is not very likely. Simply stated, there is not going to be a high-school age population in the community for some time. In four years, however, the high-school population reappears, as the current elementary school cohort matures. But right now it looks like there will have to be a contraction in high school teachers. The current staff includes six teachers and one teacher's aide for a total of 41 students (one of which is in ninth grade and another which is in tenth grade).

**Table 15-KAK**

**Kaktovik School Enrollment**
**(1978-1989)**

| YEAR | ECE3-4 | Elementary (K-5) | Jr. High (6-8) | High School (9-12) |
|---|---|---|---|---|
| 88-89 | 10 | 26 | 3 | 2 |
| 87-88 | 11 | 16 | 6 | 14 |
| 86-87 | 15 | 14 | 6 | 11 |
| 85-86 | 10 | 13 | 8 | 21 |
| 84-85 | 6 | 12 | 7 | 15 |
| 83-84 | 3 | 15 | 10 | 22 |
| 82-83 | 3 | 11 | 15 | 21 |
| 81-82 | 2 | 11 | 12 | 27 |
| 80-81 | 4 | 12 | 15 | 13 |
| 79-80 | 5 | 19 | 17 | 14 |
| 78-79 | 5 | 19 | 17 | 14 |

2. Organization and Operations

The school advisory board meets monthly to make reports and suggestions to the NSB school board. The representative of the higher education board is in charge of monitoring telecommunication for the schools. There are also quarterly telecommunication conferences.

3. Issues

In 1989 the **Kaktovik** school had a bilingual teacher, not a teacher's aide, from the village. Villagers were impressed by the children's singing in **Eskimo** at the last Christmas program. Much to their distress, however, older villagers feel that **Inupiaq** is a dying language. They maintain that the **Inupiaq** instruction program in the school is superficial. Young children are most likely to learn **Inupiaq** from their grandparents but, as even grandparents admit, they must sometimes revert to English **to** make themselves understood by children.

## A. Patterns of Change in Informal Institutions

A part of the process of change on the North Slope has included the formalization of aspects of society that were previously informal. The process, of course, has a lengthy history differing from the current context only in terms of the pace, diversity, and complexity of the organizational change. The formalization of search and rescue organization discussed in detail earlier is only one example. The formation of health and education boards and committees, and the volunteer fire fighter's association, are examples of the formalization of informal institutions that have occurred primarily over the last decade. Earlier processes of formalization, resulting from incorporation as a city, participation in the borough form of government, in dealing with pre-ANCSA and ANCSA negotiations, in contributing toward the organization and operation of the Eskimo Whaling Commission, and so on, have merely continued and accelerated in the current environment.

The leadership crisis discussed earlier, and the increasingly complex and conflicting issues with which these local organizations must deal, have been magnified by the increasing scale and scope of the political agencies and environmental entities with which the community itself must deal.

## B. Subsistence

### 1. Organization of Subsistence Activities

Subsistence activities are organized seasonally. But the precise times vary over time according to environmental conditions, the availability of subsistence species, and hunting technology (Jacobson and Wentworth 198229). Unlike northern villages along the Chukchi Sea whose whaling season begins in the spring, the whaling season in Kaktovik begins in mid-August and runs until as late as early October (Wentworth 1979102). During the summer, hunters pursue seals and, less commonly, walrus although the walrus is considered a superior catch (Chance 1966:36). Caribou, perhaps the single most important subsistence resource in terms of quantity, are hunted during this time of year as well because the herd on which Kaktovik residents rely, the Porcupine herd, is in the area (Jacobson and Wentworth 198229). Hunters do not travel far inland to hunt the caribou because the rivers are too shallow to accommodate their boats. "When caribou are spotted, the boat is pulled up on shore and they are pursued short distances on foot. Occasionally caribou are shot from the boat" (Wentworth 1979101). In the past, winter was the season for trapping but today it is not a very profitable livelihood because of the low price of furs. During the winter people eat the muktuk and caribou meat stored earlier in the year in underground ice cellars.

Both Chance (1966:42) and Wentworth (1979104) emphasize the persistence of subsistence activities in terms of the perpetuation of traditional cultural values despite the radical changes in the means of subsistence pursuits. Prior to the Air Force's construction of the airstrip in July 1947, a modified yet highly traditional technology prevailed It was typified by such artifacts as skin boats (umiaks, which are still used today in some villages), outboard motors, sod houses, firearms, harpoons, and primus stoves. This blend of old and new technological forms had been reasonably

stable for at least a generation. It probably remained that way because the local store stocked only a basic inventory of imports, such as ammunition, tea, sugar, flour, and dry goods. The store stock was selective because few local commodities were desirable in the trade.

By 1989, of course, the balance had changed to a dominance of Western technological forms. The well-equipped standard American-type houses, aluminum boats, automobiles, snowmobiles, and well-stocked cooperative store typify the metamorphosis. Yet continuities with the technological past cannot be ignored. Villagers still make their own sleds, a wide variety of skin garments, fishhooks, whale flensing knives, and the harpoons required to retrieve seals that are shot in open water. The tradition of craftsmanship persists most emphatically in the production of small items, usually made for sale to outsiders. Included are yo-yos, ivory and baleen carvings, masks, and small seals made from skins. Interestingly enough, it is the craft skills of the women that appear to be the most enduring ones.

Whaling is becoming more popular. As of March 1989, there were twelve whaling crews, up from six just a few years ago. Kaktovik didn't take a whale in 1987, but did land one in 1988. From informant reactions, it was obvious that the community was very happy to get that whale and they were very proud of their whalers.

Of interest to the organization of subsistence activities is the relationship between degree of subsistence participation and level of income, especially as this differs between Inupiat and non-Inupiat households as depicted in Table 16-KAK. Among Inupiat households, those in the "moderate" and "active" subsistence level categories have an average annual income above those in the minimal subsistence level category. The opposite pattern holds for non-Inupiat households. It appears that those with the highest annual incomes engage in subsistence practices least.

This table also has implications for the relationship between sharing and level of subsistence participation. Those Inupiat households that engaged in moderate subsistence activities give away the highest percentage of meat and fish harvested. Among non-Inupiat, those in the highest level of subsistence participation level give away the least.

2. Inupiat Subsistence Ideology

The concept of self-sufficiency of the nuclear and extended families, the latter in particular, is deeply ingrained and retains a high positive cultural value. As one man said, "Big family means big protection" and also many "votes." The tradition of a husband-father as the provider and a wife-mother as the processor of consumables remains strong. The young married women consulted usually emphasized the contributions their spouses made to family subsistence welfare. Most women estimated that a high percentage, 50% or more, of their food was harvested locally. Whether their estimates are valid is really not important as a basis for making policy decisions. Their perception, however, of how much food is acquired from subsistence activities is important because it is these estimates upon which Kaktivigmiut base their behavior. These women also spoke at length, and without prompting, about the varied food-getting activities of their spouses, children, and themselves.

## Table 16-KAK

### Kaktovik Household Characteristics - 19SS
By Levels of Subsistence Participation

| | DEGREE OF SUBSISTENCE PARTICIPATION | | | |
|---|---|---|---|---|
| | MINIMAL | MODERATE | ACTIVE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $34,063 | $36,250 | $36,087 | |
| Non-Inupiat HHs | $110,833 | $50,000 | $52,500 | |
| All HHs | $55,000 | $40,833 | $35,341 | $44,804 |
| Cases: | 22 | 6 | 23 | 51 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 3.2 | 2.8 | 4.0 | |
| Non-Inupiat HHs | 2.5 | 4.0 | 2.0 | |
| All HHs | 3.0 | 3.2 | 4.0 | 3.4 |
| Cases: | 26 | 6 | 24 | 56 |
| **Average Meat & Fish Cmptn from Own HH Subsistence (%):** | | | | |
| Inupiat HHs | 6.5% | 35.0% | 70.6% | |
| Non-Inupiat HHs | 1.7% | 27.5% | 90.0% | |
| All HHs | 5.4% | 32.5% | 71.4% | 36.6% |
| Cases: | 26 | 6 | 24 | 56 |
| **Average Meat & Fish Cmptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 22.9% | 37.5% | 23.5% | |
| Non-Inupiat HHs | 0.8% | 15.0% | 5.0% | |
| All HHs | 17.8% | 30.0% | 22.7% | 21.2% |
| Cases: | 26 | 6 | 24 | 56 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 8.5% | 70.0% | 35.3% | |
| Non-Inupiat HHs | 0.3% | 27.5% | 70.0% | |
| All HHs | 6.6% | 55.8% | 36.8% | 24.8% |
| Cases: | 26 | 6 | 24 | 56 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 62.5% | 90.0% | 72.4% | |
| Non-Inupiat HHs | 17.2% | 45.0% | 10.0% | |
| All HHs | 51.2% | 75.0% | 70.0% | 62.1% |
| Cases: | 24 | 6 | 24 | 54 |

Notes: Degree of subsistence participation measured on the basis of how much HH meat & fish consumption was from the HHs own subsistence activities; where
MINIMAL Under 20% meat & fish from own HH subsistence
MODERATE 20-40% meat & fish from own HH subsistence
ACTIVE Over 40% meat & fish from own HH subsistence.
Total cases (households)= 66.

Source: NSB Department of Planning and Community Services
Census of Population and Economy

Despite the emphasis on local resources, especially for food, each of the young women interviewed worked for the local government of the NSB. Why did they work? Wages represent a significant, or perhaps the only, source of reliable household income, and fringe benefits loomed large. Despite their wage labor employment, these women clearly viewed themselves as homemakers and stressed that they not only processed fish and game but were skilled in traditional craft skills.

One good indication that subsistence ideology remains strong is that it is emphasized with respect to training children. Villagers spoke often and with pride of their efforts to teach children subsistence skills. Grandfathers took their grandchildren camping, families went on fishing and hunting trips, and a boy's 'first kill" of any major species was accorded ceremonial recognition. Furthermore, stories about living off the land continue to be told by elders as another effort to sustain Inupiat traditions. Yet in this general context, villagers have no desire to go back to the "old ways." This is so not only because they recognize how difficult life was in those times, but also because their lives are inextricably bound to the cash economy that now supports the maintenance of subsistence activities.

## 3. Issues

It has been reported by both Chance (1966) and Smythe and Worl (1985) that leaves of absence from school and salaried/wage jobs are not uncommon, especially during whaling season when even the non-Inupiat teachers participate by bringing donuts and coffee to the whaling crews.

There are several salient issues related to subsistence in the minds of Kaktovik residents. Perhaps the most obvious is the potential oil development in ANWR. Subsistence is a matter of cultural identity for the people of Kaktovik and its threat from oil development brings up serious issues. Several studies, including Pedersen and C.Offing (1984), address the status of the ANWR land development issue. One species in particular, caribou, is considered by many to be a regional resource. The status of the caribou herd and the interaction of the herd, hunters, and oil development is an area of strong concern. Other issues are the introduction of musk ox into the area and the regulations that govern their harvest, the perceived role of the musk ox in the recent decrease in local availability of caribou, the role of the recent massive research efforts mounted by the U.S. Fish and Wildlife Service on local subsistence activities, and the effect of recreational users of ANWR on subsistence activities. In addition, offshore oil exploration continues to be an issue, especially in regard to its effects upon whaling.

### *Musk Ox*

Musk ox were reintroduced into the Kaktovik area by the State of Alaska Department of Fish and Game, with assistance from the U.S. Fish and Wildlife Service and the residents of Kaktovik, in 1%9. The species had been indigenous to the region but had been hunted to local extinction during the last half of the 1800s. This has been attributed mostly to non-Inupiat hunters. No hunting of the transplanted musk ox was allowed until 1983, when a permit hunt was initiated with essentially no participation of the local Kaktovik population in the process. There was a fee of $500 and the drawing was held in Fairbanks, and no Kaktovik resident ever applied for a permit. In 1986 the fee was reduced to $25 and five permits were issued in Kaktovik on a first-come, first-

serve basis. In 1988 the number of permits was raised to ten, with five issued in Kaktovik and five in Fairbanks. Local participation increased for 1986-1988, but for the 1988-89 season was minimal as sports hunters flew to Kaktovik to stand in line and essentially received all the permits. Local hunters thought the necessity to stand in line to obtain a permit unnecessary and demeaning. This raised a storm of protest in Kaktovik, and the permit regulations have again been modified so that seven are reserved for sports hunters (allocated by a draw in Fairbanks) and seven are allocated to local Kaktovik subsistence hunters. The method of allocation in Kaktovik is to be worked out by the local Kaktovik residents themselves.

In addition to the problem that musk ox were introduced to serve as another potential resource, and then so regulated that local hunters essentially could not utilize it, there are other aspects to the situation. Kaktovik hunters in general feel that the regulation of subsistence hunting is inappropriate. They maintain that Inupiat have always hunted what they needed, but have never taken too many of any animal. The idea of regulation, or limiting the level of effort or take, is alien and fairly repugnant to Kaktovik residents. In the case of bowhead whales they have accepted the political necessity of regulation. For musk ox, as for sheep and caribou, they think such regulation is overly restrictive (it should also be noted that bowhead whale are only seasonally available while musk ox, sheep, and caribou are all potentially available year-round).

Also, at least some local Kaktovik residents maintain that musk ox compete with caribou for food. They note that they have been seen using the same areas, but that once musk ox are noted to be using an area that there have been many fewer (or no) caribou in those areas. The last several summers have been very poor for the harvest of caribou, as the herds have for some reason spent only very short periods of time on the coast. Biologists maintain that this is due to the natural variation in caribou migratory patterns and is not due to the presence of musk ox. Local people point out that usually dependable winter caribou harvest sites are also relatively devoid of musk ox, and that the only place Kaktovik hunters can dependably find caribou is on the mountains in the winter.

*Caribou*

The explanations for why there seem to be fewer harvestable caribou (the local herds that are hunted are increasing in size, according to population counts) are various. Musk ox competition is one locally popular reason. Another is the large number of USF&WS researchers in the area in the summer. There are numerous helicopter flights in and out of Kaktovik to support the many missions that go on every summer, as well as freed wing aircraft tights. There has been little public evaluation of this possibility. Rather, biologists have stressed the historical variability in the distribution of caribou and that too little is known about the factors which influence this to understand what is really happening now. This is complicated by the observation that the caribou appear to have been using a somewhat different calving area than was noted in the past. Since it is this core calving area that would be most affected by any development in ANWR, there is some political pressure to determine if there are other areas which the caribou could use for calving or if this is habitat that is not replaceable. The "natural fluctuation" argument would support the conclusion that caribou are adaptable, although without a better understanding of why the concentrated calving area has not been so heavily utilized the last two or three years the amount of development that the caribou could live with cannot be easily assessed. This is perhaps the

major political and economic question facing Kaktovik, as it affects not only caribou but also oil development (and the NSB tax base and local employment).

### *Recreation and Subsistence*

While no definitive documentation exists of the effects of the recreational use of ANWR (and especially the rivers) upon subsistence, there have been an increasing number of comments by Kaktovik hunters that this is becoming more of a problem. The USF&WS is currently in the process of instituting a system to issue a limited number of permits for float trips on rivers in ANWR (this would affect commercial guided trips only -- private individuals would not need permits). While this may control access, there has so far been little consultation with the local Kaktovik population as to how many permits should be issued, or how those to be issued should be allocated. It should also not be overlooked that while Inupiat do not explicitly talk about the recreational aspect of their subsistence activities that much of the time their subsistence activities have a very important recreational component. In Kaktovik, for instance, some hunters will harvest sheep choose not to hunt the most accessible areas because they enjoy traveling in other regions, or want to explore an area they do not know so well. The Hulahula is used by Kaktovik hunters so much in part because it is possible to harvest a variety of resources in the same general area. While the men hunt sheep and caribou the women and children can fish through the ice. This enables the efficient harvest of resources, but also enables the family to engage in a common activity. It is to protect this Inupiat enjoyment of the land, as well to protect the continued harvest of subsistence resources, that in part keys the Inupiat complaints about recreational use of ANWR.

There are other issues of use of the Arctic National Wildlife Reserve by "floaters and hikers" in the summer. The claim has been made at NSB Department of Wildlife Management meetings that at some points in the summer that subsistence hunters cannot use the parts of the river they wish to because of the presence of recreational tourists. They have reportedly shifted their summer caribou hunting away from the rivers, where they meet rafters, toward the central caribou herd, which they can access with four-wheelers. They also claim that at times campers with their bright colored packs and tents keep the animals away (especially if they camp in high locations). The report of this perception, even in the absence of any information as to its basis in demonstrable fact, is of great significance. Decisions must be made as to the user groups the planning documents for ANWR are supposed to serve. Local residents are well aware of the diverse interest groups which have a stake in their local land, and are often as concerned with conservationists and recreational users as they are with oil development interests.

### *Oil Development and Whaling*

Kaktovik, along with Nuiqsut, has a formal working agreement with the oil companies working in its immediate vicinity. None of the other NSB (or AEWC) villages have similar agreements. The Oil/Whalers Agreement specifies that whalers will not interfere with oil exploration and drilling operations, and vice versa. The mechanism for this is a formal process by which ship locational information is exchanged and a suspension of certain oil operations during the fall whaling season. In addition, certain sorts of assistance are promised to the whalers by the oil companies. This

agreement has, to a large extent, helped forge a cooperative rather than an antagonistic relationship between the oil industry and the two villages.

There are still concerns in the villages about oil operations in the area, however. Although most oil company scientists would maintain that the evidence of the effect on noise (and specifically drilling and production platform noise) on bowheads is inconclusive, most Inupiat would claim that bowhead whales avoid the sources of such noise. As evidence they cite the whales taken close to the barrier islands prior to oil exploration and development, whereas now they have to go well offshore. They are also applying traditional Inupiat knowledge that whales are very sensitive to noise. The Oil/Whalers agreement addresses these concerns by providing for the suspension of activities during critical whaling periods.

Local Inupiat are also quite concerned about the potential effects of an oil spill (whether from a production facility, a ship, or a pipeline). Local residents have been trained by the oil companies as members of an oil spill response team, so that local residents are for the most part informed about the measures that can be taken and whether they are effective or not under certain conditions. This has alleviated some of the free-floating anxiety that is often exhibited about possible disaster effects.

Few local Inupiat seem to have considered the implications of what the development of ANWR for oil development would be. The potential infrastructure would probably not inconvenience the human population too much, as the inland areas are difficult to access in the summer in any event. In the winter it is predominately the mountains which are used, although the flats are often important as well. It is the effect of the infrastructure, if any, on the caribou that appears to be the most salient concern at present. Development of ANWR will also potentially mean more local jobs, but will certainly mean more contact with development enclaves, increased access of oil people to the community, and possibly even a permanent road to Prudhoe Bay (since any oil produced would eventually end up in the TAPS). There is little treatment in the literature on these topics.

**C. Traditional Sharing and Kinship Behaviors**

1. Kinship Organization

The extended family was traditionally the basic unit of north Alaskan Eskimo social structure (Chance 1966:48). This remains true today despite the predominance of nuclear family households. Individuals, in fact, recognize kinship through at least three generations on both the mother's and father's side (Smythe and Worl 1985:125).

As noted above, in Kaktovik the traditional preference for a marriage partner was usually with parallel or cross-cousins (Chance 1966:49), but this has largely given way to more eclectic patterns with individuals free to marry whomever they please.

2. Formal and Informal Sharing

Evidence for both formal and informal sharing is clear from consultations with informants. Whale meat, for example, is formally shared between many people. In addition to the kin of the successful crew getting some of the meat, the kin of the other crews get a portion as well. The distribution of whale meat is traditional and expected. In contrast, caribou meat is slightly less formally shared. Its distribution is part of an informal network of general reciprocity. Often, caribou is shared only with one's own extended family, especially elders who are unable to carry out subsistence activities on their own. Non-subsistence foods are also shared in this informal reamer.

Money, however, is quite different from subsistence resources in terms of how it is shared. Money is normally shared, in the sense of distributed without expectation of fixed return time, only within the nuclear family. When someone from outside the nuclear family needs money, however, it is often given but only with a clear repayment schedule.

3. Ideology of Kinship and Sharing

Evidence for the persistence of recognition of the extended family comes from the cooperative nature of subsistence activities and the distribution of resources (Smythe and Worl 1985:125). The ideology of sharing is also evident in the workings of the village corporation. While the official mandate of the corporation is to maximize profit for its shareholders, "ideas of sharing money and other resources in the present take precedence over making money for the future" (Jacobson and Wentworth 1982223). On the other hand, our discussions with shareholders revealed an increasingly complex set of decision-making criteria, with less stress placed on social objectives and greater stress on financial returns, less social control over the decision-making process, and less enthusiasm for participating in the process itself.

In 1989 Kaktovik harvested three whales (quota of two plus an additional strike "passed on" from another village) which they shared by shipping a good bit of muktuk to Anaktuvuk Pass, Point Hope, and Wainwright. Point Hope did not harvest any whales in the spring of 1989 due to ice conditions and weather, and Wainwright harvested only two whales. Barrow harvested only three whales in the spring, but had a substantial fall harvest. Nuiqsut harvested two whales in the fall and also shipped muktuk to Anaktuvuk Pass, Point Hope, and Wainwright. Anaktuvuk Pass still sends caribou to Kaktovik as in the past in exchange for muktuk, but this exchange takes place mostly at Thanksgiving and Christmas and is talked about more as an exchange between the two villages as groups rather than between specific individuals within those villages. The literature on intervillage exchange is too little developed to know if this represents a substantial change in exchange relationships or is a continuation of established historical patterns.

**D. Attitudes Toward Development**

The acronym "ANWR" combined with the word "oil" is a catalyst for eliciting unambivalent opinion. The representatives of each extreme were most articulate. Those tending to favor oil development in ANWR appear to be in the majority. They emphasize that Prudhoe Bay oil development has

had no negative effects on the environment in general or the caribou population in particular. They note that the local corporation badly needs additional revenue, and they feel that development in ANWR is the only realistic way to obtain it.

With respect to drilling for oil offshore, there is perhaps complete unanimity. The possibility is deplored universally, and environmental damage is cited as the primary reason. In more specific contexts, it is maintained that the habitat of the bowhead whale would be disturbed by the noise involved, and the possibility of oil pollution clearly exists. Apart from the possibility of local employment, there appears to be no local advantage in ocean drilling. This no doubt influences the attitudes of villagers toward oil development.

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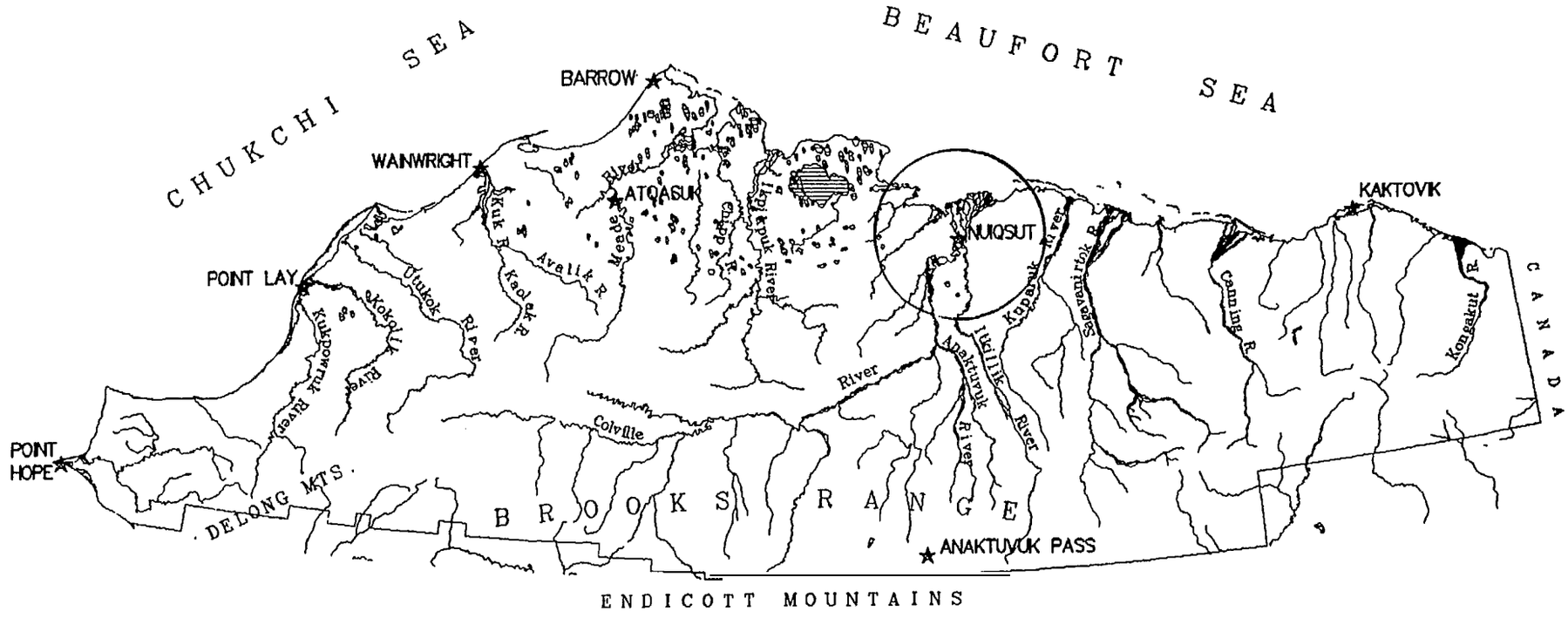
# NUIQSUT

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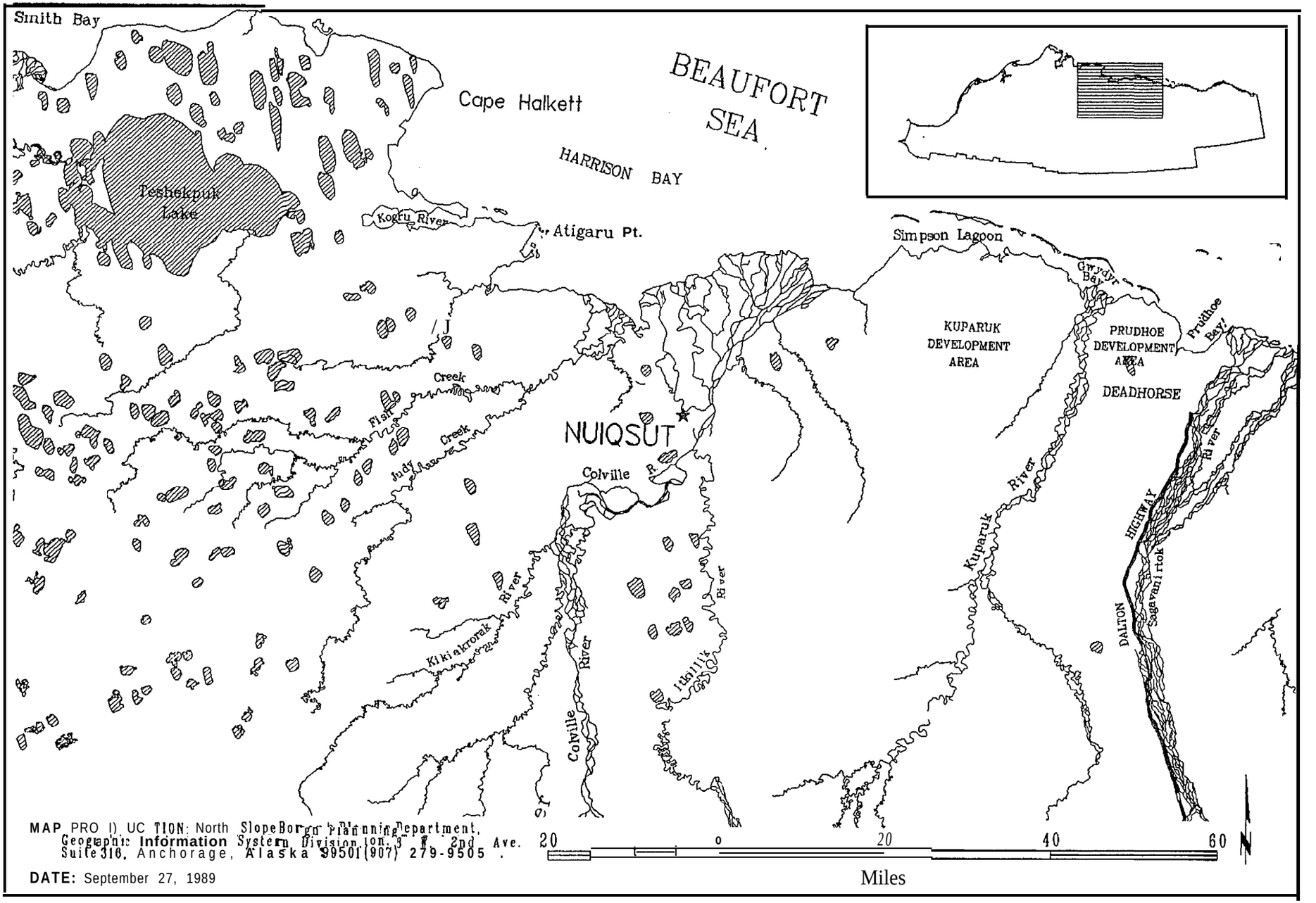
DATE: October 03, 1989

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DATE: September 27, 1989

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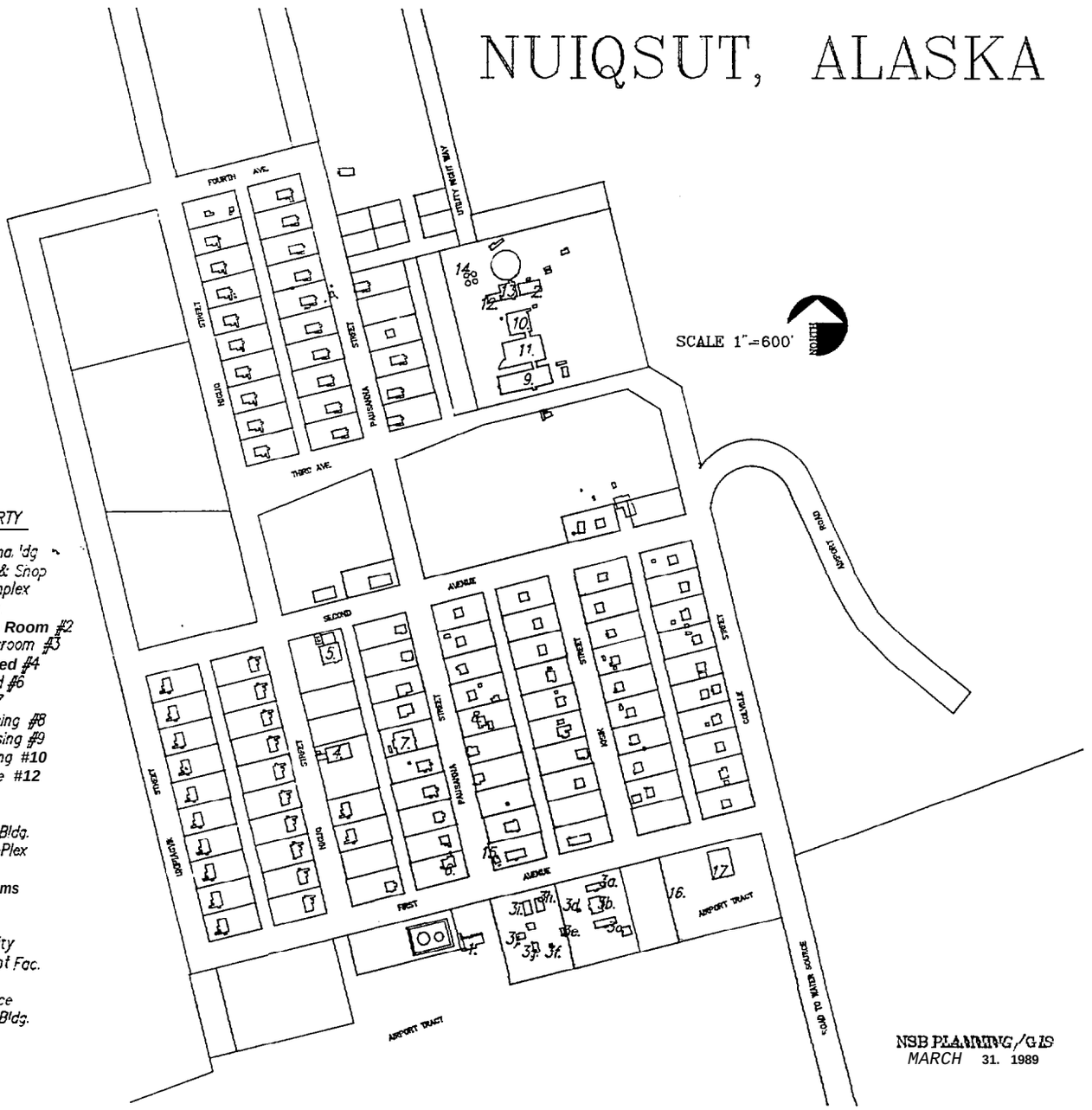


LEGEND :

NSB REAL PROPERTY

1. Airport Termina 'dg
2. Warm Storage & Shop
3. Old School Complex
   - a. Classroom #1
   - b. Multi-Purpose Room #2
   - c. Primary Classroom #3
   - d. Generator Shed #4
   - e. Storage Shed #6
   - f Bunkhouse #7
   - g. Teacher Housing #8
   - h. Teacher Housing #9
   - i. Teacher Housing #10
   - j. Storage Garage #12
4. Health Clinic
5. Fire Station
6. Public Safety ABldg.
7. Teachers Four-Plex
8. NSB House
9. School Classrooms
10. School Shop
11. School Gym
12. Generator Facility
13. Water Treatment Fac.
14. Tank Farm
15. Central Dial Ofice
16. CATV Headend Bldg.
17. U.S.D W

NSB PLANNING/GIS
MARCH 31. 1989

# NUIQSUT


SECTION I: POPULATION . . . . . 1

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## SECTION I: POPULATION

### A. Size and Composition

1. Demographic Characteristics

The available census information for Nuiqsut is summarized in Table 1-NQT. This information is reproduced from Galginaitis et al. 1984, supplemented by Galginaitis and Petterson 1985 and North Slope Borough Planning Department 1989. These sources provide information on Nuiqsut's population for 1973, 1981, 1982, 1983, 1985, and 1988. Population descriptions by age, sex, and ethnicity are provided in Tables 1-NQT through 13-NQT and population pyramids based on these Tables follow in Figures 1-NQT through 6-NQT. We have not cited the many subsequent studies which make use of this same information. The recent history of the ethnic composition of Nuiqsut's population is summarized in Table 2-NQT.

**Table 1-NQT**

Total **Population of Nuiqsut**

| | Inupiat | | Non-Inupiat | | |
|---|---|---|---|---|---|
| Date | Number | Percentage | Number | Percentage | Total |
| 04/73[1] | 175 | 100.0 | 0 | 0.0 | 175 |
| 1974[2] | | | | | 145 |
| 19773 | 144 | 91.7 | 13 | 8.3 | 157 |
| 03/76[4] | 196 | 97.0 | 6 | 3.0 | 202 |
| 1980[5] | | | | | 208 |
| 05/80[6] | 183 | 84.7 | 33 | 15.3 | 216 |
| 07/81[7] | 224 | 96.1 | 9 | 3.9 | 233 |
| 07/82[8] | 269 | 88.5 | 30 | 9.9 | 304 |
| 11/82[9] | 235 | 86.1 | 38 | 13.9 | 273 |
| 01/83[9] | 245 | 85.7 | 41 | 14.3 | 286 |
| 02/83' | 230 | 86.1 | 37 | 13.9 | 267 |
| 09/85[9] | 300 | 89.8 | 34 | 10.2 | 334 |
| 11/851'3 | 304 | 89.4 | 36 | 10.6 | 340 |
| 1988[11] | 283 | 93.7 | 19 | 6.3 | 314 |

[1]Reconstructed founding population.
[2]University of Alaska.
[3]Hoffman et al. 1978. 1988.
[4]Galginaitis 1989, unpublished field notes.
[5]U.S. Census.
[6]Alaska Consultants 1981.
[7]Subsistence Division, Alaska Department of Fish and Game. "Mixed" individuals counted as Inupiat.
[8]Alaska Consultants for the NSB. "Mixed" individuals counted as Inupiat. Five of unknown ethnicity included in total.
[9]Galginaitis et al. 1984. "Mixed" individuals counted as Inupiat.
[10]Galginaitis and Petterson 1985. "Mixed" individuals counted as Inupiat.
[11]NSB Village Census, 12 cases with ethnicity unknown included in total.

**Table 2-NQT**

**Ethnic Composition of Population - Nuiqsut**

| Year | Inupiat | | Non-Native | | *Mixed* | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female | Male | Female |
| 1976[1] | 108 | 88 | 2 | 4 | 0 | 0 | 110 | 92 |
| 1980[2] | 92 | 99 | 46 | 15 | | | 138 | 114 |
| 1981[3] | 117 | 105 | 5 | 4 | 0 | 2 | 122 | 111 |
| 1982[4] | 141 | 123 | 18 | 12 | 2 | 3 | 161 | 138 |
| 1982[5] | 121 | 107 | 25 | 13 | 3 | 4 | 149 | 124 |
| 1983[6] | 123 | 114 | 30 | 11 | 3 | 5 | 156 | 130 |
| 1983[7] | 117 | 107 | 26 | 11 | 2 | 4 | 145 | 122 |
| 1985[8] | 156 | 136 | 21 | 13 | 3 | 5 | 180 | 154 |
| 1985[9] | 156 | 140 | 22 | 14 | 3 | 5 | 181 | 159 |
| 1988[10] | 155 | 139 | 13 | 6 | 0 | 1 | 168 | 146 |

[1]Galginaitis 1989, unpublished field notes.
[2]Alaska Consultants 1981, page 6 (Inupiat and "Mimed" not separated), 05/80.
[3]Alaska Department of Fish and Game, Subsistence Division, 07/81.
[4]Alaska Consultants for the NSB, 07/82. "Five unknowna not included in totals.
[5]Galginaitis et al. 1984, 11/82.
[6]Galginaitis et al. 1984, 01/83.
[7]Galginaitis et al. 1984. 02/83.
[8]Galginaitis and Petterson 1985, 09/85.
[9]Galginaitis and Petterson 1985, 11/85.
[10]NSB Census of Population and Economy 1989.

Table 1-NQT makes it clear that Nuiqsut's non-Native population is relatively small and unstable. It has ranged in the past from 3 to about 15% (excluding the founding population, which was totally Inupiat). The size and composition of the non-Native population is closely related to the time of year and the level of construction activity in the village, since the two largest groups of non-Native residents are school employees and construction workers. These effects are quite evident in the variation in the non-Native population figures for Nuiqsut and demonstrate that census information for any community on the North Slope is not totally informative and is certainly not comparable with other census information unless one knows the time of the year the census was taken and the general conditions in the community at that time.

The sexual composition of Nuiqsut's population is evident from an examination of Table 2-NQT. For the most part, Inupiat males have consistently outnumbered Inupiat females in Nuiqsut, with a ratio of males to females ranging from 1:9 to 1:15 since 1981. Non-Native males, on the other hand, greatly outnumber non-Native females, with the ratio ranging from 1:5 to 27 since 1982. This is the period of time for major construction in Nuiqsut. Prior to that time most non-Natives were school employees and the ratio was much more equal or even reversed.

Tables 3-NQT through 12-NQT provide the information graphically displayed in Figures 1-NQT through 9-NQT. Perhaps the most consistent feature displayed is that the village population is very young, with one middle-aged cohort that is also fairly large. For the most part, it is the younger cohorts that dominate the village population structure, however, with the founding population being the one which varies from the pattern the most. The founding population information is much less reliable than that from other years, as it is based on informant recall and the process of resettlement selects for a different sort of population structure than is established in a more 'permanent' village. The effects of the relative youth of the founding population are quite evident in present day Nuiqsut. It is also clear from the population statistic that much of the immigration into Nuiqsut, at least in the early 1980s, was of middle-aged adults. It can be presumed that these were individuals either seeking employment in Nuiqsut or expanded subsistence opportunities, or both. As Nuiqsut's infrastructure grew, so did the demand for working adults to maintain that structure. Many of these adults came from outside of Nuiqsut.

Another consistency is that the non-Inupiat population of Nuiqsut is small and clustered into the working age groups. There are a few non-Inupiat children, but no non-Inupiat who are of retirement age. Non-Inupiat come to Nuiqsut to work. Those who marry people from Nuiqsut are still working, but all maintain that they will not retire in Nuiqsut (although they will always maintain contacts there since many of their spouse's relatives are there).

Another consistency perhaps not evident from the tables and figures themselves is the lack of precision in the numbers. NSB surveys were done, for the most part, by local villagers who were not always consistent in their methods. Sometimes people usually expected to live in the village were counted whereas at other times only those actually there were enumerated. Most times the methods were mixed, with no written "footnotes" to the numbers recorded. Thus the tables should be used with discretion. They are most useful to indicate trends rather than as a basis for refined statistical analysis. For instance, in 1980 the 35-39, 40-44, and 45-49 Inupiat age groups had 16, 9, and 8 members respectively. In 1981 they had 14, 19, and 10. Natural aging of the population does not explain this increase, which is most probably related to CIP projects in Nuiqsut in 1981. This is perhaps the most dramatic example of this sort of fluctuation, but this dynamic affects all NSB population figures. Another good example can be drawn from Tables 7-NQT through 11-NQT (November 1982 through November 1985). for the most part, natural aging of the population explains a good part of the age structure differences over time. However, there are increases in the middle-aged population, and in the younger age groups, that natural increase and aging cannot account for. These are also related to CIP activity in Nuiqsut. The time of the year that the population survey is done has a great deal of influence on the final numbers and the age composition of the enumerated population. This can be seen by examining the two censuses done in November and comparing them with those done in between at different times of the year.

It is interesting to note that Nuiqsut did essentially stabilize in terms of household composition and approximate size during the boom in CIP projects. After the infrastructure was essentially built, most people remained in Nuiqsut even though for a time available jobs were fewer. There was no large loss of population after 1983/84 (the peak of the CIP in Nuiqsut) and most population increase since then has been by natural births. Immigration and emigration have more-or-less balanced, often with the same people moving back and forth over time. This could well be a regular pattern. Point Lay, another village for which fairly good population information is available, also seems to have a population which is related to the economic activity going on at the time.

When the school and houses were under construction there was a large surge in the population. The population then declined once the projects were finished, in contrast to Nuiqsut. This was probably due to the smaller initial size of Point Lay and the fact that most workers who went to Point Lay had kept their homes in other communities, whereas those who went to Nuiqsut had made a decision to move. The more recent projects going on in Point Lay (RELI house modifications, washeteria) have attracted several family units to move to Point Lay and they are expected to stay if and when the work is over. They are expected to be among the last people to move into Point Lay, unless a new supply of housing is built. Anyone else who comes will essentially have to replace a current resident or build his own house. This was the situation in Nuiqsut in 1985, and is essentially the case today as well (there are some vacant houses which for various reasons are not readily available as housing stock either due to condition or owner reluctance to rent).

**Table 3-NQT**

**Population Description**
**Nuiqsut - March 1976**

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| 0 to 4 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5 to 9 | 14 | 12 | 0 | 0 | 0 | 0 | 0 | 26 |
| 10 to 14 | 19 | 20 | 0 | 0 | 0 | 0 | 0 | 39 |
| 15 to 19 | 16 | 10 | 0 | 0 | 0 | 0 | 0 | 26 |
| 20 to 24 | 9 | 5 | 0 | 0 | 0 | 0 | 0 | 14 |
| 25 to 29 | 5 | 3 | 0 | 0 | 0 | 0 | 0 | 8 |
| 30 to 34 | 5 | 6 | 0 | 0 | 0 | 0 | 0 | 11 |
| 35 to 39 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 13 |
| 40 to 44 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 7 |
| 45 to 49 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 50 to 54 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 55 to 59 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 5 |
| 60 to 64 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 65 to 69 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 70 to 74 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 75 to 79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80 to 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 13 | 9 | 2 | 4 | 0 | 0 | 0 | 28 |
| Total | 108 | 85 | 2 | 4 | 0 | 0 | 0 | 202 |

Source: Galginaitis 1989: unpublished fieldnotes.

## Table 4-NQT

## Population Composition*
## Nuiqsut - May 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Under 5 years | 5 | 13 | 18 | 1 | 4 | 5 | 6 | 17 | 23 |
| 5 - 9 | 8 | 7 | 15 | 1 | 1 | 2 | 9 | 8 | 17 |
| 10-14 | 11 | 14 | 25 | 1 | 0 | 1 | 12 | 14 | 26 |
| 15-19 | 14 | 14 | 28 | 0 | 0 | 0 | 14 | 14 | 28 |
| 20 -24 | 6 | 8 | 14 | 2 | 2 | 4 | 8 | 10 | 18 |
| 25-29 | 9 | 10 | 19 | 7 | 4 | 11 | 16 | 14 | 30 |
| 30 - 34 | 5 | 2 | 7 | 0 | 1 | 1 | 5 | 3 | 8 |
| 35-39 | 6 | 10 | 16 | 4 | 0 | 4 | 10 | 10 | 20 |
| 40-44 | 7 | 2 | 9 | 3 | 0 | 3 | 10 | 2 | 12 |
| 45-49 | 7 | 1 | 8 | 0 | 0 | 0 | 7 | 1 | 8 |
| 50-54 | 4 | 4 | 8 | 1 | 1 | 2 | 5 | 5 | 10 |
| 55-59 | 1 | 3 | 4 | 0 | 0 | 0 | 1 | 3 | 4 |
| 60-64 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 3 | 3 |
| 65-69 | 3 | 2 | 5 | 0 | 0 | 0 | 3 | 2 | 5 |
| 70-74 | 1 | 2 | 3 | 0 | 0 | 0 | 1 | 2 | 3 |
| 75 and over | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| TOTAL | 88 | 95 | 183 | 20 | 13 | 33 | 108 | 108 | 216 |
| Median Age | 23.0 | 19.5 | 20.6 | 28.0 | 24.8 | 27.5 | 27.0 | 20.2 | 24.2 |

- Figures exclude a total of 36 persons (4 Alaska Native males, 4 Alaska Native females, 26 non-Native males and 2 non-Native females) for whom no age information waa provided. Thus, a total of 252 persona in Nuiqsut was surveyed by Alaska Consultants, Inc.

Source: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 5-NQT

## Population Description
## Nuiqsut - July 1981

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | unknown | Total |
|---|---|---|---|---|---|---|---|---|
| oto4 | 15 | 15 | 1 | 0 | 0 | 2 | 0 | 33 |
| 5t09 | 6 | 7 | 0 | 0 | 0 | 0 | 0 | 13 |
| 10 to 14 | 12 | 10 | 0 | 0 | 0 | 0 | 0 | 22 |
| 15 to 19 | 20 | 19 | 0 | 0 | 0 | 0 | 0 | 39 |
| 20 to 24 | 13 | 11 | 0 | 0 | 0 | 0 | 0 | 24 |
| 2S to 29 | 10 | 8 | 1 | 1 | 0 | 0 | 0 | 20 |
| 3oto34 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 8 |
| 35 to 39 | 6 | 8 | 1 | 1 | 0 | 0 | 0 | 16 |
| 40 to 44 | 10 | 9 | 0 | 0 | 0 | 0 | 0 | 19 |
| 45 to 49 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 10 |
| 50 to 54 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| 55 to 59 | 3 | 2 | 1 | 1 | 0 | 0 | 0 | 7 |
| 601064 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 |
| 65 to 69 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |
| 70 to 74 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 75 to 79 | 0 | 1 | 0 | Q | 0 | 0 | 0 | 1 |
| 80 to 84 | 0 | 0 | 0 | o | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 7 |
| Totaf | 117 | 105 | 5 | 4 | 0 | 2 | 0 | 233 |

Source: July 1981 census, Subsistence Division of the Alaska Department of Fish and Game.

## Table 6-NQT

### Population Description
### Nuiqsut - July 1980

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| 0 1 0 4 | 19 | 14 | 3 | 2 | 1 | 3 | 0 | 42 |
| 5 t 0 9 | 11 | 7 | 1 | 1 | 0 | 0 | 1 | 21 |
| 10 to 14 | 9 | 12 | 1 | 0 | 1 | 0 | 0 | 23 |
| 15 to 19 | 26 | 24 | 0 | 0 | 0 | 0 | 0 | 50 |
| 20 to 24 | 18 | 13 | 2 | 2 | 0 | 0 | 0 | 35 |
| 25 to 29 | 13 | 13 | 1 | 1 | 0 | 0 | 0 | 28 |
| 30 to 34 | 8 | 4 | 3 | 1 | 0 | 0 | 0 | 16 |
| 35 to 39 | 6 | 9 | 1 | 1 | 0 | 0 | 0 | 17 |
| 4oto44 | 12 | 9 | 1 | 1 | 0 | 0 | 0 | 23 |
| 45 to 49 | 7 | 2 | 3 | 2 | 0 | 0 | 0 | 14 |
| 50 to 54 | 6 | 4 | 1 | 0 | 0 | 0 | 0 | 11 |
| 55 to 59 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 5 |
| 60 to 64 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 5 |
| 65 to 69 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 70 to 74 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 75 to 79 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 80 to 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 5 |
| Total | 141 | 123 | 18 | 12 | 2 | 3 | 5 | 304 |

Source: U.S. Census

## Table 7-NQT

### Population Description
### Nuiqsut - November 1982

| Age Category | Male Inupiat | Female | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | |
|---|---|---|---|---|---|---|---|---|
| 0 t o 4 | 15 | 14 | 3 | 2 | 2 | 4 | 0 | 40 |
| 5 t 0 9 | 10 | 7 | 1 | 1 | 0 | 0 | 0 | 19 |
| 10 to 14 | 9 | 10 | 1 | 0 | 1 | 0 | 0 | 21 |
| 15 to 19 | 22 | 21 | 1 | 0 | 0 | 0 | 0 | 44 |
| 20 to 24 | 18 | 8 | 2 | 2 | 0 | 0 | 0 | 30 |
| 25 to 29 | 10 | 10 | 2 | 1 | 0 | 0 | 0 | 23 |
| 30 to 34 | 7 | 3 | 3 | 1 | 0 | 0 | 0 | 14 |
| 35 to 39 | 3 | 8 | 3 | 1 | 0 | 0 | 0 | 15 |
| 40 to 44 | 11 | 10 | 0 | 1 | 0 | 0 | 0 | 22 |
| 45 to 49 | 7 | 2 | 3 | 2 | 0 | 0 | 0 | 14 |
| 50 to 54 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 55 to 59 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 60 to 64 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 4 |
| 65 to 69 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| 70 to 74 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 75 to 79 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 80 to 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 0 | 1 | 5 | 1 | 0 | 0 | 0 | 7 |
| Total | 121 | 107 | 25 | 13 | 3 | 4 | 0 | 273 |

Source: Galginaitis 1989 unpublished fieldnotes

## Table 8-NQT

### Population Description
### Nuiqsut - January 1983

| Age Ca | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| oto4 | 18 | 15 | 2 | 1 | 2 | 5 | o | 43 |
| 5t09 | 10 | 7 | 1 | 1 | 0 | 0 | 0 | 19 |
| 10 to 14 | 9 | 9 | 1 | 0 | 1 | 0 | 0 | 20 |
| 15 to 19 | 22 | 22 | 1 | 0 | 0 | 0 | 0 | 45 |
| 20 to 24 | 19 | 14 | 1 | 1 | 0 | 0 | 0 | 35 |
| 25 to 29 | 8 | 8 | 2 | 1 | 0 | 0 | 0 | 19 |
| 30 to 34 | 7 | 3 | 3 | 1 | 0 | 0 | 0 | 14 |
| 35 to 39 | 2 | 7 | 1 | 1 | 0 | 0 | 0 | 11 |
| 4oto44 | 11 | 10 | 0 | 1 | 0 | 0 | 0 | 22 |
| 45 to 49 | 7 | 2 | 3 | 2 | 0 | 0 | 0 | 14 |
| 50 to 54 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 7 |
| 55 to 59 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 6oto64 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 5 |
| 65 to 69 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 70 to 74 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 75 to 79 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 80 to 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 1 | 3 | 13 | 1 | 0 | 0 | 0 | 18 |
| Total | 123 | 114 | 30 | 11 | 3 | 5 | 0 | 286 |

Source: Galginaitis 1989: unpublished fieldnotes.

## Table 9-NQT

### Population Description
### Nuiqsut - February 19S3

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| o t o 4 | 18 | 15 | 2 | 1 | 1 | 4 | 0 | 41 |
| 5 t 0 9 | 10 | 7 | 1 | 1 | 0 | 0 | 0 | 19 |
| 10 to 14 | 9 | 9 | 1 | 0 | 1 | 0 | 0 | 20 |
| 15 to 19 | 21 | 21 | 1 | 0 | 0 | 0 | 0 | 43 |
| 20 to 24 | 17 | 13 | 1 | 1 | 0 | 0 | 0 | 32 |
| 25 to 29 | 7 | 9 | 2 | 1 | 0 | 0 | 0 | 19 |
| 3oto34 | 8 | 3 | 3 | 1 | 0 | 0 | 0 | 15 |
| 35 to 39 | 3 | 7 | 2 | 1 | 0 | 0 | 0 | 13 |
| 4oto44 | 10 | 10 | 0 | 1 | 0 | 0 | 0 | 21 |
| 45 to 49 | 4 | 2 | 3 | 2 | 0 | 0 | 0 | 11 |
| 50 to 54 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 6 |
| 55 to 59 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| 6oto64 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 4 |
| 65 to 69 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 70 to 74 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 75 to 79 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 80 to 84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 3 | 0 | 8 | 1 | 0 | 0 | 0 | 12 |
| Total | 117 | 107 | 26 | 11 | 2 | 4 | 0 | 267 |

Source: Galginaitis 1989 unpublished fieldnotes.

## Table 1O-NQT

### Population Description
### Nuiqsut - September 1985

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| 0 to 4 | 29 | 19 | 1 | 0 | 2 | 3 | o | 54 |
| 5 to 9 | 16 | 17 | 1 | 2 | 1 | 2 | 0 | 39 |
| 10 to 14 | 6 | 7 | 2 | 0 | 0 | 0 | 0 | 15 |
| 15 to 19 | 15 | 13 | 0 | 0 | 0 | 0 | 0 | 28 |
| 20 to 24 | 23 | 22 | 0 | 0 | 0 | 0 | 0 | 45 |
| 25 to 29 | 13 | 15 | 3 | 2 | 0 | 0 | 0 | 33 |
| 30 to 34 | 13 | 9 | 7 | 4 | 0 | 0 | 0 | 33 |
| 35 to 39 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| 4oto44 | 8 | 10 | 1 | 1 | 0 | 0 | 0 | 20 |
| 45 to 49 | 11 | 7 | 0 | 3 | 0 | 0 | 0 | 21 |
| 50 to 54 | 6 | 3 | 2 | 0 | 0 | 0 | 0 | 11 |
| 55 to 59 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 6oto64 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| 65 to 69 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| 70 to 74 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 75 to 79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80 to 84 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Unknown | 2 | 1 | 4 | i | 0 | 0 | 0 | 8 |
| Total | 156 | 136 | 21 | 13 | 3 | 5 | 0 | 334 |

Source Galginaitis 1985: unpublished fieldnotes.

## Table 11-NQT

### Population Description
### Nuiqsut - November 1985

| Age Category | Male Inupiat | Female Inupiat | Male Non-Inupiat | Female Non-Inupiat | Male Mixed | Female Mixed | Unknown | Total |
|---|---|---|---|---|---|---|---|---|
| 0 to 4 | 29 | 22 | 1 | 0 | 2 | 3 | o | 57 |
| 5 to 9 | 17 | 17 | 1 | 2 | 1 | 2 | 0 | 40 |
| 10 to 14 | 6 | 7 | 2 | 0 | 0 | 0 | 0 | 15 |
| 15 to 19 | 16 | 12 | 0 | 0 | 0 | 0 | 0 | 28 |
| 20 to 24 | 22 | 24 | 0 | 0 | 0 | 0 | 0 | 46 |
| 25 to 29 | 13 | 15 | 3 | 2 | 0 | 0 | 0 | 33 |
| 30 to 34 | 12 | 9 | 8 | 4 | 0 | 0 | 0 | 33 |
| 35 to 39 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 10 |
| 40 to 44 | 7 | 10 | 1 | 1 | 0 | 0 | 0 | 19 |
| 45 to 49 | 11 | 7 | 0 | 3 | 0 | 0 | 0 | 21 |
| 50 to 54 | 6 | 2 | 2 | 0 | 0 | 0 | 0 | 10 |
| 55 to 59 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 5 |
| 60 to 64 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 7 |
| 65 to 69 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4 |
| 70 to 74 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 75 to 79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80 to 84 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 85 to 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| unknown | 2 | 1 | 3 | 2 | 0 | 0 | 0 | 8 |
| Total | 156 | 140 | 22 | 14 | 3 | 5 | 0 | 340 |

Source Galginaitis 1985: unpublished fieldnotes.

**Figure 1-NQT**

**Nuiqsut Population Pyramid: April 1973**

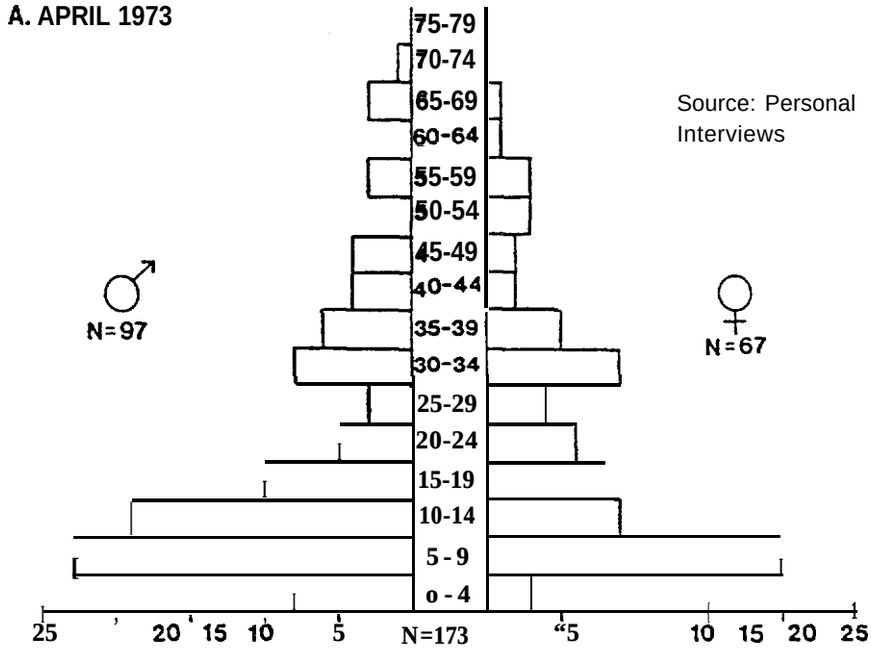



**Figure 2-NQT**

**Nuiqsut Population Pyramid July 1981**

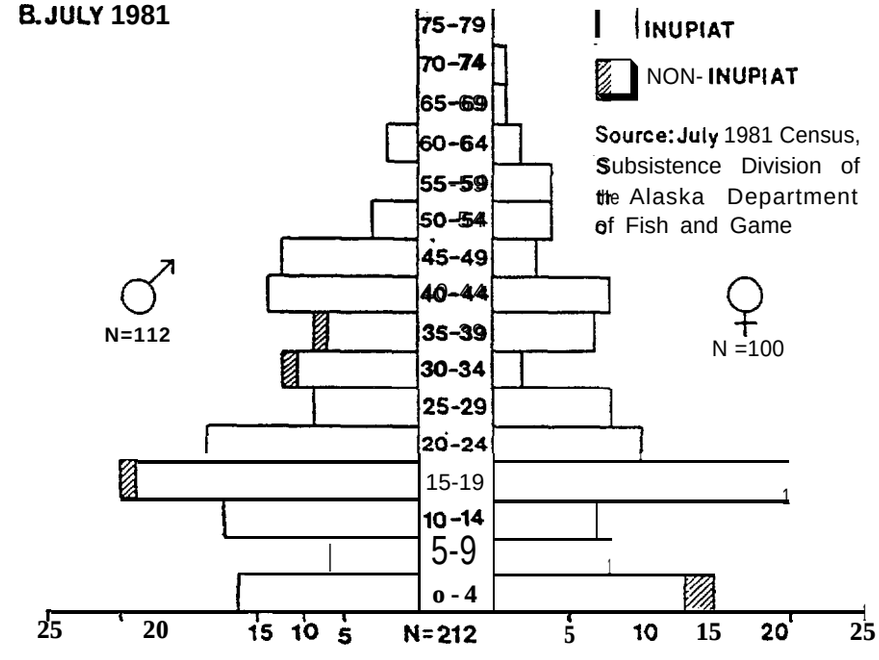


Figure 3-NQT

**Nuiqsut Population Pyramid: July 1982**

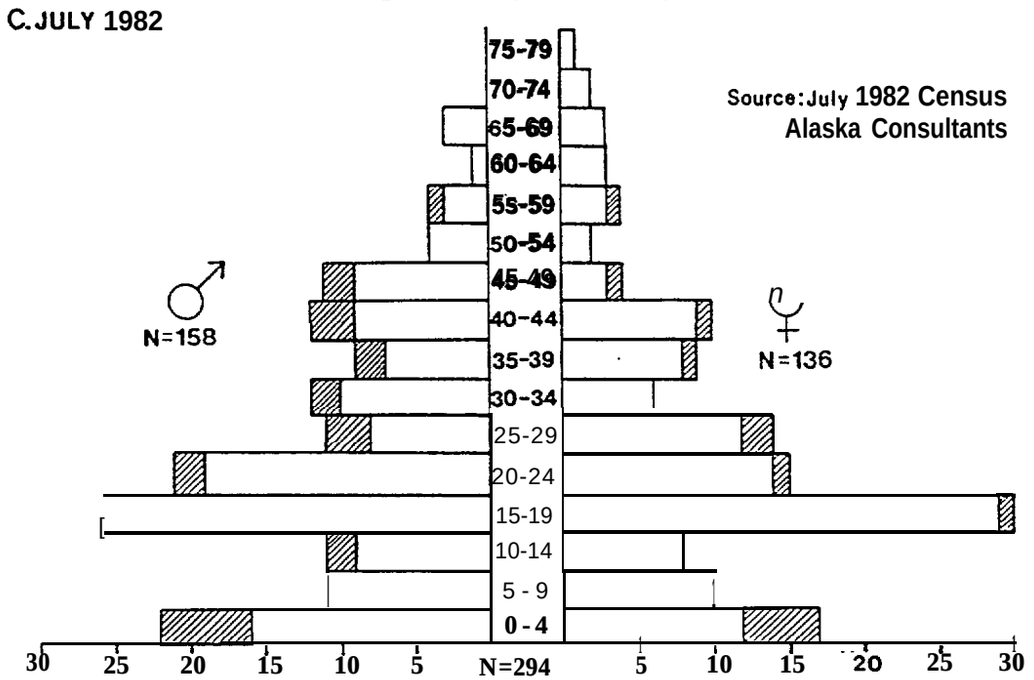



**Figure 4-NQT**

**'Nuiqsut Population Pyramid November 1982**

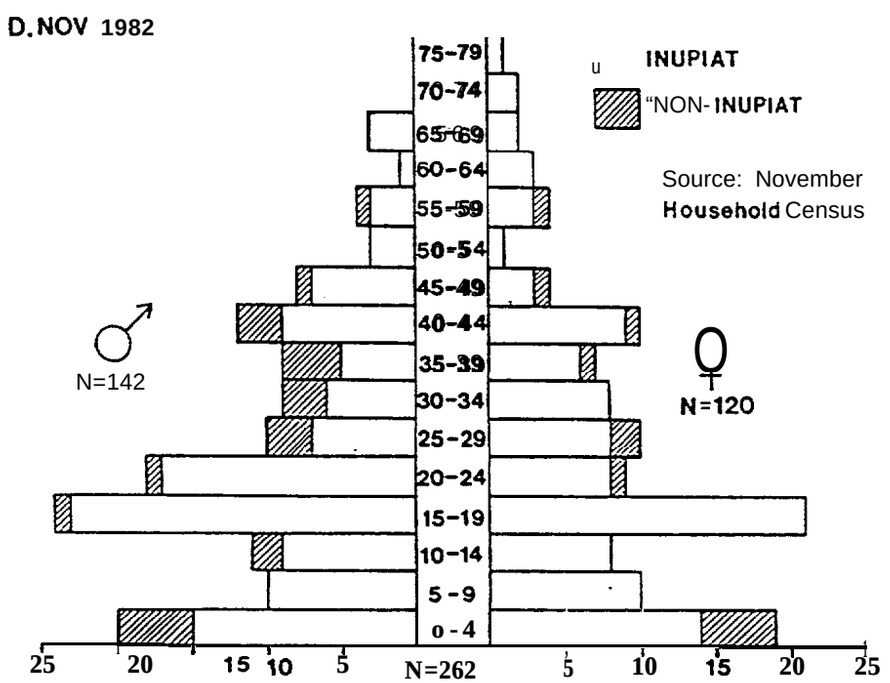


**Figure 5-NQT**

**Nuiqsut Population Pyramid January 19S3**

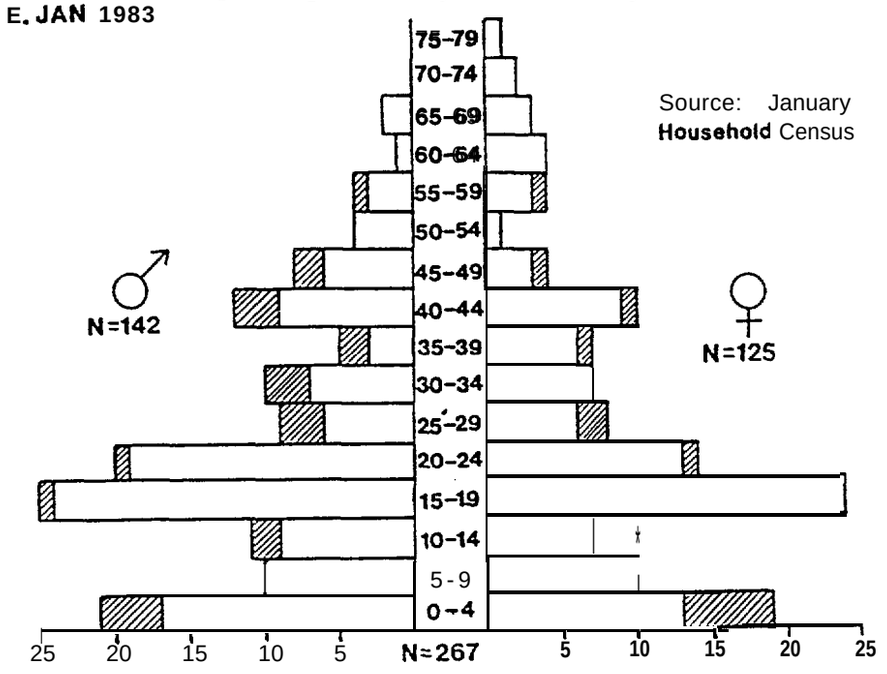
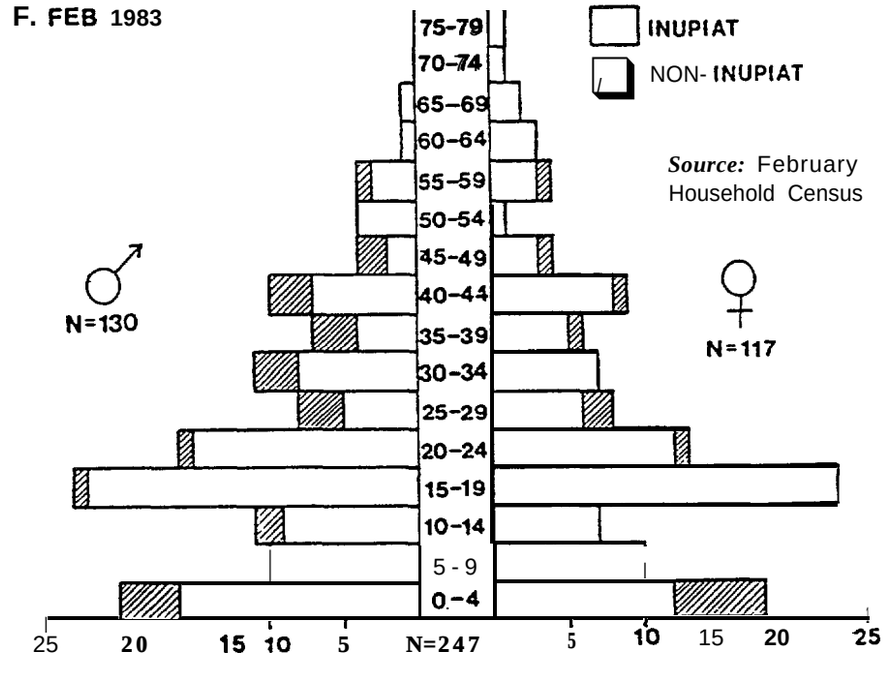



**Figure 6-NQT**

**Nuiqsut Population Pyramid February 1983**

**Figure 6-NQT**



## Table 12-NQT

## Age, Sex, and Race Composition of Population -1988
## Nuiqsut

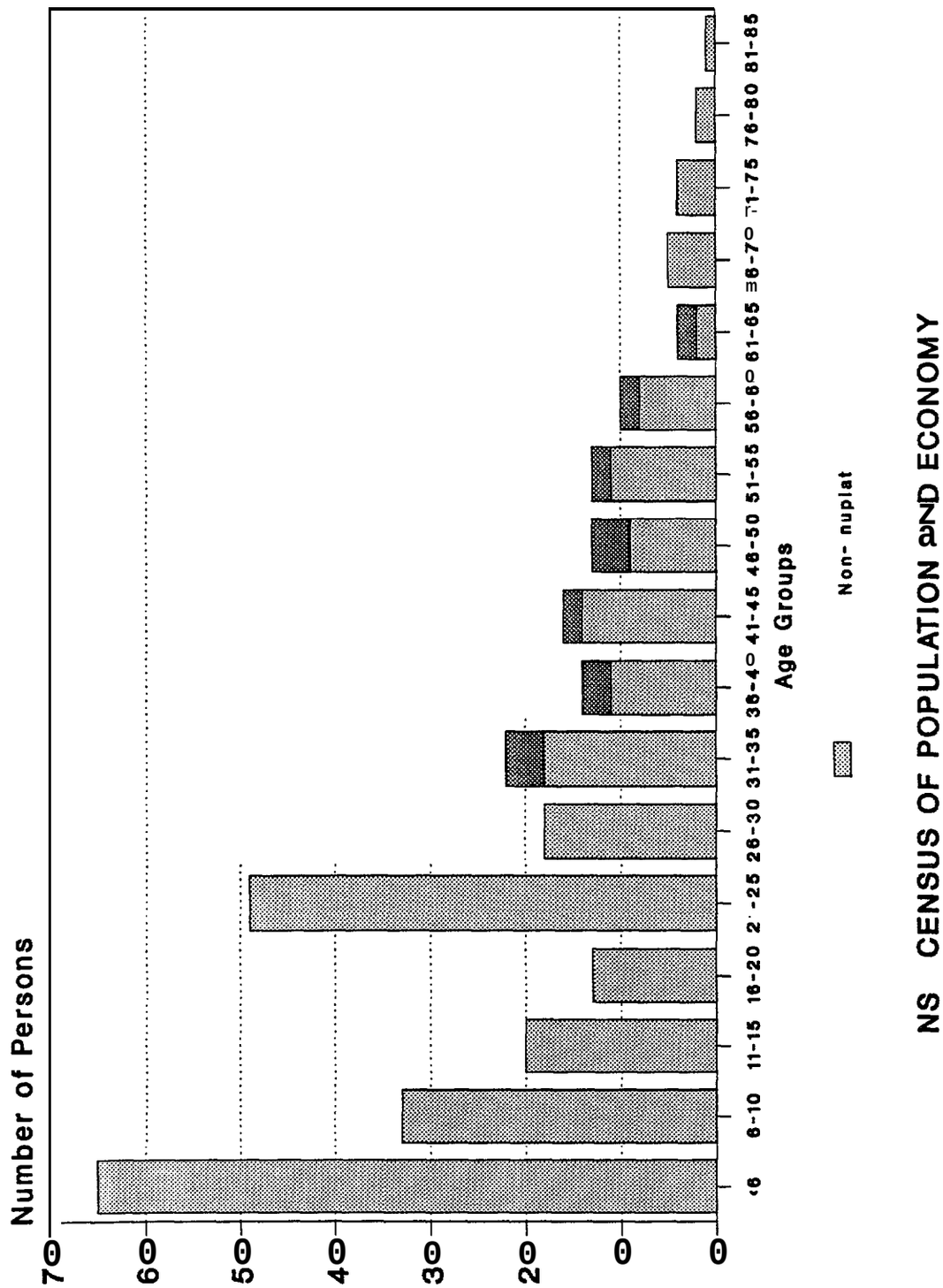
| | INUPIAT | | | NON-INUPIAT | | | TOTAL | | | % |
|---|---|---|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | TOTAL |
| UNDER 4 | 18 | 18 | 36 | | | 0 | 18 | 18 | 36 | 11.9% |
| 4 - 8 | 3a | 18 | 48 | | | 0 | 30 | 18 | 48 | 15.9% |
| 9-15 | 11 | 23 | 34 | | | 0 | 11 | 23 | 34 | 11.3% |
| 16-17 | 3 | 1 | 4 | | | 0 | 3 | 1 | 4 | 1.3% |
| 18-25 | 30 | 28 | 58 | | | 0 | 30 | 28 | 58 | 19.2% |
| 26-39 | 26 | 19 | 45 | 5 | 2 | 7 | 31 | 21 | 52 | 17.2% |
| 40-59 | 27 | 16 | 43 | 5 | 5 | 10 | 32 | 21 | 53 | 17.5% |
| 60-65 | 2 | 1 | 3 | 2 | | 2 | 4 | 1 | 5 | 1.7% |
| 66+ | 3 | 9 | 12 | | | 0 | 3 | 9 | 12 | 4.0% |
| TOTAL | 150 | 133 | 283 | 12 | 7 | 19 | 162 | 140 | 302 | 100.0% |
| % | 49.7% | 44.0% | 93.7% | 4.0% | 2.3% | 6.3% | 53.6% | 46.4% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | | | 12 | |
| TOTAL POPULATION | | | | | | | | | 314 | |

| | AVERAGE AGE (years) |
|---|---|
| ENTIRE POPULATION | 25 |
| MALE | 25.3 |
| FEMALE | 24.7 |
| INUPIAT | 23.6 |
| NON-INUPIAT | 45.6 |

**Source:** NSB Census of Population and Economy, 1989.

**Figure 7-NQT**

**Inupiat and Total Population in 1988**
**Nuiqsut**



## Table 13-NQT

### Ethnic Composition of Population -1988
### Nuiqsut

| ETHNIC CATEGORY | TOTAL POPULATION MALE | FEMALE | TOTAL | % OF TOTAL |
|---|---|---|---|---|
| INUPIAT | 155 | 139 | 294 | 93.6% |
| WHITE | 13 | 6 | 19 | 6.1% |
| FILIPINO | 0 | 1 | 1 | 0.3% |
| TOTAL | 168 | 146 | 314 | 100.0% |
| % | 53.5% | 46.5% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | 0 | |
| TOTAL POPULATION | | | 314 | |

Source: NSB Census of Population and Economy, 1989.

**Figure 8-NQT**

**Nuiqsut Population Characteristics -1988**

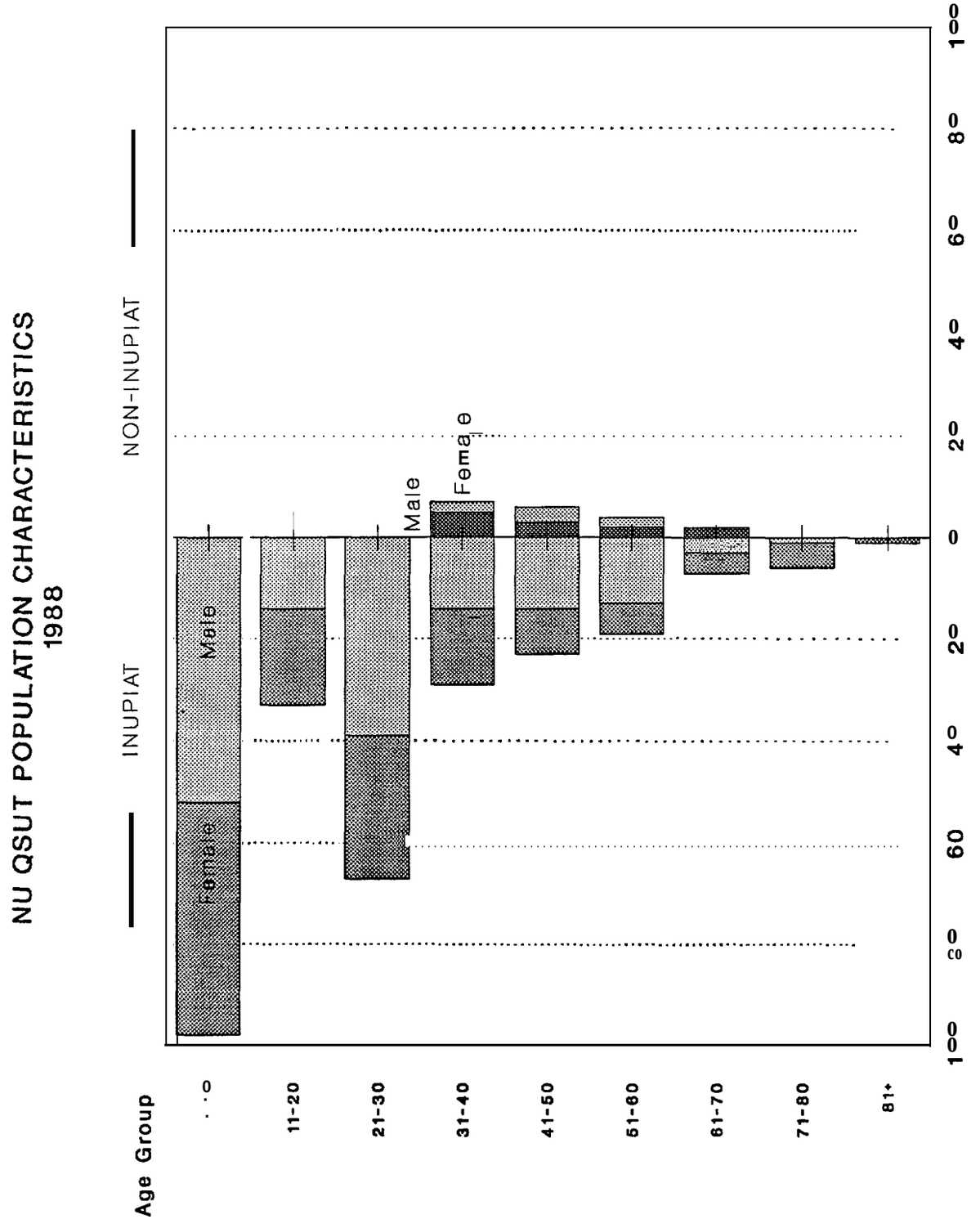
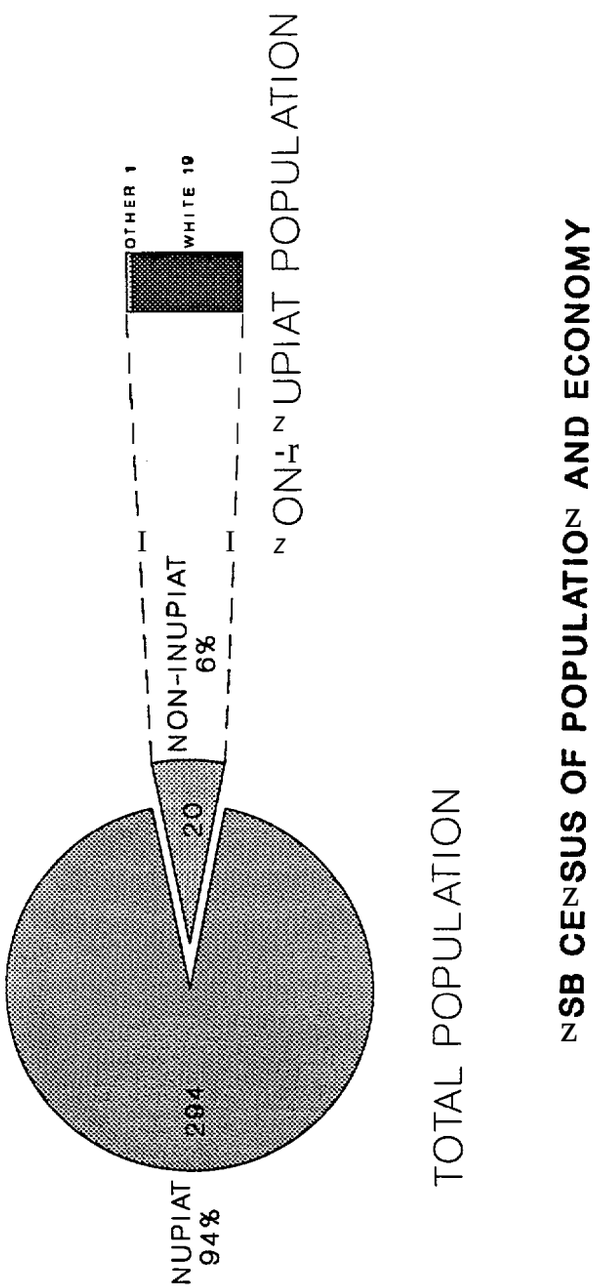


**Figure 9-NQT**

**Ethnic Composition of Nuiqsut Population -1988**



### 2. Influences on Demographic Characteristics

Prior to 1973, there had never been a permanent settlement in the Nuiqsut area, although the area was used extensively on a seasonal basis for harvesting subsistence resources and was traditionally the site of a trade fair (near the mouth of the Colville River). The political and sociocultural factors underlying the foundation of the community in 1973 and the economic factors underlying its growth since then are discussed in the NSB Planning Commission report 1978, Hoffman et al. 1988, Galginaitis et al. 1984, Dekin 1985, Alaska Consultants 1982, and Kruse et al. 1983. Population growth in Barrow, the desire of people to move to outlying villages and develop a closer relationship to the land, and the economic and political opportunities associated with ANCSA all combined to make this possible in a fashion similar to the refounding of Point Lay and Atqasuk (and to a large degree Anaktuvuk Pass). Wage labor employment has been and continues to be almost totally NSB-dependent, with the mix between permanent service and seasonal construction jobs varying depending on the season and the state of the NSB CIP program at that time. At present there are few large CIP projects slated for Nuiqsut.

The last four sources cited above also discuss recent population trends and project growth rates based on these and other tendencies. Galginaitis et al. 1984 point to two particular factors influencing population growth in recent years. Fertility is examined in terms of child-to-women ratios and the number of pregnancies and births by age group among Nuiqsut women. Nearly 50% of those pregnant were reported to be teenagers. This, along with an increasing number of individuals attaining childbearing age, combines for an increased number of births. This was found to still be the pattern two years later (Galginaitis and Petterson 1985). The future birthrate will depend upon the reproductive choices of these women, about which little information is available at present. It appears unlikely that the village population can greatly increase, however, because of limited housing and employment opportunities. Thus, if birthrates continue to be high a fair amount of emigration can be expected to take place. The current 5- to 9-year-old cohort is somewhat constricted and so the birthrate may decrease when they attain reproductive age in any event, at least temporarily.

Migration is examined in terms of residence patterns by year and sex for 1973 and 1981-1983. The most recent ethnographic description of the community prepared by Galginaitis and Petterson 1985 examines how these factors have contributed to the 26.7% increase in population between 1982 and 1985. They conclude that the addition of new housing stock was one factor that contributed to this population growth. Since the NSB is now essentially finished with housing projects, it is expected that housing will have a constraining effect on population in Nuiqsut in the future. For now, many households could accommodate more individuals than currently live there. Given the preference for each household unit to have a separate dwelling, this suggests that the formation of new households may be hindered while the growth of existing households continues.

**B. Household Size and Composition**

1. Characteristics of Households

Galginaitis et al. 1984 provide a thorough analysis of household composition based on 1982 data as well as data on the distribution of heads of household by household type for 1973 and 1981-1983. Descriptive statistics on the distribution of households in Nuiqsut by number of residents, mean household size, and mean size and number of residents per household by ethnicity and type of household imposition for 1973 and the 1981-1983 period are provided. Average household size varied from 3.9 to 4.4 within that period, but in no systematic way. The founding population had an average household size of 5.7, but this is clearly attributable to the lack of housing at that time. Galginaitis and Petterson report an average Inupiat household size of 4.6 in 1985, but suggest that this is not a terribly significant increase because of the number of factors which influence household size. This does suggest that there is little surplus housing in Nuiqsut. In any event, the 1988 NSB census reports an average Inupiat household size of 4.1. The reason for the difference from the 1985 figure is unclear.

Information on household composition is also available in the published literature for certain years, but unfortunately not from the most recent NSB census. Galginaitis et al. 1984 provide a list of Nuiqsut residents by household in 1973 and the analysis of kin groups in Nuiqsut in the early 1980s. An update of this information based on ethnographic research conducted in the community in 1985 is found in Galginaitis and Petterson 1985. The most important generalization is that nuclear families predominate and are the preferred household unit. Even most of the more complicated "composite" households have a clearly defined nuclear family as the basis of the unit (twelve of fifteen in November 1985). Descriptive statistics on the age, ethnicity, and length of residence of heads of households for 1980 is found in Alaska Consultants 1981. This information is reproduced below in table and/or figure form.

*2.* Recent Trends in Household Size and Composition

There are clear contrasts between the characteristics of Inupiat and non-Inupiat households, as summarized in Tables 16-NQT and 17-NQT and Figure 1O-NQT. Non-Inupiat households are smaller than Inupiat households, and in 1988 consisted of only one or two people. Inupiat households range from one to twelve members. Fully six of seven (86%) non-Inupiat households had an income of more than $60,000 in 1988, while only two of fifty-nine (3%) Inupiat households are in this category. There is clearly an enormous per capita income difference. The sample is not complete, in that income information is missing for 19% of the households of the village, but the contrast is so large that it is very doubtful that the incomplete nature of the sample misrepresents the situation.

## Table 14-NQT

## Age of Head of Household for Alaska Natives* **, Non-Natives*** ****, and All Groups Nuiqsut - May 1980

| Household Size | 14-24 | | | 25-34 | | | 35-44 | | | 45-64 | | | 65+ | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total | Native | Non-Native | Total |
| 1 pet-inn | 0 | 1 | 1 | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 4 | 1 | 5 |
| 2 persons | 1 | 0 | 1 | 1 | 2 | 3 | 1 | 0 | 1 | 1 | 1 | 2 | 3 | 0 | 3 | 7 | 3 | 10 |
| 3 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 5 | 1 | 6 |
| 4 persons | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 7 | 0 | 7 |
| 5 persons | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 8 | 1 | 0 | 1 | 1 | 0 | 1 | 7 | 3 | 10 |
| 6 persons | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 1 | 0 | 1 | 6 | 1 | 7 |
| 7 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 2 |
| 8 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 9 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 10 persons | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 11 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 13 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 persons | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1 | 1 | 2 | 8 | 3 | 11 | 11 | 4 | 15 | 14 | 1 | 15 | 8 | 0 | 8 | 42 | 9 | 51 |

• For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.
• * Figures exclude one head of household for whom no age information was obtained.
*** Figures exclude 6 heads of household (1 Alaska Native and 5 non-Natives) for whom no age information was obtained.
**'* Includes six units used as group quarters.

Source: Alaska Consultants, Inc., North Slope. Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 15-NQT

## Heads of Household
## By Age, Type of Wage Earner, and Household Size
## Inupiat - February 1983

| Age | *sex* of Head of HH: Male | Female |
|---|---|---|
| 16-24) | 1 | |
| 21-34) | 4 | |
| 3140 | 11 | |
| 41-50 | 18 | 1 |
| 51-60 | 4 | 2 |
| 61-65 | 0 | 2 |
| 66+ | 2 | 4 |
| **Total** | 40 | 9 |

| Type of Wage Earner(s)[2] | Sex of Head of HH: Male | Female |
|---|---|---|
| M-S | 11 | 3 |
| M-P, F-P | 9 | |
| M-P | 5 | 2 |
| M-S, F-P | 5 | 1 |
| None | 3 | 2 |
| M-P, F-S | 3 | |
| M-P, M-S | 2 | |
| M-S, F-S | 2 | |
| F-P | o | 1 |
| F-S | o | |
| | **40** | 9 |

| HH *size* | *sex* of Head of HH: Male | Female |
|---|---|---|
| 1 | 4 | 0 |
| 2 | 1 | 3 |
| 3 | 5 | 1 |
| 4 | 6 | 4 |
| 5 | 8 | 1 |
| 6 | 3 | |
| 7 | **5** | |
| 8 | 4 | |
| 9 | 2 | |
| 10 | 2 | |
| | 40 | 9 |

[1] Excludes three Inupiat female permanent wage earners Wing in mixed households.
2 M = male, F = female, P = permanent, S = seasonal.

## Table 15-NQT (continued)

## Inupiat Household Wage Earner Characteristics[1]

### Type of Wage Earner[2]

| Household Size | M-S | M-P, F-P | M-S, M-P | F-P | M-P, None | M-P, F-S | M-S, M-S | F-S | F-P | F-S | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | 1 | | 2 | | | | | | 4 |
| 2 | 2 | | 1 | | 1 | | | | | | 4 |
| 3 | 2 | | | | 2 | 1 | 1 | | | | 6 |
| 4 | 4 | 2 | 3 | | | | | | 1 | | 10 |
| 5 | 4 | 2 | | 2 | | 1 | | | | | 9 |
| 6 | | 2 | | | | | | 1 | | | 3 |
| 7 | 1 | 1 | 1 | 1 | | | 1 | | | | 5 |
| 8 | | 1 | | 2 | | | | 1 | | | 4 |
| 9 | | 1 | | 1 | | | | | | | 2 |
| 10 | | | 1 | | | 1 | | | | | 2 |
| Total | 14 | 9 | 7 | 6 | s | 3 | 2 | 2 | 1 | 0 | 49 |
| Age of Head of Household | | | | | | | | | | | |
| 16-20 | 1 | | | | 1 | | | | | | 2 |
| 21-30 | 2 | | 1 | | | | | | | | 3 |
| 31-40 | 2 | 2 | 3 | | 1 | 2 | 1 | - | | | 11 |
| 41-50 | 4 | 5 | 1 | 6 | | | 1 | 2 | | | 19 |
| 51-60 | 1 | 1 | | | 2 | 1 | | | 1 | | 6 |
| 61-65 | | | 1 | | 1 | | | | | | 2 |
| 66+ | 4 | 1 | 1 | | | | | | | | 6 |

[1] Excludes three Inupiat female permanent wage earners living in mixed households.
[2] M = male, F = female, P = permanent, S = seasonal

Source Galginaitis et al. 19S4141.

## Table 16-NQT

### Household Size -1988
### Nuiqsut

| NUMBER OF PERSONS | NUMBER OF HOUSEHOLDS: INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| 1 | 12 | 2 | 14 | 17.3% |
| 2 | 5 | 7 | 12 | 14.8% |
| 3 | 12 | | 12 | 14.8% |
| 4 | 16 | | 16 | 19.8% |
| 5 | 9 | | 9 | 11.1% |
| 6 | 8 | | 8 | 9.9% |
| 7 | 3 | | 3 | 3.7% |
| 8 | 3 | | 3 | 3.7% |
| 9 | 3 | | 3 | 3.7% |
| 10 | | | 0 | 0.0% |
| 11 | 1 | | 1 | 1.2% |
| 12 | | | 0 | 0.0% |
| TOTAL OCCUPIED HOUSEHOLD | 72 | 9 | 81 | 100.0% |
| AVERAGE HOUSEHOLD SIZE | 4.1 | 1.8 | 3.9 | |

Source: NSB Census of Population and Economy, 1989.

## Table 17-NQT

## Household Income and Spending -1988
## Nuiqsut

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 15 | | 15 | 22.7% |
| $20,000 - $40,000 | 22 | | 22 | 33.3% |
| $40,000 - $60,000 | 20 | 1 | 21 | 31.8% |
| $60,000 & ABOVE | 2 | 6 | 8 | 12.1% |
| TOTAL | 59 | 7 | 66 | 100.0% |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 15 |
| TOTAL OCCUPIED HOUSEHOLDS | 81 |

| | FOR ALL VILLAGE HOUSEHOLDS MEDIAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $35,000 | $41,136 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 50.0% | 53.4% |
| MONTHLY HOUSING PAYMENT (2) | $100 | $183 |
| MONTHLY HEATING COSTS | $165 | $215 |
| MONTHLY ELECTRICITY COSTS | $52 | $114 |

Notes: (1) For food, doting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

There are no resident non-Inupiat families in Nuiqsut, and it is apparent that the transient teacher couples and other non-Inupiat households do not have any children (which is what the census does indeed indicate). This is perhaps the most extreme case on the North Slope, as most of the other villages have resident non-Inupiat households. Nuiqsut has in the past had at least some temporary non-Native households with children (Figures 1-NQT through 6-NOT). Non-Inupiat are intermarried with Nuiqsut, but these households were counted as Inupiat for purposes of the NSB census and are separated out as "mixed" in Galginaitis et al. 1984 and Galginaitis and Petterson 1985. In any event, "mixed households are clearly different from non-Inupiat households and probably from households where both spouses are Inupiat as well.

*3.* Influences on Household Size and Composition

In addition to the well-documented nature of Nuiqsut households, the economic, political, and sociocultural factors contributing to household characteristics are also examined in the report prepared by Galginaitis et al. 1984 and Galginaitis and Petterson 1985. This includes a history of housing construction in the community and an analysis of traditional Inupiat patterns of kinship affiliation and residence, based on studies of North Slope Inupiat in general, such as that found in Burch 1975. The update prepared by Galginaitis and Petterson 1985 also provide data on the distribution of household sizes and mean household size by housing type. Table 18-NQT presents data on heads of household by household type for several dates from 1973 through 1983; Table 19-NQT presents household characteristics by categories of household size for 1988. The interested reader is referred to The Nuiqsut Case Study (Galginaitis et al. 1984), as similarly detailed information is not available for any of the other NSB villages. Only a very brief review of some of the more salient points will be mentioned here, in list form.

1) The predominant household form for both Inupiat and non-Inupiat is the nuclear family. Inupiat households are much more likely to add individuals to such a unit than are non-Inupiat households, but the basic nuclear family orientation remains. Inupiat households are much larger than non-Inupiat households.

2) The "original" housing, built the first year of the resettlement, is occupied totally by Inupiat, and predominantly by single individuals or young couples. This is the only housing stock in Nuiqsut with a sizable "vacancy" rate (the condition of "vacant" buildings in this group is difficult to judge).

3) Non-Inupiat tend to occupy the second "wave" of housing, which was the first built by the NSB. This seems to be the result of historical accident. Since these people are mostly NSB employees, this is understandable. Included in this group of housing is a four-unit apartment complex.

4) Newer NSB housing is occupied by Inupiat households, and has apparently been allocated on the basis of community status and need. Elders have first priority, followed by larger resident families. Households from outside of Nuiqsut have in the past received some of the new housing as it was built, but such cases are in the minority.

Figure 1O-NQT

**Nuiqsut Household Size**
**April 1973, July 1981, and July 1982**

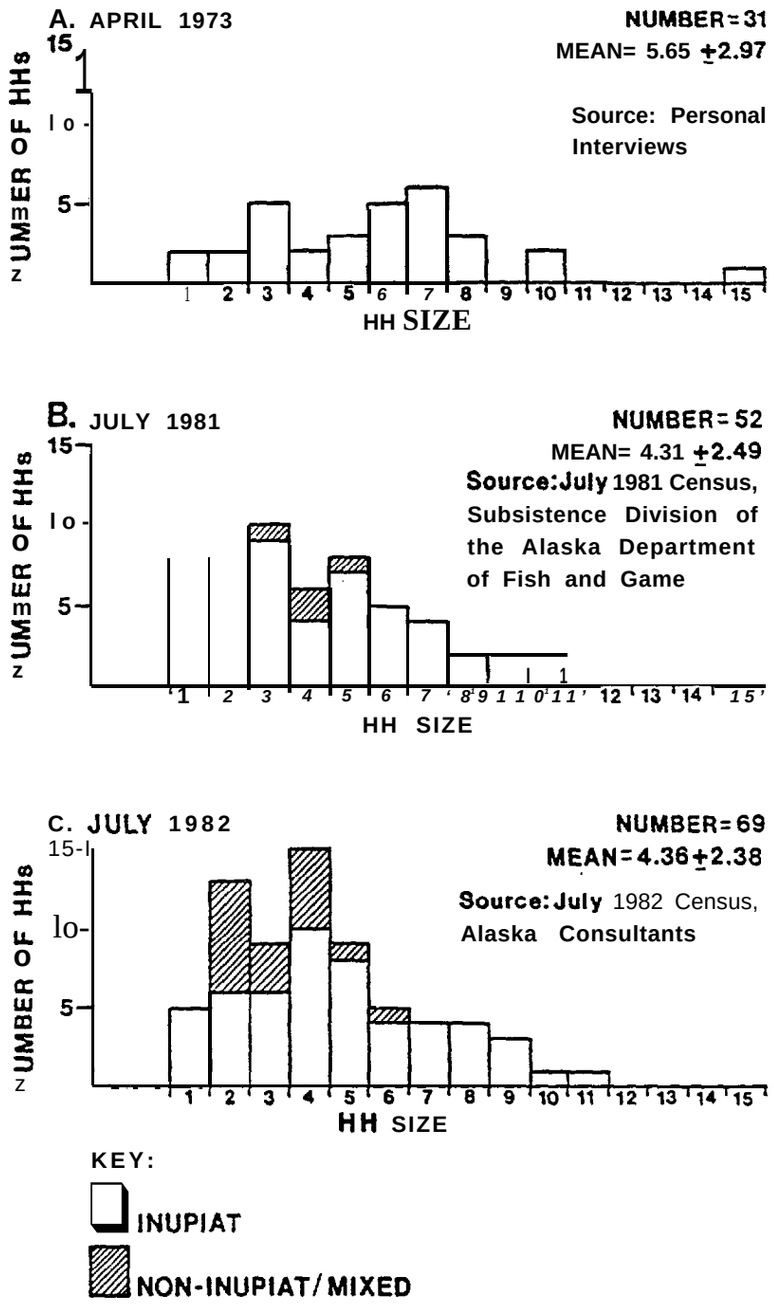
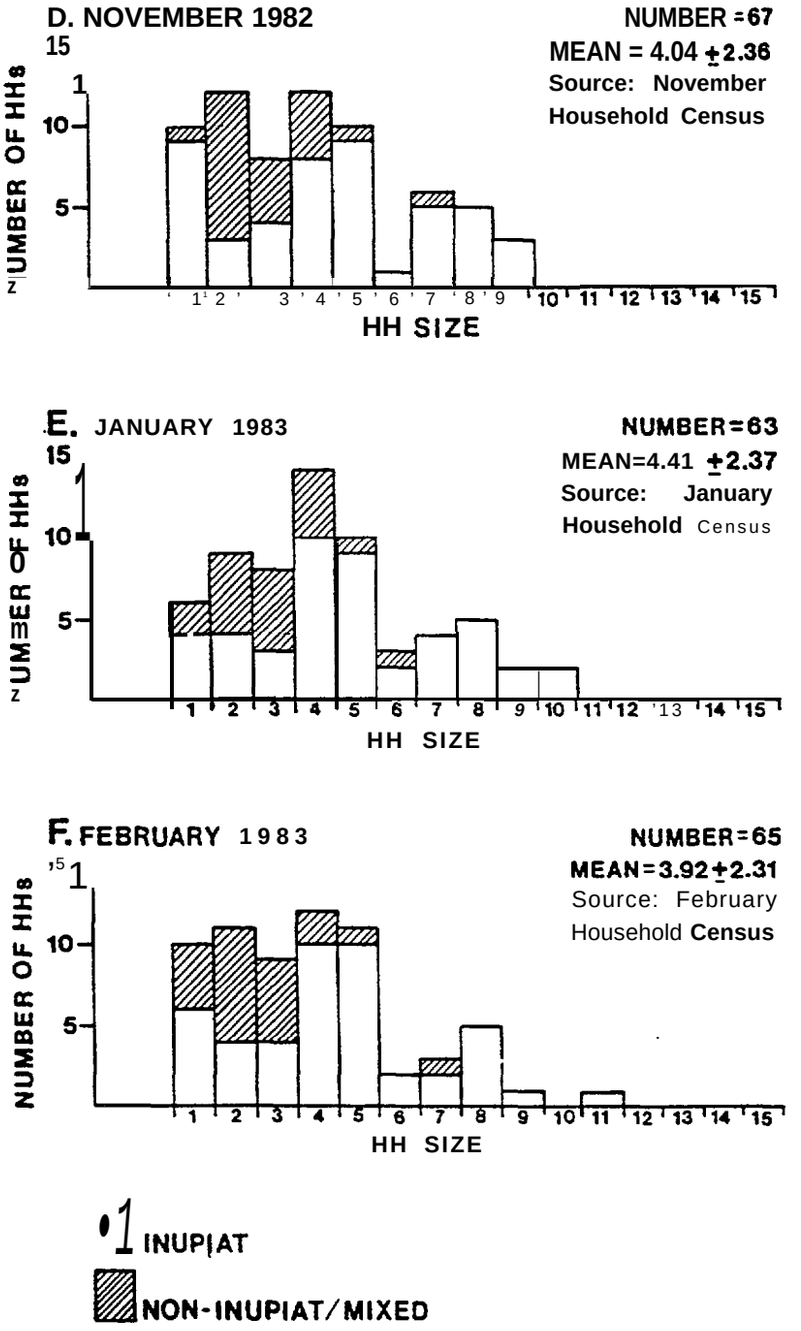


**Figure 11-NQT**

**Nuiqsut Household Size**
**November 1982, January 1983, and February 1983**



## Table 18-NQT

## Head of Household by Household Type
## Nuiqsut

**A. April** 1973

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 2 | | | | | 2 | (6.5%) |
| Nuclear Family | 22 | 1 | | | | | 23 | (74.2%) |
| Composite | 3 | | | | | | 3 | (9.7%) |
| Unknown | 2 | 1 | | | | | 3 | (9.7%) |
| TOTAL | **27 (87.1%)** | **4 (12.9%)** | | | | | 31 | |

B. **July** 19S1

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 5 | 3 | | | | 8 | (15.4%) |
| Nuclear Family | 13 | **4** | 1 | 3 | | | 21 | (40.4%) |
| **Composite** | 4 | 1 | 2 | 1 | | | t? | (15.4%) |
| Unknown | **10** | 2 | 3 | | | | 15 | (28.8%) |
| TOTAL | **27 (51.9%)** | **12 (23.1%)** | (17?3%) | **4 (7.7%)** | | | 52 | |

C **July 1982**

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 5 | | | | | 5 | (7.2%) |
| Nuclear Family | 22 | 3 | 3 | 13 | | | 41 | (59.4%) |
| **Composite** | 6 | 2 | 3 | 1 | | | 12 | (17.4%) |
| Unknown | 4 | 3 | 1 | 1 | 1 | 1 | 11 | (15.9%) |
| TOTAL | **32 (46.4%)** | **13 (18.8%)** | **7 (10.1%)** | **15 (21.7%)** | **1 (1.4%)** | **1 (1.4%)** | 69 | |

## Table 18-NQT (continued)

D. November 1982

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 7 | 1 | | 1 | | 9 | (13.6%) |
| Nuclear Family | 18 | 2 | 3 | 10 | | 1 | 34 | (51.5%) |
| Composite | 7 | | 3 | 2 | 2 | 1 | 15 | (22.7%) |
| unknown | 3 | 1 | 2 | | 2 | | 8 | (12.1%) |
| **TOTAL** | **28 (42.4%)** | **10 (15.2%)** | **9 (13.6%)** | **12 (18.2%)** | **5 (7.6%)** | **2 (3.0%)** | 66 | |

E. January 1983

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 4 | | | 2 | | 6 | (9.5%) |
| Nuclear Family | 20 | 3 | 2 | 11 | | | 36 | (57.1%) |
| Composite | 6 | | 5 | 2 | 1 | 1 | 15 | (23.8%) |
| Unknown | 2 | 2 | 1 | | 1 | | 6 | (9.5%) |
| **TOTAL** | **28 (44.4%)** | **9 (14.3%)** | **8 (12.7%)** | **13 (20.6%)** | **4 (6.3%)** | **1 (1.6%)** | 63 | |

F. February 1983

| Household Type | Inupiat: Male & Female | Inupiat: Male Only | Inupiat: Female Only | Non-Inupiat/Mixed: Male & Female | Non-Inupiat/Mixed: Male Only | Non-Inupiat/Mixed: Female Only | Total | |
|---|---|---|---|---|---|---|---|---|
| Single Person | | 6 | | | 4 | | 10 | (15.4%) |
| Nuclear Family | 17 | 3 | 4 | 10 | 1 | | 35 | (53.8%) |
| Composite | 4 | 1 | 5 | 2 | 1 | 1 | 14 | (21.5%) |
| Unknown | 2 | 1 | 2 | | 1 | | 6 | (9.2%) |
| **TOTAL** | **(3?4%)** | (129%) | **11 (16.9%)** | **12 (18.5%)** | **7 (10.8%)** | **1 (1.5%)** | 65 | |

Source Baaed on Galginaitis et al. 1984.

## Table 19-NQT
## Nuiqsut Household Characteristics - 19SS
## By Categories of Household Size

| | HOUSEHOLD SIZE | | | |
|---|---|---|---|---|
| | SMALL | MEDIUM | LARGE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $23,977 | $41,852 | $35,000 | |
| Non-Inupiat HHs | $101,071 | | | |
| All HHs | $42,586 | $41,852 | $35,000 | $41,136 |
| Cases: | 29 | 27 | 10 | 66 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 2.0 | 4.8 | 8.3 | |
| Non-Inupiat HHs | 1.8 | | | |
| All HHs | 1.9 | 4.8 | 8.3 | 3.9 |
| Cases: | 38 | 33 | 10 | 81 |
| **Average Meat & Fish Camptn from Own HH Subsistence (%):** | | | | |
| Inupiat HHs | 39.0% | 53.9% | 71.0% | |
| Non-Inupiat HHs | 20.0% | | | |
| All HHs | 34.6% | 53.9% | 71.0% | 47.6% |
| Cases: | 34 | 33 | 10 | 77 |
| **Average Meat & Fish Camptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 19.6% | 15.5% | 19.0% | |
| Non-Inupiat HHs | 0.0% | | | |
| All HHs | 15.4% | 15.5% | 19.0% | 15.9% |
| Cases: | 33 | 33 | 10 | 76 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 32.9% | 30.9% | 43.5% | |
| Non-Inupiat HHs | 3.6% | | | |
| All HHs | 26.7% | 30.9% | 43.5% | 30.7% |
| Cases: | 33 | 33 | 10 | 76 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 59.4% | 55.8% | 63.0% | |
| Non-Inupiat HHs | 7.1% | | | |
| All HHs | 48.0% | 55.8% | 63.0% | 53.4% |
| Cases: | 32 | 33 | 10 | 75 |

Notes: Household size categories measured as follows:
SMALL: under 4 persons per household
MEDIUM: 4-6 persons per household
STRONG: 7 or more persons per household.
Total cases (households) = 81.

Source: NSB Department of planning and Community Services
Census of Population and Economy

## C. Educational Characteristics

**No data on the educational background of Nuiqsut residents is currently available in the secondary literature. The recent census conducted** by the North Slope Borough does provide this information for the current population (Table 20-NQT). The relationship between educational requirements and economic opportunities, either in the community or elsewhere, is examined only briefly in the report prepared by Galginaitis et al. 1984 and Galginaitis and Petterson 1985.

About 36% of those age 18-25 have not completed high school, compared to 20% for those age 26-39 and 63% for those age 40-59. People over age 59 for the most part did not go to high school (91%). What is most surprising about this pattern is the large proportion of young people who have not graduated from high school. This is the age group that would have gone to school in Nuiqsut (or other locality on the North Slope) rather than go off-slope to school, so that the increase in "dropout rate" for the 26-39 year old age group seems especially significant. Because of the mobility of the population this cannot necessarily be attributed to the Nuiqsut school. There are also" some complications because the non-Inupiat population is concentrated in the 26- to 59-year-old age group and tend to have more formal education than do Inupiat.

## D. Marriage Patterns

Information on marriage patterns among North Slope Inupiat in general may be found in Burch 1975. Information which is specific to Nuiqsut may be found in a discussion of kin ties in Galginaitis et al. 1984. However, the existing literature does not specifically examine how marriage patterns of Inupiat currently living in Nuiqsut have changed over the past two decades and field time was not adequate for an investigation of this topic in Nuiqsut.

As could be expeeted from the small numbers and relatively young (but adult) age distribution of the population, non-Inupiat in Nuiqsut are for the most part married and have not been divorced or separated. The Inupiat population also reports very few divorces or separations, but it would appear that this is a case where information is either not complete or is misleading. From informant accounts it is obvious that marital relations are more unstable than Table 21-NQT would indicate. The eleven cases of spouses having died, on the other hand, would seem to be rather high but probably accurate, from reports of past patterns of age at first marriage.

## Table 20-NQT

### Highest Level of Education Attained by Age Group
### Inupiat Residents, Nuiqsut - 19SS

| | COLLEGE+ | SOME COLLEGE | VOTECH GRAD | HIGH SCH NOT FINISH OR GED | STILL IN HIGH SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | 2 | 33 | 1 | 36 |
| 4 - 8 | | | | | 42 | 4 | 2 | 46 |
| 9.15 | | | | | 1 | 33 | | 34 |
| 16-17 | | | | | | 4 | | 4 |
| 16-25 | | 3 | | 32 | 20 | 2 | | 57 |
| 26-39 | 0 | 3 | | 24 | 18 | | 0 | 45 |
| 40-59 | 0 | 2 | 0 | 14 | 26 | | 1 | 43 |
| 60-65 | 0 | | | | 2 | | 1 | 3 |
| 66 + | | | | | 8 | | 4 | 12 |
| TOTAL | 0 | 8 | 0 | 70 | 75 | 83 | 37 | 9 | 282 |
| % | 0.0% | 2.8% | 0.0% | 24.8% | 26.6% | 29.4% | 13.1% | 3.2% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 13

TOTAL POPULATION (Inupiat) 295

Source: NSB Department of Planning end Community Services
Census of population and Economy, 1969.

## Table 20-NQT (continued)

### Highest Level of Education Attained by Age Group
### Non-Inupiat Residents, Nuiqsut -1988

| | COLLEGE+ | SOME COLLEGE | VO TECH GRAD | HIGH SCH OR GED | NOT FINISH HIGH SCH | STILL IN SCHOOL | NOT IN SCH YET | NOT ASCERTAIN | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| UNDER 4 | | | | | | | | | 0 |
| 4 - 8 | | | | | | | | | 0 |
| 9-15 | | | | | | | | | 0 |
| 16-17 | | | | | | | | | 0 |
| 18-25 | | | | | | | | | 0 |
| 26-39 | 3 | 1 | | 2 | | | | 1 | 7 |
| 40-59 | 6 | 1 | 1 | 2 | | | | | 10 |
| 60-65 | 2 | | | | | | | | 2 |
| 66 | | | | | | | | | |
| TOTAL | 11 | 2 | 1 | 4 | 0 | 0 | 0 | 1 | 19 |
| % | 57.9% | 10.5% | 5.3% | 21.1% | 0.0% | 0.0% | 0.0% | 5.3% | 100.0% |

NUMBER OF MISSING OBSERVATIONS 0

TOTAL POPULATION (Non-Inupiat) 19

Source: NSB Department of Planning and CommunityServices
Census of Population sndEconomy, 1989.

## Table 21-NQT

## Marital Status by Ethnicity
## Nuiqsut -1988

| MARITAL CATEGORY | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| NOW MARRIED | 36 | 35 | 71 | 9 | 7 | 16 | 67 | 47.5% |
| WIDOWED | 1 | 9 | 10 | | | 0 | 10 | 5.5% |
| DIVORCED | 1 | 1 | 2 | 1 | | 1 | 3 | 1.6% |
| SEPARATED | 1 | | 1 | 1 | | 1 | 2 | 1.1% |
| NEVER MARRIED | 51 | 29 | 80 | 1 | | 1 | 81 | 44.3% |
| TOTAL | 90 | 74 | 164 | 12 | 7 | 19 | 183 | 100.0% |
| % | 49.2% | 40.4% | 89.6% | 6.6% | 3.8% | 10.4% | 100.0% | |
| NUMBER OF MISSING OBSERVATIONS | | | | | | | 1 | |
| TOTAL POPULATION (age 16+) | | | | | | | 164 | |

Note: Figures include persons age 16 and above.

Source: NSB Department of Planning and Community Services
Census of population and Economy, 1969

## E. Migration Patterns

The history of Nuiqsut is fundamentally a history of migration, both in an historical as well as a contemporary sense. The characteristics of migration of residents from Barrow and other North Slope communities to Nuiqsut in the early 1970s and the influences on patterns of migration since that time have been well documented in Brown 1979 and Galginaitis et al. 1984. Most had some prior connection with the Nuiqsut land use area, either through personal use or that of their parents. Almost half of the original founding population has maintained continuous residence in Nuiqsut, while those who have left had done so by July 1981 (Galginaitis et al. 1984). A large percentage of the present population of Nuiqsut has arrived after the village was refounded. Most have come as permanent residents, although there is some movement in and out of the village. Some information on migration patterns between 1982 and 1985 may be found in Galginaitis and Petterson 1985. The community history of migration is also examined in this report. This history is also summarized in Hoffman et al. 1988.

SECTION II: ECONOMY

A. Historical Overview

The economic history of Nuiqsut prior to 1973 is largely one of subsistence activities and is well documented in a number of sources, including Jenness 1957; Hoffman et al. 1988; Brown 1979; and Galginaitis et al. 1984. A summary chapter appears in North Slope Borough Contract Staff 1979, although the seasonal round information may be somewhat dated (as with all NSB communities). This is a topic that will be developed in the comparative section, where the available data is unfortunately confined to a few communities and is suggestive rather than conclusive. Be that as it may, more informal historical information for Nuiqsut is contained in the memoirs of Helmericks and Helmericks 1948, 1949. Substantial recent information is forthcoming from the Alaska Department of Fish and Game (Pedersen n.d.).

Apart from the sale of fires, a cash economy centered on the Nuiqsut area did not really develop until the reformation of the community by the North Slope Borough in 1973. Even the fur trade involved individuals whose primary community of residence was Barrow or some other permanent community. Hence, the cash economy in Nuiqsut is intimately connected with ANCSA and its economic effects and with the community's relations with the NSB. Both of these subjects are examined in Galginaitis et al. 1984. To all intents and purposes, the cash economy in Nuiqsut began with the refounding of the village (residents had of course been involved with the cash economy in other locations prior to that time).

**B. The Public Sector**

Data on public sector revenues, largely in the form of CIP fund expenditures, for Nuiqsut from 1975 to 1981 are provided in Galginaitis et al. 1984. These expenditures reached very high levels in 1979 and remained high through the peak in the NSB CIP program in 1983, after which they declined as sharply as they had risen. The amount of CIP money allocated for projects in Nuiqsut approached $50,000 per capita for some years. This reflects the high cost of infrastructure development, the commitment of the NSB to such development, and the lack of other capital for such development. Only the two churches, a structure sometimes used as a pool hall, a few frame houses, five makeshift dwellings, and perhaps part of the community building, have been constructed with non-CIP money. In combination with direct government employment (for the village or the NSB), this has meant that virtually all jobs within the village have resulted from public expenditures.

Comprehensive statistics on public sector employment in Nuiqsut are found in Knapp et al. 1986. Included are data on average annual full-time employment by industry classification for 1982; class of workers, occupations, and occupations by government employer for 1980; school district FTEs by ethnicity for 1984-19135; shares of Natives in total employment by type of employment for 1980; percent distributions of Natives 18 and over by monthly employment status and months and hours worked for 1976-1977; percent of Natives who worked in home village and elsewhere for 1976-1977; composition of employment by age, race, and sex for 1980; major employers for 1980; local labor statistics for 1985; and gross earnings of employees by project for 1984. Data on composition of government employment by age, race, and sex for 1980 are contained in Alaska Consultants 1981.

Other sources indicate public sector employment data for Nuiqsut by sex and ethnicity for each public sector employer in 1977 (Hoffman et al. 1978, 1988 - sex and ethnicity information uncertain), September 1980 (Alaska Consultants 1981), March 1983 (Galginaitis et al. 1984), and September 198S (Galginaitis and Petterson 1985). Also described are data on weekly earnings for certain jobs, average household income in 1980 and 1983, and selected household expenditures. Similar data on community residents in 1977 may be found in Kruse et al. 1981. Data on the salaries of temporary borough jobs in the community between October 1976 and October 1977 are included in the report by Hoffman et al. 1988. Employment information for March 1989 was collected in the field and is in the process of being checked for completeness and compatibility with the NSB census of 1988. Much of this information has been reproduced below in tabular form.

There are a few main points to be made from this material. The first is to again stress the predominance of the NSB and the public sector in providing employment. The second is a discussion of unemployment in Nuiqsut. There is no good information on unemployment or labor force participation for years prior to 1988, but the following tables, Tables 22-NQT through 30-NQT, allow a rough comparison to be made when used in conjunction with the closest available census. Using the total number of persons between the ages of 20 and 64 as the definition of the total potential labor force, unemployment rates can be computed for March 1983 (using February 1983 census information), 1984, November 1985, and 1988. The figures for Inupiat employment for these years are summarized in Table 30-NQT.

Current employment is at the highest documented level that it has ever been in Nuiqsut. Nonetheless, informants still report that unemployment and lack of jobs are important issues in the village. This is partially due to the perception that many jobs are only temporary or seasonal, but no longer pay as much as NSB CIP jobs did in the past. There is also a village perception that the typical household now needs a higher cash income than before. Recent experience with outside contractor working in the village has also reinforced the view that there are not enough jobs for local people. The common village perception is that these contractors brought in non-Native labor from outside of the village to perform tasks that local people could have done. Local people are probably also comparing the present situation, where most jobs are permanent and there are relatively few job openings for those who do wish to find employment, with the case in 1983. This was the peak of the CIP construction boom and most jobs in Nuiqsut were temporary, as much of the infrastructure was in the process of being built and thus did not as yet support permanent jobs. Not everyone was employed at the same time, but turnover was such that generally anyone who wanted a job at that time could find one. The rate of pay was also quite a bit higher than that for current jobs in Nuiqsut.

**Table 22-NQT**

**Nuiqsut 1977 Employment**

| Permanent Employment | Position | sex | Ethnicity |
|---|---|---|---|
| Kuukpik Corporation | President of the Board | Male | Inupiat |
| | Land Chief | Male | Inupiat |
| | Secretary | Female | |
| | Telephone Operator | Female | |
| | Store Manager | | |
| | Store Employee (4) | | |
| | Accountant | Male | |
| North Slope Borough[2] | Village Coordinator | | |
| | Maintenance Manager | Male | Non-Inupiat |
| | Public Safety Officer | Male | Non-Inupiat |
| | Health Aide | Female | Inupiat |
| | Alternate Health Aide | Female | Inupiat |
| | School Caretaker (2) | Female | |
| | Teacher's Aide (3) | Female | |
| | Meter Reader | Male | |
| | Social Worker | | |
| Federal Government | | | |
| | Postmaster | Female | |
| | Paralegal | Male | |
| ARCO (Prudhoe Bay) | unspecified (4) | Male | Inupiat |
| Non-Permanent | | | |
| North Slope Borough[3] | CIP (15) | Male | Inupiat |

[1]Sex breakdown is thirteen woman and ten men, plus the four men at Prudhoe Bay.
[2]It is unclear whether this is a complete list, as Utilities and Public Works positions are not listed.
[3]For the period 10/01/76 to 10/01/77. Does not include school district positions. Fifteen men worked a total of forty jobs, average job lasted 16.2 days, average man worked 43.3 days.

Source: Hoffman et al. 1978, 19SS

## Table 23-NQT

### Composition of Employment by Race and Sex * •*
### Nuiqsut - May 1980

| Employment Sector | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| Mining | 4 | 2 | 6 | 0 | 0 | 0 | 4 | 2 | 6 |
| Contract Construction | 0 | 1 | 1 | 2 8 | 2 3 | 0 | 28 | 3 | 31 |
| Transportation, Communication, and Public Utilities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Trade | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Finance, Insurance, and Real Estate | 3 | 2 | 5 | 0 | 0 | 0 | 3 | 2 | 5 |
| Services | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 0 | 2 |
| Government | | | | | | | | | |
| Federal | 0 | 0 | 0 | 6 | 1 | 7 | 6 | 1 | 7 |
| State | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Local | 24 | | 35 | 7 | 4 | 11 | 31 | 15 | 46 |
| Construction | (16) | (: | (17) | ( 0) | ( 0) | ( 0) | (16) | ( 1) | (17) |
| Non-Construction | (8) | (10) | (18) | (7) | (4) | (11) | (15) | (14) | (29) |
| TOTAL | 32 | 17 | 49 | 42 | 7 | 49 | '74 | 24 | 98 |

• Employment waa not necessarily full-time or permanent. People were asked onfy to fiat their employer or major source of income.
"* Employment figures exclude 10 Alaska Natives (3 males and 7 females) who listed various forma of assistance, primarily Social Security, as their major source of income. Employment figures afao exclude 61 Alaska Natives (26 males and 35 females) and 3 non-Natives (aff females) aged 16 and over for whom no employment information waa provided or who claimed to be unemployed.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Worka Department. Anchorage, September 1980.

## Table 24-NQT

## Composition of Employment by Age, Race, and Sex *
## Nuiqsut - May 1980

| Age Range | Alaska Native | | | Non-Native | | | TOTAL | | |
|---|---|---|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 15-19 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 2 |
| 20 - 24 | 4 | 2 | 6 | 2 | 2 | 4 | 6 | 4 | 10 |
| 25-29 | 5 | 2 | 7 | 7 | 2 | 9 | 12 | 4 | 16 |
| 30-34 | 4 | 1 | 5 | 0 | 0 | 0 | 4 | 1 | 5 |
| 35-39 | 4 | 7 | 11 | 4 | 0 | 4 | 8 | 7 | 15 |
| 40-44 | 3 | 1 | 4 | 3 | 0 | 3 | 6 | 1 | 7 |
| 45-49 | 7 | 0 | 7 | 0 | 0 | 0 | 7 | 0 | 7 |
| 50-54 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 3 |
| 55-59 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 60-64 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 65-69 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 70-74 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 |
| 75 and over | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Age unknown | 1 | 1 | 2 | 25 | 2 | 27 | 26 | 3 | 29 |
| TOTAL | 32 | 17 | 49 | 42 | 7 | 49 | 74 | 24 | 98 |

" Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

## Table 25-NQT

## Major Employers by Sector * **
## Nuiqsut - May 1980

| Employment Sector and Employers | Number of Employees |
|---|---|
| Mi | 6 |
| Contract Construction | 31 |
| Steve's Construction | (13) |
| Rockford | (6) |
| Trade | |
| Finance, Insurance, and Real Eatate | 5 |
| Kuukpik Corporation | (5) |
| Services | 2 |
| Government | |
| - Federal Government | 7 |
| Public Health Service | ( 6) |
| - Local Government | 46 |
| North Slope Borough general government | (17) |
| North Slope Borough School District | (12) |
| North Slope Borough construction | (17) |
| TOTAL EMPLOYEES | 98 |

• Major employers defined as having at least 5 employees.
• * Employment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

Source Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 19S0.

## Table 26-NQT

## Employment in Nuiqsut
## March 1983

| Employer | Inupiat Men | Inupiat Women | Non-Inupiat Men | Non-Inupiat Women | Total |
|---|---|---|---|---|---|
| NSB | | | | | |
| Utilities Department | 6 | 0 | 0 | 1 | 7 |
| Public Works | 4 | 0 | 0 | 0 | 3 |
| Clinic | 0 | 2[1] | 0 | 0 | 2a |
| Public Safety | 0 | 0 | 2 | 0 | 2 |
| School | | | | | |
| Teachers, Adm. | 0 | 2 | 5 | 5 | 12 |
| Maintenance | 2 | 3 | 1 | 0 | 6 |
| Support | 0 | 5 | 1 | 0 | 6 |
| Other | 7 | 1 | 3 | 0 | 11 |
| City of Nuiqsut | 0 | 0 | 0 | 1 | 1 |
| Kuukpik Corporation | | | | | |
| Permanent Employees | | | | | |
| Officers | 5 | 0 | 0 | 0 | 5 |
| "Office" staff | 3 | 1 | 1 | 0 | 5 |
| store staff | 0 | 3 | 0 | 0 | 3 |
| Seasonal[2] | 12 | 0 | 0 | 0 | 12 |
| Blackstock | 0 | 0 | 3 | 0 | 3 |
| Pest office | 1[3] | 0 | 0 | 0 | 1[3] |
| NSB Presbytery | 1 | 0 | 0 | 0 | 1 |
| Self-Employed[4] | 2 | 3 | 1 | 0 | 6 |
| Prudhoe Bay[5] | 2 | 1 | 0 | 0 | 2[5] |
| Other | 4 | 1 | 3 | 0 | 6 |
| TOTALS | 48[6] | 22 | 20 | 7 | 97[6] |

[1] Two full-time health aides. Substitute till-in not counted.
[2] Fluctuates widety during the year, depending mostly on construction activity within the village. As of 3/83, these numbers were increasing. The maximum in years past has been approximately 60.
[3] Not counted in column totals. Postmaster also works for NSB Utilities.
[4] Does not include craft activities (see text).
[5] Long-term employees only (greater than 6 months - see text).
[6] See note 3.

Source: Galginaitis et al. 19S4.

## Table 27-NQT[1]

## CIP and Non-CIP Employment

| Trades | Total Work Force | NSB Dept. Full-Time | Other Full-Time | CIP Project Employees |
|---|---|---|---|---|
| Airline | 1 | | 1 | |
| Carpenter | 25 | | 8 | 6 |
| Clergy | 1 | | 1 | |
| Clerical | 4 | | 4 | |
| culinary | 4 | | | |
| Electrician | 3 | 1 | | 2 |
| Laborer | 40 | 2 | | 4 |
| Equip. Operator | 11 | 2 | 1 | 1 |
| Painter/Taper | 2 | | | |
| Plant Operator | 2 | | | |
| Plumber | 4 | | | |
| Postal | 1 | | 1 | |
| School | 8 | 8 | | |
| Store Clerk | 4 | | 4 | |
| Truck Driver | 10 | 2 | 1 | 1 |
| Welder | 3 | 1 | | |
| Total | 123 | 16 | 21 | 14 |

### CIP Employment

| CIP Project | 10/84 | 11/84 | 12/84 | 01/85 | 02/85 | 03/85 |
|---|---|---|---|---|---|---|
| O6-94II3-1O5 | | | | | | 10 |
| 08-91 | 25 | 8 | 10 | 10 | 10 | |
| 11-02 | 3 | 2 | | 4 | 4 | |
| Totals | 28 | 10 | 10 | 14 | 14 | 10 |

'Information from North Slope Borough Department of Public Worka CIP Project Status Report, Januaiv 1985. Comparable information not available for other yeara.

Source: Knapp et al. 1985, page E-105.

## Table 28-NQT

### Employment in Nuiqsut
### November 1985

| Employer | Inupiat Men | Inupiat Women | Non-Inupiat Men | Non-Inupiat Women | Total |
|---|---|---|---|---|---|
| NSB | | | | | |
| Utilities Department & Public Works | 9 | 1 | 2 | 0 | 12 |
| Clinic | 0 | 3 | 0 | 0 | 3 |
| Public Safety | 0 | 0 | 2 | 0 | 2 |
| School | | | | | |
| Teachers, Adm. | 0 | 2 | 5 | 5 | 12 |
| Maintenance | 2 | 2 | 1 | 0 | 5 |
| support | 2.5 | 5 | 0 | 1 | 8..5 |
| Other | 0 | 0 | 1 | 0 | 1 |
| City of Nuiqsut | 2 | 2.5 | 0 | 0 | 4.5 |
| Kuukpik Corporation | | | | | |
| Permanent Employees | | | | | |
| officers | 2 | 2 | 0 | 0 | 4 |
| "office" staff | 2 | 1 | 0 | 0 | 3 |
| store staff | 0 | 4 | 0 | 0 | 4 |
| Seasonal | 11 | 0 | 0 | 0 | 11 |
| Post Office | 1 | 0 | 0 | 0 | 1 |
| NSB Presbytery | 1 | 0 | 0 | 0 | 1 |
| Self-Employed | 2 | 1 | 0 | 0 | 3 |
| Prudhoe Bay, Kuparuk | 14 | 1 | 0 | 0 | 15 |
| Other . | 0 | 0 | 6 | 1 | 7 |
| TOTALS | 50.5 | 24.5 | 16 | 7 | 98 |

Source: Galginaitis et al. 1984.

## Table 29-NQT

### Industry Composition of Employment by Sex and Ethnicity
### Nuiqsut - 19S8

| INDUSTRY GROUP | INUPIAT MALE | INUPIAT FEMALE | INUPIAT TOTAL | NON-INUPIAT MALE | NON-INUPIAT FEMALE | NON-INUPIAT TOTAL | TOTAL VILLAGE | % OF TOTAL |
|---|---|---|---|---|---|---|---|---|
| PRIVATE SECTOR | | | | | | | | |
| FISHEWES | | | 0 | | | 0 | 0 | |
| MINING | 3 | 2 | 5 | | | 0 | 5 | |
| CONSTRUCTION | 7 | 1 | 8 | 2 | | 2 | 10 | |
| TRANSP/COMM/PUBLIC UTL | 1 | 1 | 2 | | | 0 | 2 | |
| TRAOE | | | 0 | | | 0 | 0 | |
| FINANCE/INSUR/REAL EST | | | 0 | | | 0 | 0 | |
| BUSINESS/REPAIR SERV | 2 | | 2 | | | 0 | 2 | |
| ENTERTMT/REC/TOURIST 6ERV | | | 0 | | | 0 | 0 | |
| HEALTH, SOCIAL, & EDUC SERV | | | 0 | | | 0 | 0 | |
| SELF-EMPLOYED | | 2 | 2 | 1 | | 1 | 3 | |
| NATIVE CORP a AFFILIATE | 13 | 8 | 21 | | 1 | 1 | 22 | |
| OTHER | 1 | | 1 | | | 0 | 1 | |
| SUBTOTAL | 27 | 14 | 41 | 3 | 1 | 4 | 45 | 30.8% |
| NSB GOVERNMENT | | | | | | | | |
| HEALTH | 1 | 6 | 7 | | | 0 | 7 | |
| PUBLIC SAFETY | 1 | | 1 | 1 | | 1 | 2 | |
| MUNICIPAL SERV | 28 | 3 | 31 | | | 0 | 31 | |
| FIRE DEPT | | | 0 | | | 0 | 0 | |
| SEARCH & RESCUE | | | 0 | | | 0 | 0 | |
| HOUSING | 1 | 2 | 3 | | | 0 | 3 | |
| WILDLIFE MGT | 1 | | 1 | | | 0 | 1 | |
| RELI & MJP | 12 | 6 | 18 | | | 0 | 18 | |
| LAW OFFICE | | | 0 | | | 0 | 0 | |
| ADMIN & FINANCE | | | 0 | | | 0 | 0 | |
| PLANNING | | | 0 | | | 0 | 0 | |
| INDUSTRIAL DEVELOPMENT | | | 0 | | | 0 | 0 | |
| HIGHER EDUCATION CENTER | | | 0 | | | 0 | 0 | |
| MAYOR'S OFFICE & ASSEMBLY | 1 | 2 | 3 | | | 0 | 3 | |
| OTHER NS6 | | | 0 | | | 0 | 0 | |
| SUBTOTAL | 4s | 19 | 54 | 1 | 0 | 1 | 65 | 44.5% |
| NSB SCHOOL DISTRICT | 4 | 11 | 15 | 7 | 6 | 13 | 26 | 19.2% |
| NSS SUBTOTAL | 49 | 2 0 | 7 s | 8 | 6 | 14 | 93 | 63.7% |
| OTHER LOCAL GOV'T | 2 | 2 | i | | | 0 | 4 | 2.7% |
| STATE GOV'T | 1 | | 1 | | | 0 | 1 | 0.7-% |
| FEDERAL GOV'T | 1 | 2 | 3 | | | 0 | 3 | 2.1% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| SUBTOTAL ALL GOV'T | 53 | 34 | 87 | 6 | 6 | 14 | 101 | 69.2% |
| GRAND TOTAL | 80 | 48 | 128 | 11 | 7 | 18 | 146 | 10Q.0% |
| %(X TOTAL | 64.6% | 32.9% | 67.7% | 7.5% | 4s% | 12.3% | 100.0% | |

Notes

(1) Figures equal b number of persons employed, including part-he, temporary, and full-time employment.

Source: NSB Census of Population end Economy, 1969.

**Table 30-NQT**

**Percentage of Individuals Employed, By Year**

| | 03/77[1] | 05/80 | 03/83 | 19s4 | 11/85 | 1988[2] | 1988[3] |
|---|---|---|---|---|---|---|---|
| Male Inupiat | | 54% | 67% | | 60% | 98% | 93% |
| Female Inupiat | | 35% | 31% | | 33% | 91% | 75% |
| **Total Inupiat** | 2s% | 46% | 49% | 41% | 47% | %% | 85% |

[1]Kruse et al. 1981:52.
[2]As reported by NSB 1988 Village Census, using NSB determination of labor force size.
[3]Using similar age group aa for earlier years to define potential labor force.

Source: Based on previous tables and population statistics.

"Underemployment" was officially estimated as 32% in Nuiqsut in 1988. It is likely that this was true in earlier years as well, but that there was less local pressure for full employment and so there was little incentive for the NSB to document underemployment at that time. The NSB has made a serious effort in the recent past to replace the capital-intensive CIP with a program which concentrates more on the creation of local jobs. This has been remarkably successful, but at the same time has run up against the expectations of high rates of pay and flexible work schedules set up by the experience of the CIP in the past. This partially explains the fact that it is now, with employment at an all-time high, that the demand for more jobs is greatest. People remember past years as times when they could earn what they needed in a short period of time and then quit to do what they wanted to do. Jobs were available when people wanted to work, and when they wanted to quit someone else would eventually take over the job. Thus, unemployment rates were high but people were basically satisfied. This is in marked contrast with the situation currently, where pay rates are comparatively low, people are expected to keep a very regular work schedule, and job availability is low.

Much of the general discussion of employment in Nuiqsut in Galginaitis et al. 1984 remains valid. Male wage earners still seem to predominate, although perhaps not to the same extent as before. There is still a sharp sexual differentiation between the jobs which men and women hold. Men are still for the most part considered the primary workers in the village. Middle-aged people and those with families are still preferentially employed over those who are younger. These generalizations are developed somewhat further below.

### C. *The* Private Sector

Data on private sector employment is included in the tables referenced above. Essentially the only private businesses currently in operation in Nuiqsut are the retail (mostly grocery) stores. The organization and number of local residents employed by the private sector of the community as it existed in 1982-1983 is well documented (Galginaitis et al. 1984:150-63). We reproduce Table 30-

NQT from The Nuiqsut Case Study (Galginaitis et al. 1984) as an introduction to this subject (information from earlier periods is almost entirely lacking).

The corporation store was the main store in Nuiqsut in 1982-1983. Of the four private stores, two were apparently serious commercial enterprises. Neither significantly affected the volume of business at the corporation store, however, although each offered items not available at the larger store. None of the other commercial businesses in Nuiqsut in 1982-1983 were significant. The two construction camps were temporary quarters for transient construction workers. Villagers received little of the money paid by these transients (one camp was run by the NSB, the other was in a private structure rented from an individual), as no locals were employed to help operate them. The pool hall, arcade, and restaurant were all marginal economic enterprises. The village corporation operated more as a conduit for NSB jobs than as a job creation agency itself. The airline employee was the wage labor agent of the Barrow-based earner and was part-time at best. The telephone company had no employees in Nuiqsut and the other entities apparently never operated in Nuiqsut (see Galginaitis et al. 1985 for more detail).

Retail stores were still clearly the most significant part of Nuiqsut's private economic sector in 1985. The corporation store remained the dominant store, but three of the other four stores that had existed in 1982-1983 had closed (including both which had been more successful than the others - the owner/operators had left the village) and the other was open only very intermittently. Three new stores had opened, only one of which provided any real competition for the corporation store (Galginaitis and Petterson 1985). One of the other two was not actually in operation and the other was a convenience store. As in 1982-1983, no small storekeeper relied on the store for the majority of the family's income. The pool hall, arcade, restaurant, and camps had been shut down as of 1985. Airline representatives had been increased to three, but all were part-time and worked in return for in-kind services (tickets and he-freight) rather than wages. There was no significant change in the employment of local residents by oil-related industries in the Prudhoe Bay area. Very few Nuiqsut individuals are employed there, although quite a few have tried it or received training there, for reasons discussed in Galginaitis et al. 1984 and Galginaitis and Petterson 1985.

In March 1989 there were five or possibly six stores in operation. The corporation store was still the main store in Nuiqsut. The private competitive store of 1985 was still operating, but the owner reports that business is down (which she attributed to a poorer economy in general and better management at the corporation store), and the focus of her business is changing to the operation of a short-order take-out food business. This is being done as a conscious way to perform a specialized and needed service in a declining economy. The operator essentially said that the volume of buying would no longer allow for the operation of their store as mainly a retail grocery store. Two other small grocery stores operate mainly as convenience outlets, again providing service that the corporation store does not (longer hours). They are used mainly when the corporation store is closed or out of a certain item. The fifth store is actually a component of the corporation store. The hardware part of this business is operated as a separate store, which also handles the fuel business. The sixth store is one which may operate on and off. It was not in evidence for our short field visit.

## D. Economic Issues and Concerns

Galginaitis et al. 1984 discuss some of the major economic issues and concerns which apply to all of the North Slope communities. These include the prospect of declining revenues from the North Slope Borough, the termination of Capital Improvement Program funds, boom and bust patterns of consumption and savings, effects of transfer payments, and prospects for employment in oil development projects.

While not addressing the issue of household income directly, The Nuiqsut Case Study (Galginaitis et al. 1984) provides reasonably detailed information on employment as related to other household characteristics. Tables from that report, for both the Inupiat and non-Inupiat portions of the population, are reproduced as Tables 31-NQT through 35-NQT.

**Table 31-NQT**

**Commercial Businesses in Nuiqsut, 1982-19S3**

| | Telephone Book | NSB Tax Office | Alaska esses Licenses | Observation |
|---|---|---|---|---|
| storea | 3 | 4 | 6 | 5 |
| Construction Camps | 1 | | | 2 |
| Pool Hall | | 1 | 1 | 1 |
| Arcade | | 1 | 1 | 1 |
| Restaurant | | | 1 | 1 |
| Village Corporation | 1 | 1 | | 1 |
| Airline | 1 | | | 2 |
| Telephone Company[a] | 1 | | | 1 |
| Security Company | | | 2[b] | |
| Other | | | 2[b] | |
| TOTALS | 7 | 7 | 13 | 14 |

[a] No employees in Nuiqsut.

[b] Licenses issued to non-Inupiat names. There is no evidence that these businesses ever operated, nor were they ever mentioned except in direct response to questions asked of the license holders.

Source: Galginaitis et al. 19S4.

## Table 32-NQT

## Number of Working Age Adults[a]/Inupiat[b] Household by Household Size, March 19S3

| # Adults | Household Size | | | | | | | | | | Total | | % of |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ | Households | Adults | HH |
| 1 | 4 | 2 | | | | | | | | | 6 | 6 | 11 |
| 2 | | 3 | 8 | 7 | 3 | | 2 | 1 | | | 24 | 48 | 45 |
| 3 | | | 1 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 11 | 33 | 21 |
| 4 | | | | 1 | 3 | | 2 | | | | 6 | **24** | 11 |
| 5 | | | | | 2 | | 1 | 1 | | | 4 | **20** | 8 |
| 6 | | | | | | | 1 | | | | **1** | 6 | 2 |
| 7 | | | | | | | | | | | | | |
| 8 | | | | | | | | | | 1 | 1 | 8 | 2 |
| TOTALS | 4 | **5** | **9** | **1** | **1** | **9** | **1** | **7** | **3** | **2** | 53 | 145 | 100 |

[a] Working age adult" is an individual between the ages of 15 and 65 and no longer in school. Thus, high school students employed only in the summer are excluded.

[b] Inupiat head of household or Inupiat spouse.

Source Galginaitis et al. 1984.

## Table 33-NQT

## Number of Working Adults[a]/Inupiat[b] Household by Household Size, March 1983

| # Workers | Household Size | | | | | | | | | | Total | | % of |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10+ | Households | Adults | HH |
| 0 | 2 | 1 | | | | | | | | | 3 | *0* | 6 |
| Sporadic[c] | | 1 | 2 | 3 | | | 1 | | | | **7[c]** | **c** | 13 |
| 1 | 2 | 1 | 3 | 3 | 6 | 1 | 4 | | | **1** | 21 | **21** | 40 |
| 2 | | 1 | 3 | 3 | 2 | | 1 | 1 | 2 | 1 | 14 | 28 | 26 |
| 3 | | | | | 1 | | **1** | **1** | | | 3 | 9 | 6 |
| Unknown | 1 | 1 | 2 | | | | | **1** | | | 5 | | 9 |
| TOTALS | 4 | 5 | 9 | 11 | 9 | 1 | 7 | 3 | 2 | 2 | 53 | 58 | 100 |

[a] See note a, above table.

[b] Inupiat head of household or Inupiat spouse.

[c] Not currently working, but has history of seasonal or unsteady wage employment. Households listed as 1,2 or 3 ean also include "sporadic" workers as well.

Source Galginaitis et al. 1984.

## Table 34-NQT

### Number of Working Age Adults[a]/Non-Inupiat Households[b] by Household Size, March 19S3

| # Adults | Household Size | | | | | Total | | # of |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Households | Adults | HHs |
| 1 | 2 | | | | | 2 | 2 | 20 |
| 2 | | 4 | 2 | 1 | 1 | 8 | 16 | 80 |
| TOTALS | 2 | 4 | 2 | 1 | 1 | 10 | 18 | 100 |

[a] See note a, Table 15.
[b] Both head of household and spouse non-Inupiat. Excludes construction camp personnel. There is one male who has been in Nuiqsut long enough to perhaps be considered another household of 1. Thii would not alter the pattern however, although it would change the percents of 1 and 2 (working) adult households.

Source: Galginaitis et al. 1984.

## Table 35-NQT

### Number of Working Adults[a]/Non-Inupiat Household[b] by Household Size, March 19S3

| # Workera | Household Size | | | | | Total | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Households | Workera | % of HHs |
| 1 | 2 | | | | | 2 | 2 | 20 |
| 2 | | 4 | 2 | 1 | 1 | 8 | 16 | 80 |
| TOTALS | 2 | 4 | 2 | 1 | 1 | 10 | 18 | 100 |

Source Galginaitis et al. 1984.

In 1983, Nuiqsut residents were very concerned over what they perceived as a high rate of unemployment, and especially with its seasonal nature. This perception is borne out by the tables, as in March 1983 one-third of Inupiat males and two-thirds of Inupiat females of employable age were unemployed. There had been a pattern of little wage work in the winter and an abundance of such work (again at least perceptually) in summer. The most common preference was for work within the village. Few people wished to travel elsewhere to work. However, it was not always clear that those wishing more jobs in Nuiqsut also desired the local development that would almost certainly have to accompany such jobs. No informant willingly suggested that there was an acceptable trade-off between local jobs and development that could affect subsistence harvests in the Nuiqsut area. There were few jobs available, even outside of Nuiqsut. The upcoming work season was predicted to be better than the previous year, which had been relatively inactive in terms of CII? work in Nuiqsut (Galginaitis et al. 1984).

It is apparent that even with a very high unemployment rate that wage positions are fairly well distributed throughout the Inupiat population of the village. Most Inupiat households in the recent past have had at least one wage earner and the average household income in 1983 was estimated to be $30,000 per year, substantially in agreement with the 1980 NSB housing survey household income median of $24,167 (Galginaitis et al. 1984:1 15). Non-Inupiat households demonstrated 100% employment for 1983 and substantially higher incomes.

The pattern of employment by age, sex, and ethnicity is also well documented in the Nuiqsut Case Study (Galginaitis et al. 1984). Tables 36-NQT through 38-NQT reproduce this information. Current information from the NSB 1988 census appears in Table 39-NQT. The Inupiat employment rate is much lower than the non-Inupiat employment rate. Full-time employment rates for male and female Inupiat are about equal, but male Inupiat have a higher overall employment rate than female Inupiat due to the lack of many seasonally employed Inupiat women. Middle-aged Inupiat are more likely to be employed than young or old Inupiat, and this apparently interacts with the sexual factor so that Inupiat women apparently enter the work force later and leave it earlier than Inupiat men. Only between the ages of 31-40 did employed female Inupiat outnumber unemployed female Inupiat for 1983.

There were clear differences in the sorts of jobs held by Inupiat men and those held by Inupiat women in 1983.

> "Men essentially monopolize unskilled and semi-skilled jobs, as well as those involving machinery. Women hold clerical positions or function within a nurturing and/or domestic situation such as the village clinic or the school. Men are perceived as the primary providers and main wage earners. In all age classes, more men than women are engaged in some form of wage labor . . . . This is especially true on a percentage basis for those age groups likely to have children . . . . These are also the age groups with the highest percentages of working adults" (Galginaitis et al. 1984:140).

The final conclusion seems to be that Nuiqsut displays some of the sexual differentiation of employment as in Barrow, but that it is not as extreme or developed.

## Table 36-NQT

## Nuiqsut Employment Status by Sex and Ethnicity, March 1983

| | Inupiat | | Non-Inupiat | |
|---|---|---|---|---|
| Employment Status | Male | Female | Male | Female |
| Unemployed | 24(33%) | 50(69%) | 2(9%) | 1(12.5%) |
| Full-time | 25(35%) | 19(26%) | 14(64%) | 7(87.5%) |
| seasonal | 23(32%) | 3(4%) | 6(27%) | 0 |
| Total | 72 | 72 | 22 | 8 |

EMPLOYMENT STATUS BY ETHNICITY

| | Inupiat | Non-Inupiat | Total |
|---|---|---|---|
| Full-time | 44 | 21 | 66 |
| Unemployed & seasonal | 100 | 9 | 109 |
| Total | 144 | 30 | 174 |

$x^2 = 16.6$, df=1; hypothesis of no significant difference rejected.

INUPIAT EMPLOYMENT STATUS BY SEX

| | Male | Female | Total |
|---|---|---|---|
| Unemployed | 24 | 50 | 74 |
| Full-time | 25 | 19 | 44 |
| seasonal | 23 | 3 | 26 |
| Total | 72 | 72 | 144 |

$X^2$=25.4, df=2; hypothesis of no significant difference rejected.

INUPIAT WORK STATUS BY SEX

| | Male | Female | Total |
|---|---|---|---|
| Full-time | 24 | 19 | 43 |
| seasonal | 35 | 3 | 38 |
| Total | 59 | 22 | 81 |

$x^2$=13.4, df=1; hypothesis of no significant difference rejected.

Source: Galginaitis et al. 1984.

## Table 37-NQT

## Nuiqsut Employment Status by Sex and Ethnicity
## Constructed Annual Data (19S3)

| oym Status | Inupiat Male | Inupiat Female | Non-Inupiat Male | Non-Inupiat Female |
|---|---|---|---|---|
| Unemployed | 24(25%) | 57(67%) | 2(12%) | 1(12.5%) |
| Full-time | 24(26%) | 21(25%) | 14(82%) | 7(s7%) |
| Seasonal | 35(3s%) | 4(5%) | 0 | 0 |
| Unknown | 8(9%) | 3(4%) | 1(6%) | 0 |
| Totaf | 91 | 85 | 17 | 8 |

### EMPLOYMENT STATUS BY ETHNICITY

| | Inupiat | Non-Inupiat | Total |
|---|---|---|---|
| Full-time | 45 | 21 | 66 |
| Unemployed & seasonal | 120 | 3 | 123 |
| Total | 165 | 24 | 189 |

$X^2$= 33.5, df =1; hypothesis of no significant difference rejected at 0.001 level.

### INUPIAT EMPLOYMENT STATUS BY SEX

| | Male | Female | Total |
|---|---|---|---|
| Unemployed | 24 | 57 | 81 |
| Full-time | 24 | 21 | 45 |
| Seasonal | 35 | 4 | 39 |
| Total | 83 | 82 | 165 |

$x^2$=38.4, df =2; hypothesis of no significant difference rejected at 0.001 level.

### INUPIAT WORK STATUS BY SEX

| | Male | Female | Total |
|---|---|---|---|
| Full-time | 24 | 21 | 45 |
| Seasonal | 35 | 4 | 39 |
| Total | 59 | 25 | S4 |

$X^2$= 13.2, df =1; hypothesis of no significant difference rejected at 0.001 level.

Source: Galginaitis et al. 19S4.

## Table 38-NQT

## Inupiat Employment Status by Sex and Age
## Constructed Annual Data (19S3)

| | Male | | | |
|---|---|---|---|---|
| Age | Unemployed | seasonal & Full-time | Unemployed | seasonal & Full-time |
| 16-m | 13 | 11 | 20 | 3 |
| 21-30 | 6 | 16 | 1s | 8 |
| 31-40 | 1 | 13 | 6 | 7 |
| 41-50 | 1 | 17 | 5 | 4 |
| 51-65 | 2 | 1 | 7 | 2 |
| 66+ | 1 | 1 | 4 | 0 |

### MALE INUPIAT EMPLOYMENT STATUS BY AGE

| Age | Unemployed | seasonal & Full-time | Total |
|---|---|---|---|
| 16-30 | 19 | 27 | 46 |
| 31+[1] | 5 | 32 | 37 |
| | 24 | 59 | 83 |

$X^2$=10.7, df= 1; hypothesis of no significant difference rejected at 0.001 level.
[1] There are too few males aged 51+ for a chi-square with three age categories.

### FEMALE INUPIAT EMPLOYMENT STATUS BY AGE

| Age | Unemployed | seasonal & Full-time | Total |
|---|---|---|---|
| 16-30 | 35 | 11 | 46 |
| 31-50 | 11 | 11 | 22 |
| 51+ | 11 | 2 | 12 |
| | 57 | 24 | 79 |

$x^2$=7.2, df=2; hypothesis of no significant difference rejected at 0.001 level.

Source: Galginaitis et al. 1984.

## Table 39-NQT

### Occupation Composition of Employment by Sex and Ethnicity
### Nuiqsut - 19S8

| | INUPIAT | | | NON-INUPIAT | | | TOTAL | % OF |
|---|---|---|---|---|---|---|---|---|
| OCCUPATION GROUPS | MALE | FEMALE | TOTAL | MALE | FEMALE | TOTAL | VILLAGE | TOTAL |
| EXEC. ADMIN. MGR. | 4 | 4 | 8 | 2 | 1 | 3 | 11 | 7.6% |
| PROFESSIONAL | | | 0 | | | 0 | 0 | 0.0% |
| TEACHER | | 3 | 3 | 4 | 3 | 7 | 10 | 6.9% |
| TEACHER AIDE | | 2 | 2 | | 1 | 1 | 3 | 2.1% |
| TECHNICIAN | 2 | 5 | 7 | | 1 | 1 | 8 | 5.5% |
| ADMIN. SUPPORT | 3 | 13 | 16 | | | 0 | 16 | 11.0% |
| SERVICE | 10 | 15 | 25 | 3 | 1 | 4 | 29 | 20.0% |
| OPERATOR/MECHANIC | 29 | 1 | 30 | | | 0 | 30 | 20.7% |
| PILOT | | | 0 | | | 0 | 0 | 0.0% |
| LABORER | 16 | 5 | 21 | | | 0 | 21 | 14.5% |
| CRAFTSMAN | 15 | | 15 | 2 | | 2 | 17 | 11.7% |
| ARTISAN | | | 0 | | | 0 | 0 | 0.0% |
| ARMED FORCES | | | 0 | | | 0 | 0 | 0.0% |
| TRAPPER/HUNTER | | | 0 | | | 0 | 0 | 0.0% |
| OTHER | | | 0 | | | 0 | 0 | 0.0% |
| TOTAL EMPLOYED | 79 | 48 | 127 | 11 | 7 | 18 | 145 | 100.0% |
| % OF TOTAL | 54.5% | 33.1% | 87.6% | 7.6% | 4.8% | 12.4% | 100.0% | |
| LABOR FORCE | 81 | 53 | 134 | 11 | 7 | 18 | 152 | |
| % OF TOTAL | 53.3% | 34.9% | 88.2% | 7.2% | 4.6% | 11.8% | 100.0% | |
| TOTAL UNEMPLOYED | 2 | 5 | 7 | 0 | 0 | 0 | 7 | |
| UNEMPLOYMENT RATE | 2.5% | 9.4% | 5.2% | 0.0% | 0.0% | 0.0% | 4.6% | |
| TOTAL UNDER-EMPLOYED | 33 | 14 | 47 | | 1 | 1 | 48 | |
| UNDER-EMPLOYMENT RATE | 40.7% | 26.4% | 35.1% | 0.0% | 14.3% | 5.6% | 31.6% | |

Notes: (1) Total employed includes pat-time, temporary, as well as fun-time employment.

(2) The occupation category "OTHER" indudes underemployed persons otherwise not accounted for. Underemployment refers to persons that were unemployed because they could not find a job during part of the year.

(3) Unemployed refers to persons out of work because they could not find a job for the entire twelve-month period.

(4) Labor force. employed+ underemployed+ unemployed.

(5) Unemployment rate= persons unemployed divided by the labor force.

Source: NSB Department of Planning and Community Services Census of population and Economy, 1989.

1. Oil Industry Employment

The only previous information on Nuiqsut residents employed directly by the oil industry is contained in Alaska Consultants 1980, Galginaitis et al. 1984, and Galginaitis and Petterson 1985. The mining sector in May 1980, employed six people from Nuiqsut. All were Inupiat. The mining industry sector on the North Slope is almost entirely composed of the oil industry, so assuming that all six are oil industry employees makes sense in this context. The total number of Nuiqsut Inupiat employed in the oil industry for March 1983 was three. That is, there were three individuals who were employed fill-time and had been for longer than six months. All were in support/maintenance positions rather than on drilling crews. There were many other Inupiat, mostly younger men, who had tried oil industry employment or had participated in job training programs for such employment and quit after a very short time. The information for November 1985 seems to indicate a significant change, especially given the attitudinal shift towards oil development discussed in the text of that report. Fifteen Inupiat are reported to work in Prudhoe Bay (or other oil enclaves). However, Galginaitis and Petterson (1985:70-72) also make it clear that this is one informant's estimate and that it is likely to be high. In fact, this figure almost certainly includes several people who fit into the pattern of 1983 of working only a very short time before quitting. It may even include a few people who intended to work at Prudhoe (or apply for such work) but who never did so. In any event, in hindsight it appears that this estimate was very high, and even if accurate represents an aberration from past and present patterns.

Fieldwork in Nuiqsut for this research was brief, but several interviews were conducted with local informants about employment within the village as well as outside of it. While the list of jobs may not be complete, it is nearly so, and those missed were almost certainly jobs within the village. Five men were said to be employed at Prudhoe Bay out of a total number of seventy-eight jobs enumerated. This compares with the NSB 1988 census, which enumerated eighty-seven Inupiat-held jobs, five of which were in the mining sector (Table 29-NQT). The close agreement gives added weight to the explanation which informants gave when asked directly about who worked for the oil companies, in what capacities, and why people decided to work there or not.

This most recent information corroborates the discussion of the Nuiqsut Case Study (Galginaitis et al. 1984). Quite a few people, especially young men, make at least one effort to work for the oil industry in the Prudhoe-Kuparuk enclaves. Most return to the village very quickly. Some don't like being away from the village for so long while others object to the long hours. Some find the work discipline imposed at these work sites distasteful or too stringent. It was also fairly common in 1983 for an individual to finish his first shift (two weeks), receive a paycheck, return to the village, and never go back to work. No information was obtained as to whether this pattern still holds. The overall pattern of few long-term oil workers from the village does carry over.

Village workers in Prudhoe are predominately young males, and almost all are unmarried. The work pattern of so many weeks on and a corresponding number off apparently stresses marriage and family relationships (not only in Nuiqsut, but Point Hope as well, according to our field data). Women do work at Prudhoe, but it is seen as more of a masculine work place. Training programs have been almost exclusively male, although now certain office skills programs are attracting more female applicants. Overall, most residents prefer to work within the village and the attitude towards oil development reflects this. Overall, the village is probably not as favorable toward development as depicted by Galginaitis and PetterSon (1985), but is certainly less antagonistic than in 1983

(Galginaitis et al. 1984). Nuiqsut is surrounded by oil development and cannot reverse that fact. Residents realize that there are employment opportunities because of this development and that because of their location that they have an advantage in obtaining them, should they desire to do so. There is ample evidence that a good number of Nuiqsut residents do take advantage of this opportunity, but then decide that it is not what they want after all. Besides the factors cited above, they mention that they still do not feel welcome as equals in Prudhoe and are cut off socially while there. They also claim that training programs are sometimes not really adequate and that Inupiat "local hire" are often given "make work" positions rather than jobs with any real responsibility (see the Nuiqsut Case Studv (Galginaitis et al. 1984) for a discussion of this in 1983).

The apparent overall changes in attitude (from 1983 to 19S4 to the present) can perhaps be understood by examining local sentiment on the building of a road between Nuiqsut and the Kuparuk Industrial Complex. This would essentially connect Nuiqsut by road with Prudhoe Bay, Fairbanks, and the rest of Alaska. In 1983, sentiment seemed to be mostly against the road, or at least there was little public support for it. There was also little public opposition to it. In 19S4, on the other hand, the majority of people in Nuiqsut apparently favored such a road and funds had been approved by the state for its construction. There was a vocal opposition group which feared the effect that increased access would have on the number of outsiders coming to hunt in the Nuiqsut area and the amount of drugs and alcohol imported into Nuiqsut. The advantages of the road would be cheaper prices (and more consistent supplies) of consumables and fuel oil. This opposition successfully delayed the project until the state withdrew the money, so that the project is no longer funded. Furthermore, in the meantime environmental considerations have increased the cost of such a road so much that it is unlikely to be funded in the future. A bridge over the Colville River would be too expensive. The alternatives are for an ice road crossing in the winter and a ferry in the summer. Most informants seemed to think that a properly constructed ice road in the winter would serve as well and be more economical that a permanent (or quasi-permanent) gravel road. The enthusiasm for a permanent connection with Fairbanks and beyond, and the advantages that would accrue, has been dampened by the realization that there are costs beyond the economic to such a road. A seasonal road, on the other hand, would have many of the cost-saving advantages without the potential problems of outside hunters and tourists. Similarly, Nuiqsut residents are reconciled to oil development in their area, and were at one time willing to think that it would mean a good number of jobs for local residents. They now perceive that few local residents desire such employment and are looking to derive benefits other than jobs from the oil companies. A discussion of this from a regional perspective, including the role of Piquniq Management Corporation (PMC), is included in the regional section.

### 2. Village Relations With Outside Contractors

Our field research in Nuiqsut yielded good information on this topic, mostly related to "local hire" for the construction project in progress in Nuiqsut at that time. We talked with most of the people who would have accurate information and potentially differing views on this subject. The village coordinator has some responsibility for advising people of job opportunities that exist and helping them apply to for them. Kuukpik Corporation had a controlling interest in the project in question and so Kuukpik officials have a stake in local hire, from the viewpoint of productivity as well as the economic interest of local individuals. The contracting firm (which has a minority position in a joint venture with the Kuukpik Corporation) formally hires the project labor force and so has the

best work force records available. Villagers who have worked on the project have their own perceptions, as do those who have not worked on the project but have observed it as it has progressed. What emerges is not a simple situation, but is one that illustrates many of the complexities of doing business on the North Slope. What outsiders view as strictly an economic situation or transaction can actually have social and cultural aspects that completely overshadow the economic considerations. This is not to say that the economic considerations are not important, because the value of the paycheck is what both the employer and employee agree upon. The differences arise in the determination of who should be employed and how the work of those employees should be evaluated.

According to most village informants, the contractor claims a "local hire" labor force of 50 to 60% when in actuality only two to five of their employees are local residents (and two of them are non-Native). Most village informants clearly desire that this perceived percentage of local hire be higher. Spokesmen for the contractor and the Kuukpik Corporation point out that the local labor force is, for the most part, unqualified for most positions on construction projects other than laborer. This is because of state and union regulations which require certification (or five years verifiable experience) for most skill positions, and local residents do not maintain union membership (except for one or two individuals) and do not have documentation of past training or job experience. At the same time, they point out that for the early phases of almost all construction projects, and for this one in particular, local hire is close to 80 to 90% since much of the work involves site preparation for which laborers and heavy equipment operators are needed. As the typical project progresses, the size of the labor force decreases as the tasks to be performed become more specialized. These specialized tasks require the importation of workers and, combined with the smaller labor force, this creates the perception of a mostly non-local labor force. When analyzed on the basis of the life of the project, the contractor says that they exceed the NSB requirement of at least 50% local hire. He admits that most of this is during the early stages of any project, which creates problems in community relations since it is the later stages of the project that are most vivid in peoples' minds.

Even with this explanation for the differential perception of the same data, some problems still exist. The laws governing "local hire" designate all of Alaska as "local" (as compared to the lower-4S). Village residents define "local hire" as a preference for Inupiat village residents. Many local informants will grant that few local Inupiat have the paper certifications to support their claim to qualifications, but cite the lack of support from previous (and present) employers to provide this as one of the reasons for this lack. These informants believe that an apprenticeship program is one possible answer. If an outside worker must be brought in because no local person has the required skills then a local Inupiat should also be hired to work with him and learn those skills on the job. The contractor maintains that this is impossible in the present economic environment. Projects are too short-term to provide an adequate period of training and current budgets do not allow the luxury of keeping relatively unproductive employees on the payroll.

All parties involved agree that the Inupiat labor force on such projects tends to be relatively unstable. That is, most individuals will work for a relatively short period of time (weeks, perhaps months) and very few will work for the total length of any given project. A few Inupiat (mostly in village corporation positions) will agree with the contractor's position that the local Inupiat labor force has poor work habits (lack of work discipline) and too high an estimate of their skills and earning power. This is most often attributed to the experience of these workers on early CIP

projects which were contracted on a 'cost-plus" basis by the NSB. Contractors had little or no incentive to be efficient and so were quite willing to employ any number of local workers to maintain good local relations. They also imported a non-local labor force to actually do much of the work. Little effort was made to train the local labor force, which ensured that they did not acquire either the skills or the work habits that would later be necessary. Furthermore, the inflated wages paid to these unproductive workers created the expectation that this would be a reasonable wage for them for similar work in the future. Now that the NSB can no longer afford to contract on a "cost-plus" basis, this assumption runs up against the reality that contractors are not willing to pay such wages to an inefficient work force. The contractor contends that if a trained local labor force did exist that he would not import workers, since he must pay *per diem* or living expenses for such people, which he does not have to pay for local people. By the contractor's estimation, non-local workers are more than twice as efficient as locals for the tasks for which locals say they are qualified. Even those locals who are relatively efficient often work only until they have earned a certain predetermined amount of money (often for a very specific purchase). They then quit until they feel the need for a relatively large lump sum of money again, and expect work to be available for them whenever they need to earn such a lump sum.

Most local Inupiat disagree with this view of why locals tend to work only a short while for any given contractor employer. In their view, most contractors do not want to hire locals as it requires that they adjust their own work procedures and schedules to accommodate the local labor force. They also complain that many of the non-locals employed on these projects do not like locals and make the work environment very unpleasant. Local Inupiat also say that when they point out unsafe conditions or procedures on the job site that this is used to label them as "complainers" and often leads to harassment, which prompts them to quit. The failure of most contractors to try and establish a long-term relationship (made difficult by the short-term nature of most contracts) exacerbates these problems.

The Kuukpik Corporation is caught in the middle on this issue, which is often phrased in terms of profitability (efficiency) versus need (employing those who need jobs). Corporation officials recognize both responsibilities, but stress that the corporation needs to be profitable to ensure the future creation of jobs. They are also at present restricted by a joint venture contract that gives them 51% of the profits of the project, but no say in the management (including hiring decisions) of that project. This can be seen as one way corporation officials have protected themselves against criticism for the perceived lack of local hire, although they are criticized for negotiating a contract which gave the contractor so much responsibility. This is also clearly a part on the contractor's part to retain as much control, and ensure as large a profit, as possible. By entering into a joint venture with a Native corporation, the contractor gains a competitive advantage over other bidders on the project who are not affiliated with Native corporations. Since Kuukpik is the village corporation of the village where the project is located, they gain an advantage over most other Native corporations as well. For this advantage they guaranteed Kuukpik Corporation 51% of the profits, keeping 49% for themselves. As long as there is a profit, however, this is more than if they had not won the contract at all.

Interestingly enough, this same combination of private contractor and Kuukpik Corporation has bid on projects in other NSB villages (as well as other parts of Alaska) and won. We are only familiar with the situation in Point Lay, and refer the reader to the Point Lay chapter for that description, and the regional chapter for a comparative treatment.

3. Population.LaborForce, and Employment

Population, labor force, and employment for Nuiqsut are shown in Figure 12-NQT for the years 1980 and 1988. Also, these variables are projected to the year 1994. Between 1980 and 1988 village population increased from 252 to 314 while the labor force (employed and unemployed persons age 16 to 64 who were willing and eligible to work) increased at about the same rate from 123 to 152 persons. Total village employment increased sharply from 98 to 145 persons between 1980 and 1988, at a rate much greater than the expansion of the labor force. Consequently, the rate of unemployment (the number of persons unemployed divided by the labor force) fell from 20 to 5% over this time period.

This shift toward full employment is explained largely by a significant increase in direct NSB government employment in the village. Between 1980 and 1988 NSB government employment more than tripled from 29 to 93. These figures understate NSB government contributions to village employment because they do not include employment expansion in the private sector brought about by NSB-funded projects and programs. Private sector employment and indirect NSB government employment are depicted in the bar labeled "Total Employment" of Figure 12-NQT.

While the rate of overall unemployment declined markedly over recent years, a 32% rate of underemployment was observed in 1988. "Underemployment" refers to the count of persons who worked part of the year but would have worked more if additional jobs had been available.

In sum, the data for 1980 and 1988 indicate that Nuiqsut's underemployment rate was high in 1988. The rate of unemployment fell markedly as a result of substantial NSB government employment increases. Nearly everyone who wanted to work was able to do so for at least part of the year. This suggests that in 1988 jobs were widely distributed across the village labor force.

4. Projection to 1994

Figure 12-NQT shows projected levels of population, labor force, and employment in 1994. The assumptions used to make these projections are:

- Recent historic rates of village population growth would continue into the future;
- Village labor force would change according to natural shifts in the age distribution of village population;
- The rate of village unemployment would be held at 5%; and
- The ratio of NSB government employment to total village employment in 1988 would prevail in 1994.

Application of these assumptions leads to increases in all categories. Village population would increase to 370 in 1994. The village labor force would also grow from 152 to 177. In order to

hold unemployment to 5%, total employment would increase from 145 to 168. NSB government employment required to support this level of total employment would increase by fifteen persons from 93 to 108. Private sector employment is not expected to increase from its current minimal level.

Labor force expansion is the critical element in this projection. The number of young persons entering the labor force will more than offset retirees and other labor force departures over the next six years. Village total employment must increase to support this labor force. This, in turn, would require the NSB government to step up local employment opportunities either directly, or through programs that enhance private sector development. Little economically-motivated migration to Nuiqsut is anticipated in the near future, and no new housing is planned. In these circumstances the critical element will be whether children and adolescents will remain in Nuiqsut once they have graduated from high school or otherwise attained adulthood. There is little good information on which to base a prediction on this question.

### 5. Household Income and Spending Patterns

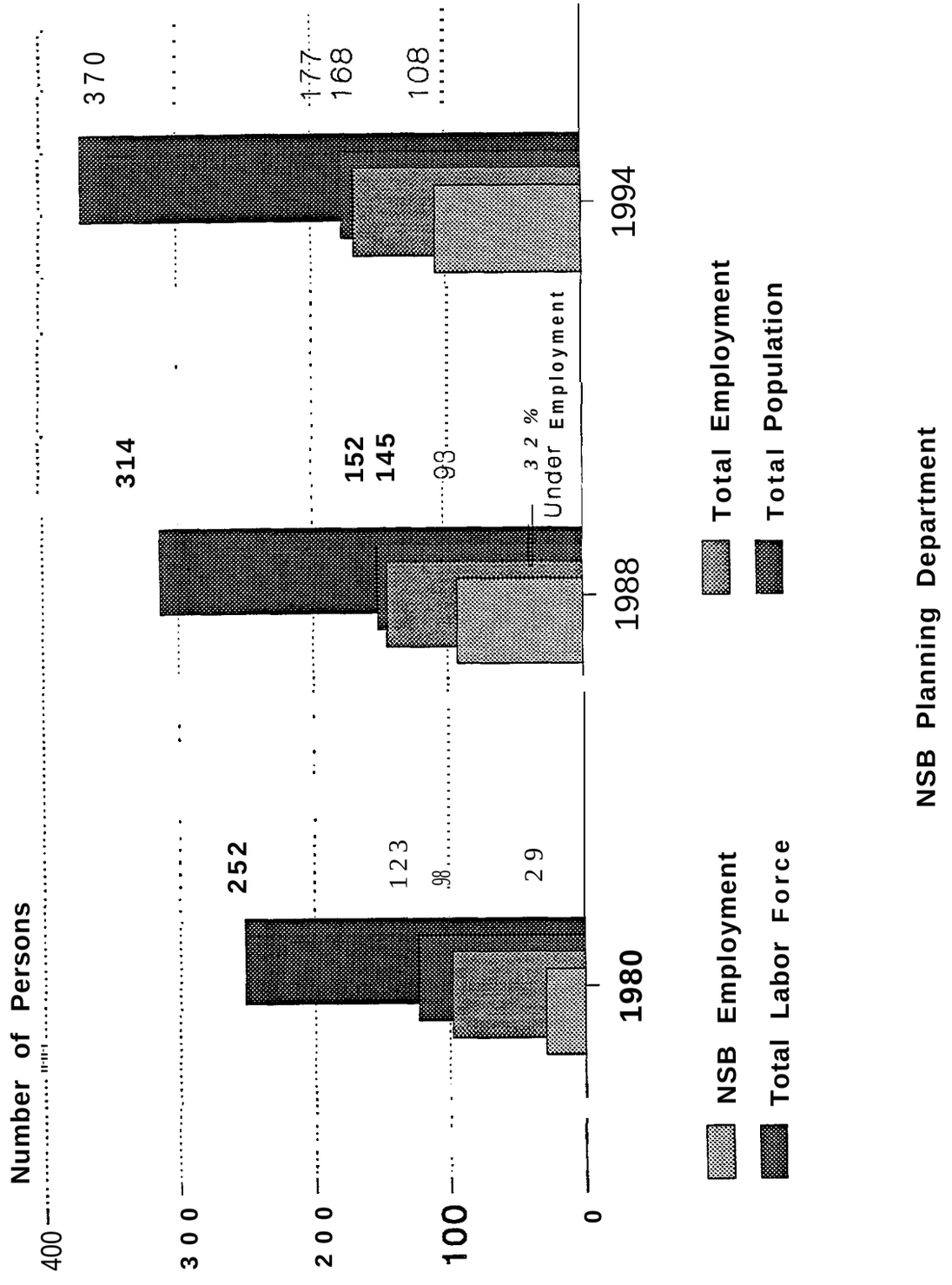
A rough idea of household income distribution in Nuiqsut for 1977 is contained in Hoffman et al. 1988 (Table 40-NQT). Census data on mean household income and distribution of income levels by ethnicity for 1980 are available in Alaska Consultants 1981, although less than half of the village was sampled and there is no indication that this was a systematic sample (Figure 13-NQT). Current information on household income and spending (as of 1988) is based on responses from the recent NSB census. Although responses to this part of the census were not 100%, they were still high enough to warrant confidence in the results (Table 41-NQT).

The most obvious point from this table is that non-Inupiat households have a much greater average income than Inupiat households. There are no non-Inupiat households with incomes of less than $57,500. Most Inupiat households have incomes well below this. While complete information has not been reported from the NSB 1988 census, it appears that non-Inupiat households in Nuiqsut earn about three times as much on the average as Inupiat households (about $101,000 compared to $34,000). When the much smaller size of non-Inupiat households is also factored in, the difference becomes even larger. Surprisingly, household income is directly related to the percentage of meat and fish consumed in the household derived from that household's subsistence harvest activities, for both Inupiat and non-Inupiat households (although Inupiat households eat much more of this food than non-Inupiat households). The same is true even when meat and fish derived from other households is added in. A cash income certainly seems to facilitate subsistence harvest activities in Nuiqsut.

An examination of household expenses is contained in Hoffman et al. 1988 but is very brief and general. They probably also overstate the expense of housing, judging from better information about such expenses for 19S8 (Table 41-NQT below). Galginaitis et al. 1984 provide good information on the cost of goods in the stores of Nuiqsut but are less detailed on household expenses. The Social Indicators Study, when published, will contain some comparative price information for recent years for Nuiqsut and several other NSB villages.

**Figure 12-NQT**

**Population, Labor Force, and Employment**
**Nuiqsut: 1980, 1988, and 1994 (Projected)**



## Table 40-NQT

## Nuiqsut Income Distribution
## By Age of Head of Household and Household Size
## 1977

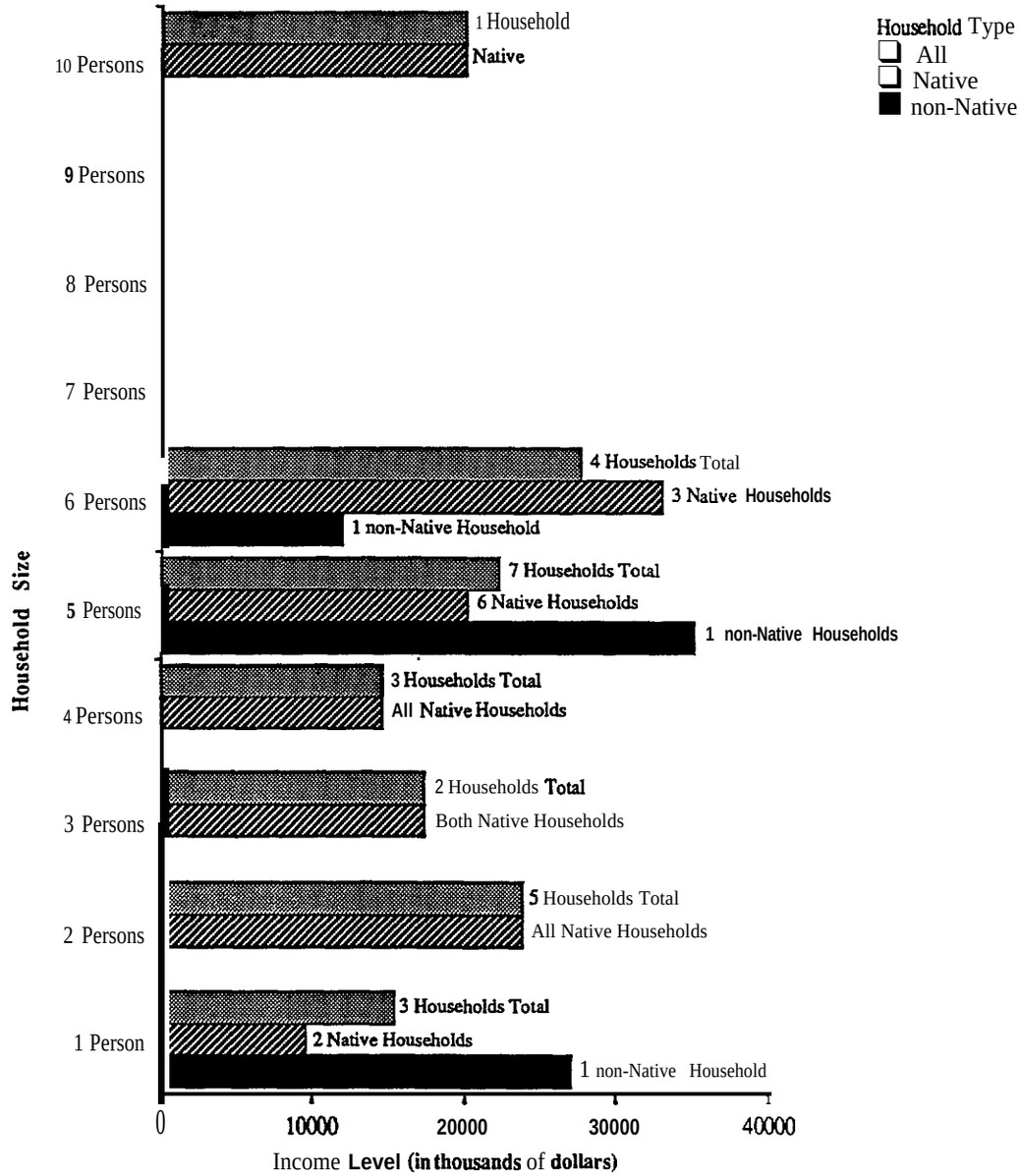
| Household Income | Total Households | Age of HH Head: up to 61 | Age of HH Head: 62 and over | Family Size: 5 or less | Family Size: 6 or more |
|---|---|---|---|---|---|
| less than $10,000 | 7 | 7 | 0 | 4 | 3 |
| $10,000 to $15,000 | 3 | 3 | 0 | 0 | 3 |
| $15,000 to $20,000 | 4 | 3 | 1 | 1 | 3 |
| more than $20,000 | 6 | 5 | 1 | 3 | 3 |
| Income not available | 3 | 2 | 1 | 2 | 1 |
| TOTALS | 23 | m | 3 | 10 | 1 |

Percent with $10,000 or less = 30%
Percent with $20,000 or more = 26%

Source NSB Housing Department, 1977.

## Figure 13-NQT

### Average Household Income Distribution
### Native and non-Native Households by Household Size
### Nuiqsut, May 1980




**Total Number of Households:** 25
Mean **Household Income:**
**All: .S21.229**
**Naive: $20,761**
**Non-Native: $24,667**

* Includes six units **used as** group quarters.
• * **Figures** exclude **32 households (21 Alaska Native and 11 non-Native)** for whom no **income** information was obtained.
*** **Forpurposes of the housing survey,** the adult Alaska Native in combination **Alaska Native/non-Native** households was always **designated** head of household.

**Source: Alaska Consultants, Inc. North Slope Borough Housing Survey.**
**Prepared for she North Slope Borough Public Works Department. Anchorage, September 1980.**

## Table 41-NQT

### Nuiqsut Household Characteristics - 1988
### By Levels of Household Income

| | HOUSEHOLD INCOME CATEGORIES | | | | |
|---|---|---|---|---|---|
| | BELOW $20K | $20-40K | $40-60K | ABOVE $60K | ALL HHs |
| **Average HH Income ($):** | | | | | |
| Inupiat HHs | $9,500 | $30,909 | $49,750 | $95,000 | |
| Non-Inupiat HHs | | | $57,500 | $108,333 | |
| All HHs | $9,500 | $30,909 | $50,119 | $105,000 | $41,136 |
| Cases: | 15 | 22 | 21 | 8 | 88 |
| **Average HH Size (# Persons per HH):** | | | | | |
| Inupiat HHs | 3.1 | 4.1 | 5.5 | 4.5 | |
| Non-Inupiat HHs | | | 1.0 | 1.8 | |
| All HHs | 3.1 | 4.1 | 5.3 | 2.5 | 4.0 |
| cases | 15 | 22 | 21 | 8 | 66 |
| Average **Meat & Fish Csmptn from Own HH Subsistence (%):** | | | | | |
| Inupiat HHs | 33.9% | 52.3% | 58.0% | 95.0% | |
| Non-Inupiat HHs | | | 0.0% | 26.7% | |
| All HHs | 33.9% | 52.3% | 55.2% | 43.8% | 48.2% |
| Cases: | 14 | 22 | 21 | 8 | 65 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | | |
| Inupiat HHs | 23.6% | 13.5% | 13.0% | 20.0% | |
| Non-Inupiat HHs | | | 0.0% | 0.0% | |
| All HHs | 23.6% | 13.5% | 12.4% | 5.0% | 14.2% |
| Cases: | 14 | 22 | 21 | 8 | 65 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | | |
| Inupiat HHs | 27.1% | 36.4% | 37.8% | 40.0% | |
| Non-Inupiat HHs | | | 0.0% | 4.2% | |
| All HHs | 27.1% | 36.4% | 36.0% | 13.1% | 31.4% |
| Cases: | 14 | 22 | 21 | 8 | 65 |
| **Average Proportion HH Income Spent in Village (%):** | | | | | |
| Inupiat HHs | 48.6% | 65.0% | 51.0% | 82.5% | |
| Non-Inupiat HHs | | | 10.0% | 6.7% | |
| All HHs | 48.6% | 65.0% | 49.0% | 25.6% | 51.5% |
| Cases: | 14 | 22 | 21 | 8 | 65 |

Note: Total cases (households) = 81.

Source: NSB Department of planing and Community Services
Census of Population and Economy

## Table 42-NQT

### Household Income and Spending - 198S
### Nuiqsut

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 15 | | 15 | 22.7% |
| $20,000 - $40,000 | 22 | | 22 | 33.3% |
| $40,000-93,000 | 20 | 1 | 21 | 31.8% |
| W,0006 ABOVE | 2 | 6 | 8 | 121% |
| TOTAL | 59 | 7 | 66 | 100.0% |

| | |
|---|---|
| NUMBER OF MISSING OBSERVATIONS | 15 |
| TOTAL OCCUPIED HOUSEHOLDS | 81 |

| | FOR AU VILLAGE HOUSEHOLDS MEDfAN | AVERAGE |
|---|---|---|
| HOUSEHOLD INCOME | $35,000 | $41,136 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 50.0% | 53.4% |
| MONTHLY HOUSING PAYMENT (2) | $100 | $163 |
| MONTHLY HEATING COSTS | $165 | $215 |
| MONTHLYELECTRICITY COSTS | $52 | $114 |

Notes: (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

## SECTION III: FORMAL INSTITUTIONS

As a refounded village, all formal institutions in Nuiqsut are directly related to the ANCSA and the formation of the NSB. Because much of this is common to all (or at least most) of the NSB villages, this general discussion of the village corporation, its relation to the regional corporation, the city council, and the traditional council (only recently revived) is for the most part deferred to the regional section of this document.

### A. Government

The Nuiqsut City Council is described in Galginaitis et al. 1984. This section is based on that document, updated with information from Galginaitis and Petterson 1985 and a short period of fieldwork in 1989. Our treatment is necessarily brief.

The Nuiqsut City Council is composed of seven elected members, as required by Alaska state law. They are elected at large by all registered voters in the village. At their first meeting they then organize themselves by electing their officers (mayor, deputy mayor, and secretary). Generally, people say, the person with the highest number of votes in the general election is elected mayor. Council members receive no pay as such, but do have travel and per diem paid for when they are away on city business. As elected officials, they often are asked to represent Nuiqsut on various committees and boards for the North Slope Borough or other governmental units and they receive expenses for these as well (most often paid by these other agencies). The only paid city employee is the city clerk, who is hired by the city council, usually based on the recommendation of the mayor.

Minutes of the Nuiqsut City Council are available only since the meeting of August 1982. This corresponds to the arrival of the first non-Inupiat city clerk and the first real formalization of the city council. Minutes of meetings, records of expenditures, or even lists of former city government members are not available for the period prior to August 1982.

Nuiqsut was refounded in 1973. Kuukpik Corporation (the ANCSA village corporation) was formed in Barrow in the months just before this event, with some assistance from ASRC. The first officers of the Kuukpik Corporation, and especially its first president, were instrumental in the resettlement movement. The president of the corporation also served as the first city mayor. The council at this time was informally organized. The situation then was as Worl et al. described (1981:185-186):

> Currently, issues between the city government and the village enterprises are relatively easily resolved because of the small number of persons involved, the ties among them, and the multiple hats worn by key individuals. For example, the mayor is also the president of Pingo Corporation and represents the community concerns to the ASRC he has other duties as called upon. He has occupied these and other roles simultaneously for a number of years. Undoubtedly, his philosophy, as it is shared by the sentiments of the community (as represented on the village council), will have a powerful institutional

influence on the future of Nuiqsut. The burden of wearing these different hats sequentially and simultaneously has provided him with a significant opportunity to shape the future of the village and has also placed stressful burdens on him.

This informal arrangement persisted until 1981, when the first actual election was held. At that time, the role of the first mayor was legitimized by his formal election as the first official major of Nuiqsut.

However, the first election in 1981 was ruled invalid, due to procedural irregularities. Thus, it was necessary to hold another election. At this time, only three of the seven then-serving council members were retained. The first mayor was not among them, and this was attributed to his being too "pro-development." The Inupiat city clerk, who had been a council member, was not reelected but remained the city clerk. He probably had been acting as city administrator in the mayor's absence. Later, a non-Inupiat woman was hired as city clerk, but it is unknown if the position was vacant at that time or not. The former Inupiat clerk is an officer of the Kuukpik Corporation. There is also some confusion as to who, if anyone, was actually mayor at the time of this second election. Several people evidently claimed this role at that time. The new mayor, who had moved from Barrow a year or so before, had a more "traditional" orientation. He was not a shareholder in the Kuukpik Corporation, however, but did move from Barrow (where he is a shareholder) for the same subsistence and ideological reasons as the original settlers did. He is also well known for his role in the passage of the Alaska Native Claims Settlement Act and the formation of the North Slope Borough, and had served as mayor in Barrow. His wife is a shareholder in the Kuukpik Corporation.

In 1983 the Nuiqsut City Council consisted of two women and five men. Two were in their late 30s, three in their early 40s, and two in their 50s. The oldest member, a man, was mayor. A woman in her 30s was deputy mayor and a man in his 30s was secretary. Meetings were regularly scheduled on the first Monday of each month, but were as often changed to a different date as not. Special meetings were quite commonly held, and were often combined with other village organizations (such as the Kuukpik Corporation) or unofficial meetings to give comments to governmental agencies holding public meetings. The clerk in 1983 was a non-Inupiat female who had served since about August 1982. Before that time, village residents had served as clerk for various periods of time.

Even though this is the period from which most people date the divergence in interests of the city council and the village corporation, the dichotomy of "traditional" versus "pro-development" does not describe the case fully. Of the three members returned to the council, one was associated with the Kuukpik Corporation (as president). More significant than the issue of development/tradition seems to have been the fact that villagers were uncomfortable with the influence of non-residents ("outsiders") who were hired as consultants but often took on more authority than was truly legitimate in terms of their job descriptions. The first mayor had found it necessary to hire a resident city administrator, since he himself had to spend a great deal of time in Anchorage on corporation (Kuukpik and Pingo) business. This was also the pattern for the Kuukpik Corporation, where a non-Inupiat accountant exercised a great deal of financial control.

The interests of the Nuiqsut City Council and the Kuukpik Corporation began to diverge from this time and cooperation between the two became more difficult. Whereas in the early years of the village they were considered one and the same, by 1983 no one served as a member of both boards (although the mayor was the father-in-law of the then Kuukpik Corporation president). Board members were pretty evenly split between Kuukpik Corporation shareholders and non-shareholders. During this period a good deal of progress was made toward resolving the land transfer issues between the city and the village corporation, with the NSB as an interested third party (see the Nuiqsut Case Study [Galginaitis et al. 1984] for details). Relations between the two village entities were amicable to the extent that a recognition of their different interests would allow.

At the next election, the incumbent mayor opted not to run, as the land issue and other duties had taken a great deal of his energy. The former deputy mayor, a woman in her 30s, was elected. Fieldwork did not take place in this period and the only records are from later interviews and the minutes of council meetings. Relations between the city and the corporation again began to become strained. Some people attributed this to the fact that the mayor was a woman, and others to who she was (in terms of kinship). Still others cited changes in the leadership of the corporation. Because of the lack of any definitive information we cannot say much more than this (but see the account of her later term below).

At the next election (1985) the former mayor (of 1983) was again elected. Five of the seven members of the 1982-1983 council also continued to serve. Four were village corporation shareholders and three were not. The city clerk was a non-shareholder Inupiat married to an officer of the village corporation (who of course was a shareholder). The council was still perceived to have a non-local, non-village corporation bias. However, relations between the corporation and the city were also recognizably more cordial than during the previous year. Given the importance of the mayor's position as an organizer and instigator of action, it is very likely that this man's kinship relations with Kuukpik Corporation officers, and his personal characteristics (older, male, educated but not too much, modest but very capable) gave him a distinct advantage over the mayor who had directly preceded him and who would again serve after him. She was married to a non-Inupiat, was younger, better educated than the average Inupiat, and of course female. She is also a modest and capable person, but is at the same time perceived by some as too aggressive at times (perhaps a combination of her youth, femininity, and education - many young educated Inupiat females seem to encounter this sort of treatment). She also is directly related to one of the "founders" of Nuiqsut, which embroils her personally in the factional politics of Nuiqsut in a way that the mayor of 1983 and 1985 was able to avoid. Other than for the improvement of intracommunity relations, there is little to note from this period.

This man again declined to run for mayor at the next election and the younger woman who had served before was again elected. Her election was an indication that her previous term was not viewed negatively, and in fact most informants said that any problems that arose were the result of a few people in the village who really did not want a female mayor. Her alternating terms with one other person also points out certain features of formal Inupiat leadership. There is little overt competition for leadership positions in Nuiqsut (or the other NSB villages, except perhaps for Barrow). Most of the time there are very few people who want to hold the position in question, and where there is more than one an informal agreement is usually reached so that there need be no public and formal winner and loser. Thus, most elections are unanimous or have only

one candidate for a position. Even in those cases where there are more candidates than offices available, campaigning is discouraged. One reason that the first (unelected) mayor is said to have lost the first official election is that he competed for the position too hard by actually canvasing the village. The limited pool of potential mayors must also be pointed out.

It is unclear how many terms this woman then served, but she eventually lost an election to the first (unelected) mayor, who thus has made a political comeback of sorts (the man who had been alternating terms with her was in bad health and could not run). The issue of the campaign was land, with the challenger asserting (with strong factional support from a large kinship group in the village) that the then mayor had used her position to favor her mother's application for a large native allotment within the town site. The city council had voted, with the mayor abstaining and taking no part, to transfer the land in question to this woman. The then mayor claimed that she had exerted no influence over the city council in this matter and that they had merely acted in a fair and just way. It is impossible for an outsider to judge the relative merits of the arguments, but what does appear clear is that the dispute is actually a vehicle for other village frictions. The land went to a woman whose husband (now deceased) had the only standing structure on the present Nuiqsut town site, before the village was relocated there. This structure was the basis of his (and his wife's) claim. Other villagers see no reason why this one family should benefit from what they see as the historical accident of the structure being his, since they all had used the area before the refounding of the village and many had similar structures in various parts of the use area. They were partly worried that this would deprive the village of room for growth and partly jealous of one person obtaining more than anyone else. This grant was and is a direct affront to the Inupiat value of equality and sharing. During the time of fieldwork there was discussion of having this land made into a sort of village park, thereby preserving it for public use while ensuring the woman and her family that other people would not take it over. Most people do agree that the present mayor of Nuiqsut did use this issue to his advantage to be elected. The degree to which he is reported to have manipulated the issue depends on the degree of support (or lack thereof) the informant has for the mayor.

All agree that the present mayor is a capable and talented man. He is active in many NSB affairs and travels to Barrow and Anchorage quite often. He is no longer involved in Kuukpik Corporation affairs, although he would like to be, under the right circumstances. Because of his past activities, or at least the perceptions of those activities, this is reported to be not likely to happen. The mayor was observed to be quite different from past mayors in his mayoral style. He was in the office regularly to deal with city business, although he is not paid to do so. He actively controls the flow of meetings in a way that no other NSB mayor (other than in Barrow and the NSB Assembly) has been observed to do. All who wish to participate in the meetings are still free to do so, but he ensures that business is taken care of in a timely matter. If an issue seems to be troublesome and there is no apparent consensus, the mayor will most often suggest that it be tabled rather than prolong an unfruitful discussion or try to impose his own opinion on the meeting. In most cases the mayor will have a position on most issues, and will control the agenda to achieve approval of his view. He is enough of a realist to know that direct methods are often counterproductive because of the opposition they raise. This partly accounts for this man's reputation as a manipulator and a wheeler-dealer. He is very aware of how the system works, both within the village and at higher levels (NSB, state, federal), and uses that knowledge to best achieve his goals for the village. There is thus no "objective" view of this man as a mayor. He is

simply too competent and active for anyone to have a neutral view. He is the only leader of his kind or style in Nuiqsut, and indeed is almost unique on the North Slope.

## B. Native Corporations

### 1. Kuukpik Corporation - Introduction

The organization and scope of operations of the Kuukpik Corporation, the village Native Corporation, is documented in Galginaitis et al. 19S4. Information on the number of shareholders, leadership, employees, history, economic activities, and current issues and concerns is also presented in this report. The kinship relations of the corporation's leaders and their relations with residents in control of the local municipal government are also examined. The report also briefly notes the role of the Arctic Slope Regional Corporation in the community. As with the other newly resettled communities (Point Lay, Atqasuk), the ASRC provided assistance in the initial resettlement and with the construction of the first housing. They also provided guidance on the formation of the village corporation and served as advisors for various ventures. Gradually, the village corporation assumed a more independent position, although in the case of Kuukpik there was (and still is) a rather extensive history of joint ventures with ASRC.

The Kuukpik Corporation has had a history of aggressively looking for business opportunities, some of which have led to temporary setbacks, which give it quite a different corporate personality than other village corporations. This may be related to the personality of the man who served as the first president of Kuukpik and was a long-time officer. He is now mayor and not much involved with the corporation, due to what community people perceive as his role in past Kuukpik ventures. His stamp has been left upon the corporation, however, in that the main business office is still in Anchorage and all paperwork is processed there. The central Kuukpik computer is in Anchorage and communicates with the computer in the Nuiqsut office by modem. The staff in Anchorage pursues construction projects and other joint ventures that corporation officials say would be difficult to develop from Nuiqsut. The main manager in Anchorage is non-Inupiat. Only two other village corporations on the North Slope maintain offices in Anchorage: UIC (from Barrow and the largest of the village corporations) and Tigara (from Point Hope and currently in Chapter 11 proceedings).

Kuukpik Corporation also apparently took the lead in the formation of the Pingo Corporation (now defunct). This was a consortium of all the NSB village corporations except for UIC of Barrow. It was an explicit attempt to deal competitively with the outer village perception that too many of the Native hire jobs were going to people from Barrow. The first Kuukpik president was a key player in the formation of Pingo (and some people say in its demise as well) and served as president for a good part of its active period. This man would like to form a similar corporation again to do much the same thing, as he believes that the need for such a entity to represent the interests of the outer villages is as great as ever and that the experience gained from past attempts make the probability of future success greater. It is significant that the impetus for this idea is again located in Nuiqsut. Little support for the idea was evident in any other village.

2. History of Kuukpik Corporation

The Kuukpik Corporation is the village corporation set up under the provisions of the Alaska Native Claims Settlement Act. As such, all 208 original enrollees in Nuiqsut (about 230 as of 1985) are shareholders. All adult shareholders can vote. All enrollees are, of course, Inupiat. The corporation has five officers, whose public titles vary somewhat: president, vice president, chairman, treasurer, and secretary, with "land manager" being another name or title for one of them. There are also two board members elected from the membership at large. These members change fairly frequently. The officers also change yearly, but tend to switch titles, so that there has been a good deal of continuity from board to board. An annual meeting is held during which officers are elected and necessary business conducted. Any shareholder may attend and speak, but meetings are closed to non-stockholders. The financial records are also open to all shareholders, but few (or none) take advantage of this to monitor the conduct of the corporation. Board meetings are held at irregular times during the year, when necessary, and special shareholder meetings have been called occasionally.

The Kuukpik Corporation was formed in Barrow before the village was resettled, with the man who assumed the first mayorship as president. Two other men who have served nearly consistently as corporation officers were officers then as well. Two members of that first corporation board have served as members of the Nuiqsut City Council, although there is little or no overlap between the corporation board and the city council at present. Since the corporation was formed, several different men have served as president, with the first president (and then mayor) serving subsequently as vice president or on the board in some other capacity. At present he has little to do with the business of the corporation, concentrating his energies instead on city affairs and other regional organizational concerns (Alaska Eskimo Whaling Commission and so on). This man's experience is perhaps emblematic of the evolution of formal organizations in Nuiqsut. When the village was refounded there was little differentiation between the corporation and the city council, either in terms of function or personnel. As time went on, differences developed as it became clear that village and corporation interests were not always the same. People began to identify more readily with one or the other depending on their own perceived interests, so that personnel began to diverge as well. There are of course shared interests between the two organizations as well, but it is interesting that at the present time the two entities have little formal overlap and while relations between them are generally cooperative when there is a perceived mutual benefit, there is a definite tension between the two.

The Kuukpik Corporation has developed and matured as a business as its shareholders have gained experience. The first city mayor, who was also the Kuukpik Corporation's first president, spent a good deal of time in Anchorage as he was the president of the Pingo Corporation (a joint effort of all the NSB village corporations, except for Barrow, to create jobs for Inupiat in the oil industry) as well. Clearly, having a permanent representative of the Kuukpik Corporation in Anchorage was perceived to be an advantage. Much of the financial activity taking place in Alaska is centered in Anchorage, and commercial transactions are facilitated by a presence there. Indeed, corporation officers are often absent from the village, attending to business in Anchorage. Just as clearly, most people in Nuiqsut felt that the titled president could function best in Nuiqsut. His signature is required on many documents and his advice required during frequent meetings. People also expect the "head man" to be available and familiar with local situations. This was also somewhat of a problem for the city council at the same time, as the mayor was seldom able to be

at city council meetings. Eventually this man was replaced in both positions, but maintained a place on the corporation's board. Having as enterprising a businessman as the first mayor on the Kuukpik Corporation's board of directors, but not as president, served both local and non-local needs. The shift of personnel from the city council to the Kuukpik Corporation board (and back) with no current overlap also demonstrates the locally felt need for cooperation between these two entities, as well as the realization that their interests are not completely the same.

Since the Kuukpik Corporation is a for-profit corporation, its central concern must be with economic enterprise. This creates some tension, especially in regard to the local store and fuel facility that Kuukpik operates, but also in the balance of economic development with subsistence protection. Kuukpik's aim is to make money and provide jobs. They have done this in the past mainly through construction subcontracts with the North Slope Borough on Capital Improvement Projects, either directly or through the Pingo Corporation. They continue to do so in the present by bidding on many construction projects throughout Alaska in joint venture with a non-Native contracting firm. Several NSB village corporations do likewise, but the Kuukpik Corporation seems to have been very successful. Only UIC in Barrow has what appears to be a higher bidding success rate and as diversified a program of ongoing projects. UIC is, of course, a much larger corporation.

The Kuukpik Corporation has had its share of business problems. Because of its first president's role in the Pingo Corporation, for a time the Kuukpik Corporation had difficulty establishing its own identity, or perhaps more accurately, was rather inactive. Pingo Corporation was set up as a joint effort with all the non-Barrow village corporations of the North Slope Borough but evidently always made more use of Nuiqsut employees than those of other villages. Pingo was quite successful for a number of years and then went bankrupt. The reasons given vary from corruption at the top to the inability of those who succeeded the first president to continue his work. In any event, the first president of Pingo left the presidency of the Kuukpik Corporation at the same time.

At this juncture a younger man was elected president of the Kuukpik Corporation. Other permanent employees of the Kuukpik Corporation at this time, besides the officers and at-large board members, were a non-Inupiat accountant, a secretary, a fuel clerk, two fuel delivery men, a store manager, and two store clerks. It is not known whether the accountant had been with the corporation before the presidency changed. In any event, he was found to have embezzled a large amount of money from the corporation and fled just before he was to be arrested. Although caught, he later escaped while on bail. He was later once again apprehended, tried, and convicted. Unfortunately, little of the money was recovered. This is, unfortunately, not an experience confined to the Kuukpik Corporation and did for a time place the corporation in a precarious business position.

A joint venture with ASRC was established for the mining of gravel on Kuukpik Corporation land. Kuukpik owed ASRC $1,400,000 for the construction of the first housing, help with past oil bills, and various things. This severely hampered Kuukpik Corporation's day-today operations. In return for discounting this debt by more than 50%, Kuukpik transferred a share in the surface rights of 1,500 acres of its land to ASRC. However, Kuukpik acquired a share in ASRC'S subsurface rights to this land through this transfer, rights which previously had belonged solely to ASRC under ANCSA. The purpose of the transaction was to form a venture for the extraction

and sale of gravel from Kuukpik land from which the Kuukpik Corporation could benefit. Because the status of gravel as surface or subsurface is unclear, and the fact that subsurface and surface rights are separated as to ownership on village corporation land, the deal was made to allow the Kuukpik Corporation to share the profits and so be able to repay its debt. The venture also obtained working capital this way.

Since that date the Kuukpik Corporation had also aggressively pursued construction joint ventures in conjunction with an Anchorage non-Native construction firm. The present president of the corporation is the man with the most construction supervisory experience in the village. The man who was president at the time of the formation of the gravel joint venture with ASRC is also still an officer. Basically, the corporate leadership displays great continuity with the past, other than for the first president. This seems to be quite typical of most NSB corporations. The Kuukpik Corporation shares the dual goals of most of the other village corporations in that it is looking to generate profits at the same time as it creates jobs for village residents (ideally but not always shareholders). Kuukpik Corporation is somewhat different in that profits have been emphasized over jobs, as demonstrated by the joint ventures outside of Nuiqsut and even off-slope. This strategy has allowed the present officers to reduce the corporation's debt and to place it on a sound financial basis.

### C. Social Services

**Information on health** and social services provided in Nuiqsut by the NSB can be found in the regional section. The only other published reference to social services provided in Nuiqsut to date are contained in a brief mention of services provided by the health clinic contained in Galginaitis et al. 1984 and region-wide descriptions of services offered by the North Slope Borough Department of Health and Social Services (Worl and Smythe 1986). Beyond that, there is no information available in the secondary literature on organization and operation of social service agencies in Nuiqsut, description of client populations, or projected service demands and resources. However, Galginaitis et al. do provide a detailed analysis of one of the major social issues affecting all North Slope communities: alcohol abuse. This includes data on drinking frequency among local residents in 1982-1983 by age, sex, and ethnicity. It is evident from that treatment that alcohol was a significant problem during the period of that fieldwork. Both village informants and the Public Safety Officers agreed that all serious village problems had alcohol abuse as at least a contributing cause. While there is not space here to repeat the treatment in The Nuiqsut Case Study (Galginaitis et al. 1984), the conclusions were that most people drank to excess at times, but that no one drank to excess for long periods at a time. The behavior observed corresponded closely to the "drink till it's gone" or 'throw away the cap" models often described in the literature. Older women and about half of the older men are the only people who did not drink in this way in 1984.

Our field research time in 1989 was too brief to reexamine the issue of alcohol abuse in depth, but several interviews on the subject and some volunteered informant comments lead to some tentative statements. Several of the known large-scale importers of alcohol in 1983 were no longer in Nuiqsut in 1989. The PSOS and village informants all agreed that less alcohol was reaching the village than had before. Indeed, the mere possession of alcohol is now illegal in Nuiqsut. Serious crime has declined in frequency in Nuiqsut, which some people attribute to the changes in alcohol use (others say that the serious offenders have been removed from the community). No incidents

involving alcohol were observed in 1989, which was certainly different from a typical week in 1982-1983.

Nuiqsut has the typical social services of the outer villages as supplied by providers from Barrow. These are described elsewhere in a regional discussion.

**D. Health**

There is no specific information on the organization and operation of the health clinic in Nuiqsut, apart from a cursory overview available in Galginaitis et al. 1984. However, because of the efforts to develop uniform facilities and services in all of the North Slope communities, a description of the clinic and the services available to Nuiqsut residents may be obtained from descriptions of clinics in the other communities. Such descriptions are included in Alaska Consultants et al. 1984.

The MMS report prepared by Galginaitis et al. 1984 provides the most comprehensive information on health problems at the community level in the North Slope region to date. Their analysis of clinic records for 1982 indicates percentage of clinic visits by age, sex, ethnicity, and disease category. Crude rates of clinic visits by age and sex are provided for the month of November 1982, as well as an analysis of potential risk factors, including household size, per capita alcohol consumption of the household, household age structure, and average per-capita adult employment of the household. Limitations to analyses of data are examined, including the inability to distinguish first visits from subsequent visits for any particular illness condition (due to confidentiality considerations). The table describing the frequency of complaints at the most general level is reproduced below as Table 43-NQT. For more detailed information please see The Nuiqsut Case Study (Galginaitis et al. 1984).

Data which may be used to determine how health problems have changed in recent years may be found in Galginaitis and Petterson 1985. These data are based on clinic visits in September 1985, and are summarized. in terms of percentages of visits by sex and disease category. The sexual division of visitors to the clinic was about the same as in 1982, 56% female and 44% male. The complaints were basically the same as in Table 43-NQT, except that respiratory complaints declined from 19.3% to 10.6%, accidents decreased from 13% to 5.1%, and infectious diseases increased from 13.4% to 18.2%. All other categories were within three percentage points of their 1982 values. It was reported by one of the health aides that cancer and diabetes were increasingly common and had not been present among the Inupiat population until recently. This is not evident in the clinic records, but probably because of its small size and the fact that people go to Barrow or other places for treatment of most serious ailments. The health aide attributed this increase in cancer and diabetes to the modem diet of the Inupiat, which now contains (in her view) too much "junk food" and sugar. The pattern of clinic use was the same in 1985 as in 1982-1983. Males, other than dependent children and men over the age of 44, do not use the clinic much except in cases of emergency. Most groups did increase their usage in 1985 over 1982.

**Table 43-NQT**

**Total Medical Complaints, Nuiqsut Clinic 1982**
**By Category of Complaint**

| Category | % of Total | % of Category Male | % of Category Female | # of Complaints |
|---|---|---|---|---|
| Respiratory | 19.3 | 46.9 | 53.1 | 275 |
| Infectious Diseases | 13.4 | 40.3 | 59.7 | 191 |
| Ear | 13.0 | 44.3 | 55.7 | 183 |
| Accidents/Injuries | 13.0 | 62.7 | 37.3 | 185 |
| Health Maintenance | 11.7 | 51.2 | 48.8 | 166 |
| Undiagnosed | 4.8 | 42.0 | 58.0 | 69 |
| Oral/Dental | 3.0 | 55.0 | 45.0 | 42 |
| skin | 2.8 | 55.0 | 45.0 | 40 |
| Pregnancy-Related | 2.7 | | 100.0 | 39 |
| Digestive System | 2.6 | 21.6 | 78.4 | 37 |
| Alcohol/Drug-Related | 2.2 | 80.6 | 6.0 | 31 |
| Eye | 2.0 | 50.0 | 50.0 | 28 |
| Female Genitalia and/or Breast | 1.7 | | 100.0 | 24 |
| Family Planning | 1.3 | | 100.0 | 19 |
| Poisoning/Allergic | 1.3 | 31.6 | 68.4 | 19 |
| Cardiovascular | 1.1 | 50.0 | 50.0 | 16 |
| Urinary Tract | 1.1 | 13.3 | 86.7 | 15 |
| Other[1] | 3.0 | | | 45 |
| Total | | | | 1,424[2] |

[1] 13 categories, none over .7%.
[2] Higher than total yearly visits because of multiple complaints on some visits.

Source: Galginaitis et al. 1984.

**Again, our fieldwork in 1989 was too brief to collect comparable information. However, health aides estimate that they see 180 to 220 people each month** (with a high of 300 a month in the flu season). The major problems are basically those listed in the table above. The major complaint was that the clinic in Nuiqsut, as in all the outer villages, treated symptoms and not the fundamental problems behind the symptoms. The facilities and support services are top-of-the-line, but there is a fundamental failure in the provision of basic care beyond what the health aides can provide. No health provider ever really gets to know the village before he leaves the North Slope because no doctor visits the villages more than a few times. The turnover, especially of doctors, is too high to provide the care that people desire. A doctor is supposed to visit Nuiqsut every three months (four times a year) but the health aides say that the average time between such trips is eight months (three visits every two years). People would like to see a doctor stationed in Nuiqsut, but realize that this is probably an unrealistic wish. One of the health aides does plan to obtain Physician Assistant (PA) training. Once she has these skills, however, she may have to leave Nuiqsut, because it is as yet too small to justify the expense of a PA. If she were to stay in Nuiqsut it would be at the pay rate of a regular health aide. She and others in the village believe that at least one person with at least the PA level of training is needed in the village. A major complaint she has is that there are not enough health aides in the village. At least one of them is on 24-hour call, and until recently she never felt as if she was off duty. They have now instituted a program where health aides work two weeks on and one week off, and she said that this made the work much more enjoyable.

In previous yearn, it had been observed that health aides would often help patients and others with social service applications (WIC, public assistance, and so on). In Nuiqsut, one of the health aides now has this as her primary duty. This allows her to obtain a greater familiarity with the programs and thus makes access to these programs easier for people in the village.

## E. Religion

Reference is made to the Assembly of God church and a new Presbyterian church in the study of Hoffman et al. 1978, 1988. A description of the two churches and their congregations is found in Galginaitis et al. 1984. This report also describes the history of the churches in the community, the social aspects of religious activities such as "singspirations," and the value systems espoused by the Protestant institutions in the community. Most of this is little different from similar institutions in other villages.

**There** are two church buildings in Nuiqsut, the Assembly of God church and the Presbyterian church. The Assembly Church was actually constructed first, by volunteer labor, but has always had only a small congregation. At present there are no Assembly services held as there is no active congregation and no pastor. There were occasional services held in 1982-1983 and 1985, but even then Assembly activity was not great. Attempts are made every so often to revive interest in the Assembly, but it is difficult to compete with the established Presbyterian church. The Assembly church has no guaranteed support, so that a pastor would have to generate his own salary. This is difficult to do in Nuiqsut.

The Presbyterian church is part of a larger organization which guarantees its budget. The church is nowhere near being self-supporting, but has a full-time, ordained Inupiat pastor. The manse was

donated to the church by a contracting firm, so that certain expenses are minimal. Still, the cost of operating the church is fairly high and most of these costs are not borne by village residents.

Most residents of Nuiqsut are nominally Presbyterian. Normal services are attended by perhaps 20 to 30 people, mostly older woman. Special services on holidays often draw a majority of the people in the village. The Presbyterian church is clearly the spiritual center of the village, but most people feel no need to attend with great regularity.

## F. Infrastructure

One of the earliest descriptions of the community infrastructure of Nuiqsut is found in the *report* prepared by Hoffman et al. 1978. More detailed information on the community's infrastructure is provided in the report prepared by Galginaitis et al. 1984. This includes a description of the water, sewage, and electrical systems, community facilities, transportation, communications, and especially housing. In addition, the appendix provides a detailed summary of the expenditures for each of the major CIP projects in the community. Nevertheless, existing information on the community infrastructure of Nuiqsut appears to be sparse in comparison with descriptions of the infrastructure of other North Slope communities, however. One exception to this generalization is a thorough account of community recreational facilities found in Galginaitis et al. 1984. An update of the community infrastructure and recreational facilities is contained in Galginaitis and Petterson 1985.

The sequence of housing construction is too complicated to replicate here. The Nuiqsut Case Study (Galginaitis et al. 1984), supplemented by Galginaitis and Petterson 1985, adequately covers this, as there has been little additional housing built since the last NSB-sponsored housing. The basic village infrastructure is as it was in 1985, except that there has been an addition to the community building and one of the Kuukpik Corporation's structures has been modified to serve as a Post Office. The warm storage facility had also been completed. The NSB Dredge Camp, which used to be across from the school, was sold to the Kuukpik Corporation. They dismantled it and meant to reconstruct it to the south of the village, but it sustained damage while being stored and is now judged to be not worth putting back up. The airport terminal still has not been used, evidently because no one wants to pay for its heat and maintenance.

The major changes between 1982-1983 and 1985 were the completion of the NSB Clinic, the community building, the Presbyterian manse, a small Search and Rescue building, and Block 4 NSB housing. The electrical plant and utilities building has been undergoing constant upgrading. An airport terminal building was constructed and bus service was started. The air terminal proved too costly to be operated for that purpose and was never used in that way. Instead, a small shack or cabin, constructed by Cape Smythe (or rented by them) and heated by a diesel space heater has been adequate for the local earners so far. It was only recently, in 1989, that the NSB moved the Nuiqsut offices for the RELI program into the building constructed as an air terminal. There is still a good deal of space in this building being used for storage rather than as working space. The bus service has been sporadic because of maintenance problems, but is generally perceived as a positive community feature.

Since 1985 there have been additional improvements is Nuiqsut's infrastructure. A Senior Van provides transportation for the elderly and disabled of the village. It also doubles as a health aide

van when it is not needed to transport seniors. The Community Center building was expanded and part of the additional space is rented to the NSB for the village coordinator's office and the teleconference center. This was accomplished under an NPR-A grant, part of which was also used to construct a boat storage facility near the village. The USDW building was finished by the NSB and now house the Department of Municipal Services offices, as well as sewing as a warehouse for the school and providing maintenance facilities for heavy equipment. A separate post office was opened, a full-time post master hired, and post office boxes installed in 198S or so. This is seen as a substantial improvement in service.

1. The "Road Issue"

An additional issue that needs to be discussed here is the status of Nuiqsut as the only NSB community that is road-connected, if only in the winter. An ice road has been built to Oliktok Point each winter for the last several years. From Oliktok Point there is a gravel road to Prudhoe Bay/Deadhorse (and the Kuparuk Industrial Center is also along the way). The construction of a year-round road between Nuiqsut and Kuparuk Industrial Center has lost some of its urgency as people have been able to realize some of the benefits, and avoid some of the potential disadvantages, of a permanent road through the seasonal ice road. That individuals have responded to the opportunities presented by the ice road is easy to demonstrate. The current "rolling stock" in the village is approximately 30 privately owned operative trucks (along with like number of inoperative trucks) in addition to the public vehicles owned by the North Slope Borough. The local PSO estimates that twelve to fifteen of the privately owned vehicles are new to the village in the past year. This same perception is shared by local Inupiat, who report that many people are now buying trucks. Before an ice road was regularly opened there was little use for a truck, outside of hauling freight from the air strip to locations within the village. Relatively few trucks were required for that purpose. Now that people can drive to Prudhoe to pick up freight, or even to Fairbanks and beyond if they wish, the number of trucks has exploded Freight costs have been so high that a truck can pay for itself, even at the high prices and high maintenance costs imposed by the arctic environment.

The ice road has usually been paid for by the NSB, with maintenance paid by the City of Nuiqsut through a grant. Whether this will continue into the future is not clear at present. The city grant has run out and is not likely to be renewed. NSB money is becoming much more difficult to obtain, especially for a recurring project of this sort which is benefiting only one village. The chances for the continuance of the road are high, because of the perceived benefits and the current investment in trucks. The source of the funding for this is still open to question.

The benefits of the ice road have been demonstrated by the decreased shipping costs individuals have been able to use by having items shipped to Prudhoe Bay/Deadhorse and then trucking them to Nuiqsut. The most expensive leg for freight is the final one, which up to this point had always had to be on a small air carrier. That the ice road is not totally adequate, or that villagers have not adapted to it as well as they perhaps could, is demonstrated by the inability so far of the village corporation to buy and truck an adequate supply of diesel and gasoline for the village while the ice road is open (generally only January or February through April). This has meant that the corporation has had to have fuel and/or gas flown in, and charged correspondingly high prices. Some individuals have responded to this by buying and hauling their own drums of gas and diesel

over the ice road (as in other villages certain individuals will order at some least drums of gas sent up on the barge). Other individuals have reacted by purchasing larger storage tanks (from 500 to 2000 gallons) which they then fill with diesel or gas from the least expensive source. Until recently, this usually meant purchasing the diesel and/or gasoline at Kuparuk or Prudhoe Bay/Deadhorse (the first being closer but more expensive) and hauling it oneself. The non-Inupiat family who have been long-term residents of the Colville delta have started up a company providing a number of services, however, one of which is fuel delivery (to Nuiqsut and to industrial users). Their minimum sale is 500 gallons, so that a large storage tank is a prerequisite for this option. For gasoline the current prices in the village from the Kuukpik Corporation is $3.50, since they are using a supply that has been flown in. The price at Kuparuk is $1.70/gallon, and at Prudhoe/Deadhorse is $1.56/gallon. The price quoted for delivery to Nuiqsut by the delta dwellers is $2.00/gallon, which is considered fair since within the village only the Kuukpik Corporation has the equipment to efficiently haul large volumes of diesel and gas. The inability of the corporation to implement such a program is seen as a lack of adequate local management, perhaps combined with cash flow problems.

The more general advantages and disadvantages of the road have been discussed in Galginaitis et al. 1984 and can be briefly summarized. People believe that a road would reduce the real costs of most consumable items in the village, and probably diesel and gasoline as well, by reducing freight charges. Even in the absence of an organized effort by the Kuukpik Corporation to realize these savings, individuals have found it possible to make their own purchases and save considerable money. As stated above, this is one reason there are so many private trucks in Nuiqsut. If Kuukpik Corporation trucked in adequate supplies of diesel and gasoline in the winter, and maintained a consistent and adequate inventory at their store, it is likely that individuals would invest their money in something other than trucks. This seems to be one clear area on the North Slope where the private sector is clearly being used to address a need that is perceived not to be met by the "public" (village corporation) sector. Although the village corporation is organized as a private sector enterprise, most outer village corporations in fact operate a good part of the time in the perceived common community interest, as was discussed in the regional chapter.

The recognized disadvantages of a road are that it would potentially increase the number of sport hunters using the area (much more serious a problem for a permanent rather than a seasonal road) and that it makes the access to, and importation of, alcohol and other drugs easier and more frequent. The ice road is seen by most people as a reasonable compromise between year-round access and the wish to avoid opening their hunting areas to urban sports hunters. The alcohol question is one that there is no simple answer to. Although the village has affirmed several times in local option elections that it wishes to be a dry village (the possession of alcohol is itself a crime), there is a large number of people who nonetheless wish to drink and will (privately) admit bringing alcohol in. Admitted drinkers say that nearly everyone in the village drinks. While this may be true, a good number of people reported drinking mostly out of the village, and this did fit the observed behavior. In any event, there is a schism between admitted village drinkers and those who maintain that they do not drink in the village, with each labeling the other group as "troublemakers." Alcohol remains a serious problem in Nuiqsut (one fifteen-year resident of Nuiqsut says there is as much alcohol in Nuiqsut as there has ever been) and a simple resolution to the problem is unlikely. Even in the absence of the ice road individuals can still transport alcohol from Deadhorse with relatively little difficulty.

## 2. Transportation

Transportation in Nuiqsut would be basically the same as in the other villages, except that it is connected to Prudhoe Bay/Deadhorse in the winter by an ice road. This is discussed above. There are observationally more trucks in Nuiqsut than in other villages (aside from Barrow). More people use trucks for in-village transportation than in any of the other outer villages, and there seems to be less local use of snowmachines and four-wheelers. There is a decided emphasis in Nuiqsut on summer and fall hunting, but it unclear if this is a recent development (perhaps relatable to the purchase of trucks rather than snowmachines). Trucks and boats are certainly the most obvious pieces of equipment in the village.

The air strip in Nuiqsut is a state responsibility, but is maintained by the NSB with local personnel and equipment. Scheduled flights are from Barrow and Prudhoe Bay/Deadhorse on a daily basis. For the most part this service has been adequate. An air terminal was finished as part of the NSB CIP program several years ago but was never used by the air carriers as it was too expensive. Instead, the carriers use a small structure with a small diesel space heater. There is now a city bus in Nuiqsut and a senior van which also is used for the clinic. There are no taxis in Nuiqsut.

## 3. Recreation

Recreation in Nuiqsut is not atypical of the North Slope in general. The school is one main center of recreational activity, focussing primarily on basketball. After school hours until about 8:00 p.m. the gym is reserved for the younger age groups, and after 800 for high school students and adults. The gym normally closes at 10:00 p.m. and so is open a relatively short period of time for any given age group. The library at the school is also open several evenings a week, and the shop is also open on a fairly regular basis twice a week. In addition, it is sometimes possible to schedule activities such as Eskimo dancing in the school on certain evenings.

Bingo is also held frequently in Nuiqsut, being scheduled five nights a week. Bingo is normally not held on the nights when church services are scheduled, Sundays and Wednesdays. On special occasions and during times of need bingo will be held on Wednesday nights. The two sponsors for bingo are the Health Board and the Mothers Club. Both are non-profit organizations who distribute all earnings above what is needed to pay workers and buy supplies for charitable purposes. One major charitable category is transportation costs for non-emergency medical treatment. Bingo is reasonably well attended, but mostly by middle-aged and older individuals.

As is true of most other NSB communities, Nuiqsut has a Community Center building that is used for evening recreation. The community center also houses the city offices and the space rented to the NSB. Most of the building is devoted to a larger room (constructed in two sections divisible by a folding wall) that is normally used for evening recreation but is also used for most public meetings. During the day this space is also sometimes used for social gatherings of the Elders and other informal get-togethers. In the evenings, the time from 6:00 p.m. to 8:00 p.m. is reserved for the younger age groups. It is typical for there to be a very large number of children, from infants to perhaps age ten or eleven, playing at the community center at this time. Most adults will avoid the center during this period, as the children tend to run around, make noise, and have a preference on the game machines in any event. The machines are in constant use and it is not

unusual to see as many as four children at one machine, pushing every available button. The period from 800 p.m. to 1000 p.m. is formally reserved for an older age group, but in most cases younger age groups are not forced to leave until 1000 p.m., the village curfew for school age people. At this time the community center is meant to be for adults, and this is the time that the gym closes in any event. Since the community center closes at 1200 midnight on weekdays, and adult recreation at the gym starts at 7:30 or 8:00 p.m., young adults can generally find a place to be with their peers. The community center also has vending machines with soda, candy, and snacks. These machines are usually nearly emptied every evening.

The revenue to support the recreation program (to pay for the supervisor, buy new snacks and soda, pay for the cleanup, and help pay for heat and electricity) is supposed to come from the proceeds from the games and concessions. Most people would agree that this revenue is not insignificant. Very rough estimates are that each of the three video machines and the two pinball machines averages $25 to $35 per night (for a total of $125 to $175). Average soda sales are 100 cans/night at $1.00 per can. The highest reported level of sales was about 14 cases (336 cans), when other stores were not open. Profits from the soda machine range from 16.5 percent from locally purchased soda to perhaps 50 percent of total take from soda purchased from the cheapest supplier, and the typical nightly profit can perhaps be estimated at $50.00. Estimates from the snack vending machine were not obtained, but a profit of perhaps $35 to $50 per night could probably be assumed. Nightly recreation revenues would thus be about $225 to $300 per night. According to some people, however, evening recreation never takes in enough money to pay for the expenses (salary, supplies, operating expenses] of operating the building in the evening. Recreation revenue is one of the largest visible sources of city money, and it may be that these informants are applying more costs to the recreation program than is truly justified. In any event, there is no way to split out the costs of heating the building for recreation from those of heating the building for the city and NSB, since separate accounts are not kept. In the absence of such detailed cost information, the only reliable financial information is for the city as a whole. These records are marginal at best, and potentially overstate the financial health of the city as of 1990.

Visiting, going out on' the land together, and traveling are perhaps the major ways that older people relax, and little systematic information exists on these activities. Similarly, the young adult pattern of staying up late at each others' homes, sleeping late the next day, and repeating the cycle, is not well documented in Nuiqsut. This cycle is known to be very typical, however, especially in the winter when jobs are less available then at other times. Little that is specific to Nuiqsut can be said on this topic.

### G. Fire Protection

Other than a reference to the fire hall found in Galginaitis et al. 1984, and mention in the report prepared by Galginaitis and Petterson 1985 that the Fire Department and Search and Rescue group became two separate organizations in 1985, there is nothing in the existing literature on fire protection history, organization and activities, and issues relating to fire protection in Nuiqsut. For the most part, the Fire Department in Nuiqsut is little different from those in other villages. Their equipment is the same state-of-the-art fire station and trucks as in the other villages. Training is provided by supervisory personnel in Barrow. Village meetings in Nuiqsut are, if anything, less frequent than in other villages. A 1989 informant reported that meetings were only held every

three months or so unless there was a real need for training. He said that there had been no recent fires and that attendance at meetings was generally low. He implied that most active volunteers were well enough trained to respond to a fire if-and when it should occur.

### H. Search and Rescue

The Nuiqsut Search and Rescue organization is briefly described in Galginaitis et al. 1984. Topics covered in this description include membership, leadership, and history. A brief mention of the group is also found in Galginaitis and Petterson 198S. In contrast to descriptions of the Search and Rescue groups of other North Slope communities, however, relatively little" attention has been devoted in the existing literature to the group in Nuiqsut.

Search and Rescue is an active organization in Nuiqsut, but again is one that does not hold many "regular" meetings. When there is a need to organize a search the membership is called together. Most searches in recent times have been short, and many have ended with the party being searched for walking into the village from wherever his snowmachine broke down. The village recognizes this as an important organization, but there is little information on its actual functioning, as few meetings and no searches have been observed in Nuiqsut and written documentation is quite sparse.

### I. Public Safety

Since the community of Nuiqsut has had only one Public Safety Officer (PSO) for most of its incorporated past, relatively little attention has been devoted to the history, organization, and activities of public safety in the community. Galginaitis et al. 1984 did provide data on the number and type of criminal offenses by month for the years 1981 and 1982. They also provide data obtained from the North Slope Borough Department of Public Safety on the number of service calls and court cases filed by month over the same period. The major public safety issue in the community appears to be the problem of alcohol abuse, which is examined at great length in Galginaitis et al. 1984 and summarized in Galginaitis and Petterson 1985.

In 1989 there were two PSOS stationed in Nuiqsut. As is so often the case, however, one was out of the village, so that effectively there is most often only one officer in Nuiqsut at any time. This PSO is at present the only Inupiat PSO on the North Slope. There have been other Inupiat PSOS, serving mainly in Barrow, but they have usually felt it necessary to resign after serving a number of years. The PSO in Nuiqsut is considered a very capable fellow and it is still early in his career. His superiors feel that he does need a fair amount of training as yet, but that he has the potential to be a fine PSO. They are somewhat uncertain about the wisdom of policing a predominately Inupiat community with Inupiat PSOS, however, as they realize the pressures that they are subject to. A PSO represents a power from outside of the village, which often must enforce rules and procedures foreign and sometimes even diametrically opposed to those espoused by villagers. A PSO who is not of the village can enforce such regulations and at the same time be accepted as a functioning member of the community in a social sense (although he will never be considered a full member of the community). An Inupiat PSO, on the other hand, faces the constant community question of to whom his primary loyalties lie, as few Inupiat subscribe to a view that a proper accommodation between mainstream American culture and Inupiat culture has been arrived at. The

pragmatic realization of this pressure is that this PSO has only served in his home community, Point Hope, while on temporary duty assignment, even though he has asked to be assigned there OKI a permanent basis. He believes that he could adequately perform his duties there, even given the pressures of having many close relations there. Only time will provide the information to examine this question.

## J. Schools

1. Overview

Almost all of this information is derived from Galginaitis et al. 1984. This source is supplemented for the time since that report with information in Galginaitis and Petterson 1985 and fieldnotes collected by Galginaitis on a brief research visit in 1989. Citations have been kept to a minimum, but unless otherwise indicated, the reader can assume that Galginaitis et al. 1984 is the source used.

The development of the school system in Nuiqsut has closely followed that of the city itself. This could be expected, as one cause of the "abandonment" of the Nuiqsut area as a permanent residence was the requirement that all children attend school. The only practical way to achieve this at the time was for most people to move into Barrow or other municipalities with BIA or other schools. When the North Slope Borough was formed and assumed responsibility for the educational function this policy of centralized education was reversed. As a direct consequence, the outlying "traditional" villages were again viable as population centers. Families with children once more found it possible to live there permanently.

The first formal school in Nuiqsut was established by Mary Eleanor Tener (later Sanders), a non-Inupiat Presbyterian missionary. She first went to Nuiqsut in November 1973 as a volunteer worker for the Presbyterian church. She was then convinced to stay for four to six weeks as an employee of the NSB, to help set up the school. As no one else was available to take over after the six weeks passed, she agreed to stay the year (Tener 1974).

Ms. Tener did not teach classes herself, serving more as a principal/administrator/facilitator. She supervised the classes, which were actually taught by five Inupiat women using correspondence course materials supplied through the Alaska State Department of Education. There was no school building as such. Everyone was living in tents at the time and classes were held in the tents of the teachers. These tents at times became very crowded. The first school building was completed in late March 1974. This allowed all classes to be moved from tents into that building, trailers, and the Inupiat Builders annex (which had also been completed by that time). Other school buildings were completed late that May. Ms. Tener stayed through the school year as the supervisor and led church services much of the time as well (Tener 1974). Many people in Nuiqsut remember her fondly -- as a teacher, a supervisor, a spiritual helper, and a good neighbor. She not only ensured the support of the village for the school system well into the future, but also was quite important for establishing and reinforcing the Presbyterian identity of Nuiqsut as a community.

In the fall of 1974 the school opened with new buildings and a new staff. The entire staff (a principal and five teachers, one who would remain only three months) were all non-Inupiat. Additional teachers' housing was built in the summer of 1975 and two non-Inupiat teachers were

added to the faculty in the fall. An additional non-Inupiat teacher was hired the next spring. Two non-Inupiat teachers apparently left during this year as the staff size was fixed at six. Five of the six did not return for the next school year, 1976/77. The principal and four other teachers were new to Nuiqsut. All were again non-Inupiat.

There is no information for the 1977/78 school year. Turnover seems to have remained high. Only two staff members were retained for 1978/79 from the year before, one as a teacher and the other as a principal. There were six additional non-Inupiat teachers and one non-certified Inupiat teacher. The Inupiat teacher was a local graduate and taught Inupiat culture courses. Only the Inupiat teacher and two non-Inupiat teachers continued on the staff the next year (1979/80). Information for 1980/81 is missing, but for 1981/82, five new non-Inupiat faculty members were hired to replace people who left, so that once again staff turnover was quite high. An additional Inupiat teacher was hired to bring the total staff size to 12.

In 1982/83, most of the students' attitudes towards the school seemed to range from neutral to hostile, with most in the higher grades being bored or apathetic. Elementary classes were more energetic. Gym was everyone's favorite class, however, and attendance before lunch was usually low (informant information confirmed by observation). Because of this, teachers never planned anything vital for the morning. Many students perceived the school primarily as a place to eat a free hot lunch, to play basketball, and as a place to be free of home influences. One of the most effective sanctions teachers had (and still have) is that of denying students access to free recreational periods. The primary identification of the school at this time was recreational and social rather than educational.

Research in 1985 suggested that this pattern may have altered (but see the discussion below). Staff turnover the previous two years had been less than 15%, compared to a rate of 70% prior to 1983 (Galginaitis and Petterson 1985). Attendance was averaging in the 94-96% compared to 86% for the earlier period (although there are severe problems with the formal attendance records of the NSBSD). Discipline problems in the school had declined and achievement scores had increased. Invariably these improvements were attributed (by villagers, by central NSBSD staff in Barrow, and by the Nuiqsut staff members themselves) to the staff of the school, which was essentially completely new two years before (Galginaitis and PetterSon 1985). Unfortunately, only two members of the staff returned for the 1986/87 school year and apparently some disciplinary problems had resurfaced at the school (NSBSD 1987).

A 1989 conversation with the principal of the school (different from that of 1985) revealed that while the school is undoubtedly improved since the years before 1983, certain fundamental problems remain the same. The staff is completely different from 1985 and the principal estimates that it averages 25% turnover a year (which he reports as the NSB average). He considered this higher than he would like, but could see few practical ways to reduce it further. It will still be some time before there are a significant number of state-certified Inupiat teachers. He himself had been in Nuiqsut two years and intended to leave after that year. He reported, but did not describe in detail, that he had been hired to come to Nuiqsut to "build a program and establish a new school atmosphere." Achievement scores have been rising in Nuiqsut (although they are still not competitive with statewide scores). The principal considered that his mission. In his view, the first need is to establish good attendance and discipline in the school, since you cannot teach students

who are not there or who are problematic. Apparently this had been accomplished before he got there. The next need is to build a staff and a program, which he considers is well in progress.

Whether the school in Nuiqsut has "turned the comer" and can now be expected to steadily improve in terms of achievement is still an open question. Given the dramatic improvement between 1982/83 and 1985/86, followed by the apparent relapse in the two years after, once that staff started to leave, it seems that no change can be considered more permanent than the people who institute it. So far, faculty turnover has been an unalterable fact of life in Nuiqsut, as it has been for the North Slope in general. Non-Inupiat teachers are generally hired as couples, generally stay one to three years, and often leave the NSB after that time. Sometimes they will transfer to another village. Rarely will a teacher remain in the same village for over three years. The experience in Nuiqsut seems to demonstrate that the performance of the school is directly related to the rate of this turnover. Clearly a turnover rate above 25% a year spells trouble, and there are years when it is not possible for the central administration in Barrow to keep turnover at or below these levels with current recruitment and personnel policies.

School enrollment in Nuiqsut for the first year of operation was estimated at 62. Enrollment for 1975/76 was approximately 68, for 1978/79 it was 54, and for 1982/83 was approximately 85. As soon as school buildings were constructed, they were also used as recreational centers, as they were really the only public buildings in the community. Dances, games, movies, and other activities were held in these multi-purpose buildings after school hours. Once the new school was built, most of these functions moved there. The new school has a large gym, a library, good-sized class-rooms, an excellent shop, and a small swimming pool. The old school buildings were converted to other uses (storage, a restaurant, and community activities such as bingo). These recreational functions, and the operation of the school itself, are of great value to the village.

### .2. School Issues in Nuiqsut

The program for the Nuiqsut school, as for all North Borough Schools, is set by the central school board in Barrow. This is an Inupiat board, but is advised by non-Inupiat staff and must act in accordance with state regulations. The resulting program is predominately what would be expected in a high school anywhere else in the United States. Courses or sequences of courses relating specifically to the North Slope or Alaska are not as prominent as the NSB'S rhetorical commitment to them might imply. Inupiaq is taught from the early grades, but few students speak it fluently unless they have learned it at home. The Alaska Native Claims Act class is taught from a series of simplified pamphlets by a non-Inupiat teacher and little connection between it and what is now occurring in Nuiqsut is made by the students. On occasion Kuukpik Corporation officials will speak at the school, but not on any regular basis or as part of a systematic course. The student corporation, conceived of originally as an organization parallel to the village corporation and a potential training ground for it, has failed in most of its roles other than as a student fund-raising entity. Inupiat culture courses are relatively popular but do not really serve to transfer the living essence of the skills involved, as the skills are taught as ends in themselves and not as functional ways to accomplish certain tasks within a real-life context. Little skin sewing or other craft activity takes place outside of these classes. Thus, the school in Nuiqsut is little different from what was found in Kwethluk, Tuluksak, and Bethel by John Collier Jr. in 1973 (Collier 1973).

Interestingly enough, the satisfaction of Nuiqsut people with their school seems to be inversely proportional to the size of the investment in its physical plant. Of course, along with this investment came a largely non-Inupiat faculty (with a variable use of Inupiat teacher aides), a closer supervision of what was being taught from Barrow, and increased size. The nostalgic remembrance of the first year in Nuiqsut also works in favor of the tent school. Nonetheless, it appears clear that Nuiqsut villagers remember the early school as better suited to their needs, and more responsive to their desires, than the present system. Some teachers feel that present students see the school as a resource-rich intrusion to be plundered whenever and however possible, either because it belongs to outsiders or to no one in particular. Students do not see it as "their" or Nuiqsut's school, although the degree to which this is obvious vanes in an irregular cyclical fashion.

The first school was operated with one non-Inupiat supervisor and five or six Inupiat teacher aides, and two Inupiat maintenance men. The school in 1983 employed twelve teachers and administrators, two Inupiat and ten non-Inupiat, and five Inupiat maintenance people with a non-Inupiat supervisor. The present staff is about the same size. An Inupiat secretary and a non-Inupiat study hall supervisor were also on the staff. Up to five Inupiat teacher aides are provided for in Nuiqsut's school budget, but rarely are all of these positions filled. Qualified villagers, for whatever reason, have not wanted to serve as teacher aides. There are thus a number of significant issues that our discussion has so far raised: 1) a lack of Inupiat teachers, 2) rapid turnover of non-Inupiat teachers, 3) little success in the recruitment of Inupiat teacher aides, 4) rapid turnover of teacher aides, and 5) lack of local control over programmatic and hiring decisions. All reinforce the perceived separation of the school and the village. Another issue maybe the rigid time constraints imposed by the school in comparison to the greater flexibility of the original tent school.

Teachers interact very sparingly with Inupiat residents, at least in part due to the great demands placed upon their time. The size of the faculty allows for little or no duplication of skills. Each teacher has a full day's responsibility every day. The absence of a teacher due to illness can be covered, but usually disrupts active learning for at least that day. The use of the school as a recreation center also consumes a good portion of the staff's time. They serve as coaches and supervisors for many of the activities and on all of the sports teams' trips to other villages. This gives teachers the opportunity to earn additional income, but also increases their desire for privacy outside of the work situation. It also reinforces the pattern of non-Inupiat teachers working on the North Slope only long enough to save a nest egg by working long hours until they bum out, and then leaving for a location more to their liking. The lack of school-village interaction is inherent in the structure of the system. Short-term teachers with severe time constraints and no Inupiaq language skills simply cannot "know" the village outside of the school. Most teachers spend their vacations and breaks outside of the village, which also limits their interaction with Inupiat residents.

Teachers in Nuiqsut in 1982/?33 were said to "enclave" themselves. This is still basically true, although at least certain teachers strive to take part in some community affairs. One couple sponsors a religious fellowship group every week. Overall, however, their interaction with and influence on the community is minimal. This may seem paradoxical, since education is considered one of the vital community responsibilities in American culture at large. While the school as a formal institution is very strongly supported in Nuiqsut, apparently the formal education it provides does not hold such a position, at least not yet. The idea of the importance of education is

accepted, but not necessarily of the education that students are receiving. This may change as more students graduate. They will either stay in Nuiqsut, go elsewhere looking for work, or go to college. The first and the last could result in a closer relationship between the village and the school, especially if Inupiat teachers were eventually hired. Those who have gone to college or for other post-secondary schooling have not had a great success rate so far, however, and those graduates who have remained in Nuiqsut are for the most part doing pretty much what non-graduates do. It is not at all clear that having a high school diploma from the school in Nuiqsut makes that much of a difference at present. If graduates leave Nuiqsut to find opportunities, it would mean that the education is useful to them, but not in the context of the village. The implications of this are not clear, but would not necessarily call for a change in the educational program.

Teachers in Nuiqsut do not voice public opinions on the educational goals of the school precisely because of the sensitive topic of Inupiat identity and cultural transmission. They feel that their job tenure is tenuous enough as it is and that there is no consensus as yet among the Inupiat as to the proper form for a formal Inupiat education. In this they seem to be correct. There is as yet no operational Inupiat consensus. This only serves to further isolate the teachers from the village. Pragmatically, teachers have little say in setting educational policy and do not want to disagree with it in public as the same board which sets policy also hires (and fails to rehire) teachers. The role of the central board is also perhaps one reason why so few local Inupiat are involved in local school issues.

Non-student villagers avoid the school for the most part. Employees, the Presbyterian minister, the mayor, and occasional elders are the only Inupiat adults in the school during school hours. The school is used for public meetings, clubs, and community feasts and celebrations, but then non-Inupiat tend to be absent. Parents of students have surprisingly little contact with the school, although this varies with the staff. Some encourage more parent-teacher conferences than others. This is one cause for teacher disquiet. They feel much of the support they need from the families of their students is not consistently there. How to generate such support from families who are often unaware of what the school is about, it being totally alien to their experience, is a difficult question. The school advisory board, made up of Inupiat village residents, holds monthly public meetings. Few people come, however, and most people who do come merely to listen. Local people say that the School Advisory Council(SAC) is powerless in two respects. The school board in Barrow really makes all the decisions, and even in purely local matters they say that the principal (whoever he may be) tends to act or decide and only consults the SAC after the fact. Principals tend to justify such behavior by the lack of attendance at SAC meetings and the difficulty of arranging for a meeting and actually trying to come to a public decision. Sometimes it almost seems to be a vicious circle of fulfilled expectations.

The close identification of the school with community recreation is not an inevitable one, but certainly seems to be persistent. The recreation facilities at the school are those used most frequently by the greatest number of people. This did not change even after the community center was built. It is open fewer hours and offers much less active recreation. Furthermore, it is commonly believed that recreation in general, and basketball courts in particular, are the school's responsibility. There are plans for an outside playground, but this was not final as of the summer of 1989. Hiring non-teachers to supervise recreational programs may be one way to sever the community connection between the school and such programs. While this may seem an ideal way

for teachers and community to interact, experience does not seem to bear this out. Rarely do people over the age of 25 go to recreation, and these duties occupy a fair amount of teachers' time. Freeing them of this responsibility would give teachers time to interact with villagers in unstructured ways and also enable (force) villagers to take at least partial responsibility for their school. There seems to be little support for such a change.

The gulf between the village and the school in Nuiqsut appears to be very real (although the width of that gulf of course varies over time). Note that this is not related to either teacher quality or educational quality, neither of which we are qualified to evaluate and neither of which was considered above. Everyone is acting with the best of intentions. There may be additional factors, but we camot say. What does appear as the vital issue to us is the lack of Inupiat involvement with the school and the resultant lack of relevant Inupiaq content in the program of study. The schools would seem to need to more clearly relate traditional Inupiat values to present-day Inupiat life opportunities. This is, unfortunately, far from a simple matter.

The school attendance records for kindergarten through high school are shown in Table 44-NQT for the academic years of 1980/81 through 1982/83.

## Table 44-NQT

## Nuiqsut School Attendance

| | 08/20/80-05/19/81 | 08/18/81 - 05/26/82 | 08/23/82-10/27/82 | Total |
|---|---|---|---|---|
| Kindergarten | | | | |
| ADAb[1] | 158 | 117 | 77 | 352 |
| (% of ADM) | (16%) | (26%) | (19%) | (19%) |
| ADAt[2] | 831 | 332 | 334 | 1,497 |
| (% of ADM) | (84%) | (74%) | (81%) | (81%) |
| ADM[3] | 989 | 449 | 411 | 1,s49 |
| Elementary | | | | |
| ADAb[1] | 363 | 451 | 94 | 908 |
| (% of ADM) | (9%) | (8%) | (9%) | (9%) |
| ADAt[2] | 3,610 | 5,050 | 952 | 9,612 |
| (% of ADM) | (91%) | (92%) | (91%) | (91%) |
| ADM[3] | 3,973 | 5,501 | 1,046 | 10,520 |
| High School | | | | |
| ADAb[1] | 1,441 | 1,456 | 177 | 3,074 |
| (% of ADM) | (16%) | (16%) | (9%) | (15%) |
| ADAt[2] | 7,538 | 7,602 | 1,729 | 16,S69 |
| (% of ADM) | (84%) | (84%) | (91%) | (85%) |
| ADM[3] | 8,979 | 9,058 | 1,906 | 19,943 |
| TOTAL | | | | |
| ADAb[1] | 1,%2 | 2,024 | 348 | 4,334 |
| (% of ADM) | (14%) | (13%) | (10%) | (13%) |
| ADAt[2] | 11,979 | 12$S4 | 3,015 | 27,978 |
| (% of ADM) | (86%) | (87%) | (90%) | (87%) |
| ADM[3] | 13,941 | 15,008 | 3?363 | 32,312 |

[1] Aggregate Days Absent
[2] Aggregate Days Attendance
[3] ADM = ADAb + ADAt

Source: Galginaitis et al. 1984.

## SECTION IV: CULTURAL ISSUES AND INFORMAL INSTITUTIONS

### A. Patterns of Change in Informal Institutions

An historical perspective on informal institutions, including subsistence activities, kin groups and sharing, and voluntary associations, may be gained from information provided in early accounts of the area (Jenness 1957; Helmericks and Helmericks 1948, 1949) and from more recent studies of the Inupiat residents of the area (NSB Planning Commission and Commission on History and Culture 1979; Hoffman et al. 1978, 1988; Okakok 1981; Kruse et al. 1983). Galginaitis et al. 1984 contains a particularly insightful examination of changes in values of Nuiqsut residents, represented in the growing involvement of women in the wage economy, changes in male and female roles, and increasing formalization of leadership positions in the community. Some of that information has been summarized above, but is more properly a part of the comparative discussion.

### B. Subsistence

A detailed picture of historic land use and subsistence activities in the Nuiqsut area can be obtained from early accounts of the area (Jenness 1957; Helmericks and Helmericks 1948, 1949) and from land use inventories of the North Slope Borough (Hoffman et al. 1978; NSB Planning Commission and Commission on History and Culture 1979). These sources provide an inventory of traditional subsistence resources, identify traditional forms of the annual subsistence cycle, document the technology used and the growing role of cash for the purchase of modern subsistence technology, and examine the kin relations of early subsistence users. Land use maps indicating the traditional geographic range and sites of each of the major forms of subsistence activity maybe found in NSB Contract Staff 1979. There is some indication that the graphic form of the yearly cycle which accompanies this map may be somewhat misleading. Informants say that subsistence activity from year to year is very variable, depending on weather conditions, the distribution and availability of animals, wage labor activity, personal health, other familial obligations, and other factors. Thus, any one year can differ greatly from the "typical" yearly cycle. What is graphically depicted is the time when resources have been harvested in the past. This by no means represents a behavioral yearly cycle, either for individuals or for the village as a collective whole. It perhaps can be used to put some outer limits on the nature of activities likely to take place at any given time, but even in a normative sense has little more force than that. It is also apparent from the reports of active subsistence hunters that patterns of activity may have changed since 1979, but the degree of this is unknown.

An account of contemporary subsistence activities and their organization into an annual cycle may be obtained from Galginaitis et al. 1984 and Hoffman et al. 1988 (first printed 1978). The latter source provides a well-documented account of the use of cash for the purchase of subsistence technology and examines issues relating to technology and land use in the form of detailed case studies. Their yearly cycle graphic is also what is most commonly referred to for Nuiqsut. Galginaitis et al. 1984 is less useful in terms of harvest activity itself, but does provide data on consumption of subsistence resources. Information on the percentage of food derived from subsistence activities as opposed to the percentage of food purchased at the store was collected from a sample of households differentiated by size, household composition, and per capita income. This is comparable to information collected in 1988 by the NSB census (Table 45-NQT). The

Nuiqsut Case Study (Galginaitis et al. 1984) goes on to examine the role of cash in the subsistence economy, particularly with reference to the time spent between wage employment and subsistence activity, and the purchase of modern technology for subsistence use.

What emerges is a rather complex relationship between subsistence resource harvest activity and wage labor. Cash is now a necessary commodity for the purchase of equipment used predominately (but not exclusively) for subsistence pursuits. There is no longer, if indeed there ever was, separate "subsistence" and "cash" economies. Those who are most active in the wage labor also tend to be those most active in subsistence harvest activities, when measured by levels of resources harvested. These same hunters may actually spend less time in subsistence pursuits than other hunters who do not have access to the same amount of cash or the equipment of similar quality. Money is being used to buy at least a certain amount of time and efficiency (and to substitute for a certain amount of expertise). There is also information that hunters may be specializing more in the pursuit of preferred subsistence resources, which incidentally require more equipment, or more expensive equipment, and are less "cost effective" in a strict accounting sense (Bowhead whale and caribou rather than seals and fish). This is supported by the results of the latest NSB census, which shows that households with higher average incomes also report deriving a larger percentage of their diet from subsistence resources, and also participate in the sharing of such resources, more than households with lower incomes do.

A third topic addressed in this study is the role of women in the subsistence economy. Again, this can be no more than summarized here. Men are still perceived as the main providers for households and tend to work at full-time, permanent "blue collar" service jobs (utilities, public works, equipment maintenance) or at seasonal construction jobs. Few women work in these occupations. Women tend to work at more part-time positions in "white collar" (and lower paying) service jobs such as store clerks, secretaries, health aide, teacher's aide, and so on. Women tend to have more formal education than men, who tend to have positions where on-the-job training and fitting in to the work group is often more important than prior expertise. There also seems to be support in Nuiqsut for the hypothesis that Inupiat women are more predisposed to seek education and better able to qualify for job opportunities in larger communities (Barrow, Fairbanks, Anchorage) than are Inupiat males (Galginaitis et al. 1984; Kleinfeld et al. 1981).

### C. Traditional Sharing and Kinship Behaviors

A historical perspective on kin relations of Inupiat who either lived in the Nuiqsut area or used the surrounding land for subsistence activities may be found in a number of sources. Brown 1979 is a summary history aimed at addressing the local need for a community history. Information on specific families during the first two decades of this century may be found interspersed in Jenness 1957. The books of Constance and Harmon Helmericks (1948, 1949) deal with the post-war era, and Smith 1980 and Okakok 1981 contain information from 1945 to the early 1970s. These sources also provide information on the ideology and behavior of kinship and sharing.

## Table 45-NQT

### Nuiqsut Household Characteristics -1988
### By Levels of Subsistence Participation

| | DEGREE OF SUBSISTENCE PARTICIPATION | | | |
|---|---|---|---|---|
| | MINIMAL | MODERATE | ACTIVE | ALL HHs |
| **Average HH Income ($):** | | | | |
| Inupiat HHs | $26,833 | $37,500 | $37,237 | |
| Non-Inupiat HHs | $93,125 | | $111,667 | |
| All HHs | $40,789 | $37,500 | $42,683 | $41,731 |
| Cases: | 19 | 5 | 41 | 65 |
| **Average HH Size (# Persons per HH):** | | | | |
| Inupiat HHs | 3.2 | 3.6 | 4.8 | |
| Non-Inupiat HHs | 1.6 | | 2.0 | |
| All HHs | 2.8 | 3.6 | 4.6 | 4.0 |
| Cases: | 23 | 8 | 46 | 77 |
| **Average Meat & Fish Csmptn from Own HH Subsistence (%):** | | | | |
| Inupiat HHs | 7.8% | 32.5% | 72.2% | |
| Non-Inupiat HHs | 0.0% | | 53.3% | |
| All HHs | 6.1% | 32.5% | 71.0% | 47.6% |
| Cases: | 23 | 8 | 46 | 77 |
| **Average Meat & Fish Csmptn from Other HH Subsistence (%):** | | | | |
| Inupiat HHs | 17.9% | 19.4% | 17.0% | |
| Non-Inupiat HHs | 0.0% | | 0.0% | |
| All HHs | 14.6% | 19.4% | 15.9% | 15.9% |
| | 22 | 8 | 46 | 76 |
| **Average Meat & Fish Harvested and Given Away (%):** | | | | |
| Inupiat HHs | 22.5% | 26.3% | 39.4% | |
| Non-Inupiat HHs | 0.0% | | 8.3% | |
| All HHs | 18.4% | 26.3% | 37.4% | 30.7% |
| Cases: | 22 | 8 | 46 | 76 |
| **Average Proportion HH Income Spent in Village (%):** | | | | |
| Inupiat HHs | 52.1% | 61.3% | 60.0% | |
| Non-Inupiat HHs | 7.5% | | 6.7% | |
| All HHs | 43.6% | 61.3% | 56.5% | 53.4% |
| Cases: | 21 | 8 | 46 | 75 |

**Notes:** Degree of subsistence participation measured on the basis of how much HH meat & fish consumption was from the HHs own subsistence activities; where

MINIMAL: Under 20% meat& fish from own HH subsistence
MODERATE: 20-40% meat& fish from own HH subsistence
ACTIVE: Over 40% meat& fish from own HH subsistence.

Total cases (households). 81.

Source: NSB Department of planning and Community services
Census of Population and Economy

The social history and kinship relations of the residents of Nuiqsut are well documented in Galginaitis et al. 1984. This report traces kinship ties of the original settlers of Nuiqsut in 1973 to the pre-1940s populations. Kin relations as they relate to political activity, subsistence activities, marriage, residence, and sharing are thoroughly examined in this report. These discussions are not easily summarized. A few general statements are made below, but the interested reader is referred to the Nuiqsut Case Study (Galginaitis et al. 1984) for a fuller discussion. Also examined in that report are male and female statuses and roles in the community. More general discussion of patterns of sharing, affiliation and descent, and the ideology of kinship and sharing, maybe found in Burch 1975.

Kinship is a key organizational aspect of Nuiqsut, although it has been modified by other formal institutional demands in the recent past. Local politics, and to a large extent local participation in regional politics, is most often explained in terms of kinship. Factionalism is quite evident in Nuiqsut and people are quick to point out the family groups involved. There is also some tension between the city and the corporation, sometimes made evident as the interests of non-shareholder residents versus shareholders. This is not an obvious distinction, however, as not everyone with a primary orientation toward the Nuiqsut land use area is a Kuukpik Corporation shareholder. Many people registered as residents of the "wrong" community for ANCSA due to time deadlines. Certain people are known as "Barrow" people as opposed to "Nuiqsut" people and others are put in still other categories. Most of this reduces to kinship and historical land use patterns of one's parents.

Kinship also determines to a large extent who one engages in subsistence activities with and who one exchanges resources with as a matter of course. Friendship also plays a strong role, especially for young men, in these decisions. This is mainly a discretionary role, however, as opposed to the fundamental and required basis provided by kinship obligations. The mobilization of kinship ties is the easiest way to achieve most goals in Nuiqsut. Borrowing most often seems to occur between kinsmen.

## D. Attitudes Toward Development

Two specific subjects are discussed within the context of community attitudes towards development in Galginaitis and Petterson 1985: concerns over the effect of oil-related development on subsistence resources and activities, and the cost of food and oil in the region. Information from the Nuiqsut Case Study (Galginaitis et al. 1984) is also pertinent, although less focussed on this topic. The potential effects of OCS activity on subsistence resources and the impact of rapid change on traditional Inupiat identity of Nuiqsut residents are examined in Brown 1979. Some of this information will be summarized in this section, but the interested reader is referred to those sources.

### 1. Development Effects on Subsistence in Nuiqsut

Oil exploration and development has occurred and will continue to occur in some of the richest subsistence range used by the inhabitants of Nuiqsut. The development that has so far most directly affected Nuiqsut, the Kuparuk oil field to the east, is luckily in the direction of the least

densely concentrated subsistence resources. Exploratory activity surrounds Nuiqsut, however, and it is not unrealistic to expect that the community maybe surrounded by development at some future date. The Endicott field potentially affects the Colville fishery, and other potential developments will have impacts on productive fish and caribou harvesting sites.

The experience of the past has been that once an area is developed by the oil industry that Nuiqsut hunters tend not to hunt that area. Hunters do not feel comfortable doing so and attribute this to the oil companies' efforts to have hunting restricted in these areas. Inupiat know that they are entitled to hunt in these areas, but feel uncomfortable doing so knowing that the oil companies prefer that they do not do so. Hunters report subtle (and not so subtle) pressure to discourage them from hunting in areas developed by the oil industry. A small minority of Inupiat may purposely hunt near oil development areas to attempt to upset the oil people, but only a very small number.

In practical terms, it is also true that the physical characteristics of a developed oilfield are hard on equipment used for subsistence. The gravel roads are built well above the tundra, often making straight-line travel difficult or impossible. Crossing such a road requires a sharp ascent followed by a sharp descent, often with a fully loaded sled under conditions of limited visibility. The truck traffic on the road adds to the stress of such crossings. The pipelines used to collect and transport the oil also create travel barriers. They are too low to go under and often require extensive detours. Machines are thus subject to increased usage in these areas. Besides this, machines used in such areas also wear out faster. The gravel used in the construction of the roads and other facilities in these areas spreads easily and increases wear on snow machine treads, sleds, and other equipment. Dust from the road requires that everything be cleaned more often than it would otherwise and can shorten the effective life of subsistence equipment.

The areas of most immediate concern are the Colville delta area (one of the most productive fisheries on the North Slope) and the Teshekpuk Lake region (important for caribou and water fowl, as well as general hunting). If these areas are lost for subsistence purposes, Nuiqsut people would be confined to going south. This would not be acceptable, and known (capped) oil sources are known to exist in that direction as well. Nuiqsut residents are also well aware of the exploratory well drilled near Fish Creek, a popular and productive fish and game area northwest of Nuiqsut. Results from this test well have not been released to the public.

2. Development and the Cost of Living

Nuiqsut was formed, at least ideologically, as a village where it would be possible to live a subsistence life style. Oil development has historically been perceived as antithetical to this. The situation has become somewhat more complex as it has become clear that the NSB does have limits on the amount of money that it can devote to support Nuiqsut. Most people now accept that subsistence and development cannot be considered mutually exclusive, and indeed that a compromise position incorporating the existence of both is required for the continued health of Nuiqsut and the NSB as a whole, at least in its present form. This is not to say that there is any sort of agreement on the form that this 'compromise" should or will take. The process of reaching such a position is one that will never be final, and is a process rather than a final goal. Certain issues can serve as examples of the process, however.

People in Barrow, because of Barrow's proximity to natural gas fields, use gas to heat their homes. People in the outer villages must use diesel to do so. Natural gas is significantly cheaper than diesel, and is certainly much less trouble. Gas is odorless, whereas diesel is not. The result is that, given a choice, any NSB resident would choose gas over diesel. The NSB subsidizes the purchase of diesel for residential heating purposes in the outer villages, but even so the cost to the resident family is still higher than to families in Barrow. In Nuiqsut, this has led to the question of why gas is not available in Nuiqsut, when the Kuparuk oil field is so close. One of the village's top priorities has been a feasibility study of such a gas pipeline. In theory, such a study was done and found that the cost would be too high (basically because the population of Nuiqsut is too small to make the pipeline pay off in a reasonable length of time). Residents in Nuiqsut tend not to accept this conclusion and continue to press for a gas pipeline. Even if it is not economical to build a pipeline, many feel that it is something that is perhaps owed to them -- a way that they can share directly in the benefits of oil development near their community. These informants believe that they have so far borne many of the non-economic, and thus non-recompensed, effects of oil development (see the subsistence section above) but have received none of the benefits. This would be one way to start to even the score, in their view.

The question of a permanent road linking Nuiqsut with Kuparuk (and Prudhoe, Fairbanks, and points south) has a similar history. There is less agreement in the village on support for such a road, however, and this support has not been constant through time. At present (1989), local support for a road does not appear strong. The potential negative impacts of increased pressure from sport hunters, increased access to drugs and alcohol, environmental problems associated with the several water crossings involved (especially the Colville), and the cost of the project outweigh the positive benefits. It is admitted that a road would reduce the cost of goods in Nuiqsut, ensure a more stable supply of fuel oil and other heavy material, and make working in the oil fields easier for Nuiqsut residents. These benefits are what encouraged people to push for a road in the first place. As time went on, however, the potential negative aspects have caused many people to rethink the road issue. As with almost any issue, there are also rumors that the road is simply another one of those situations used by the NSB and the oil companies to try and win a concession from the other. Some say the NSB wants the oil companies to pay for the right to explore and develop in such an environmentally sensitive area, but that if the road is built that a development precedent will have been set that the oil companies will be able to use, without paying the NSB a significant fee. The truth is impossible to know in such a case, and is probably not too influential in any event. Most people seem to think a road would have more negative influence than positive.

Nuiqsut is connected to Prudhoe in the winter by an ice road. This has most of the advantages of a permanent road and few of the disadvantages. With proper planning, a year's supply of diesel and other heavy goods could be trucked over the ice road. This has indeed been the plan for the last several years, but there are often problems which arise that prevent this from happening. In any event, the ice road exists at a time of the year when few sports hunters want to visit Nuiqsut. In theory, drug and alcohol traffic could increase because of the ice road but in practice most major drug dealers and many bootlegged in Nuiqsut have essentially been "outsiders" with easy transportation into and out of the village (a common pattern on the North Slope). As with sports hunters, they flourish more in the summer than the winter. The ice road also provides annual jobs for locals in its construction and maintenance. All-in-all, most local Nuiqsut people are probably satisfied with the status quo in regards to the road.

## E. Attitudes Toward Local Control of Schools

Although the existing literature does not refer to local control of schools per se, the issue of the role of the school in the community has been examined in Galginaitis et al. 1984 and Galginaitis and Petterson 1985. These sources document the change in community perception of the school from being an outside institution in 1982 to a fundamental part of the community in 1985. Reasons for this change are not given, however.

## F. Secularization

Secularization of community life is examined in the larger context of the role of religion in community life found in Galginaitis et al. 1984. Beyond this discussion, however, there is little in the published literature which addresses the issue of secularization in Nuiqsut per se.

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# APPENDICES

**Appendix A**
**List of Primary Occupation Categories**
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## APPENDIX A

## LIST OF PRIMARY OCCUPATION CATEGORIES
**NSB Census of Population and Economy**

**Executive, Administrative, Managerial**

| | |
|---|---|
| **Professional** | Lawyer |
| | Doctor |
| | Engineer |
| Teacher | |
| Teacher's Aide | |

**Support**

| | |
|---|---|
| **Technician** | Surveyor |
| | Health Aide |
| Administrative Support | Office Worker |
| | Clerk |
| | Secretary |
| Service | Care-giver |
| | Guide |
| | Hotel |
| | Police |
| | Restaurant |
| | Janitor |

**Construction, Trades**

| | |
|---|---|
| Operator | Heavy equipment |
| | Machinist |
| | Truck driver |

## LIST OF PRIMARY OCCUPATION CATEGORIES
## NSB Census of Population and Economy

| | |
|---|---|
| Pilot | |
| Laborer | Semi-skilled general construction work |
| Craftsman | Foreman<br>Plumber<br>Carpenter<br>Electrician |
| **Other** | |
| Artisan | Ivory carver<br>Mask or basket maker<br>Skin sewer |
| Armed Forces | National Guard |
| Trapper, Hunter | |
| Houseperson | Takes care of family |
| Other | |
| **Not in Labor Force** | Retired, Disabled, or Does Not Want Job<br>Student |
| **Unemployed** | |
| **Underemployed** | |

[1]"Underemployment" included in "Other" category when not otherwise accounted for in a more defined labor classification.

## APPENDIX B

### LIST OF PRIMARY INDUSTRY CATEGORIES
### NSB Census of Population and Economy

Fisheries
Mining (Oil, Coal, Hardrock)
Construction
Transportation, Communication, Public Utilities
Trade (sells goods)
Finance, insurance, real estate
Business and Repair Services
Entertainment, Recreation, Tourist Services
Health and Social Services
Legal, Engineering, and Other Professional Services
Educational Services
North Slope Borough (Specify Department)

| | |
|---|---|
| Health Department | **Mayor's Office** |
| Public Safety | **Law Department** |
| Public Utilities | **Admin & Finance** |
| Public Works | **Planning** |
| Fire Department | **Industrial Development** |
| Search and Rescue | **School District** |
| Wildlife | **Assembly** |
| RELI | **Mayor's Job Program** |

Other Local Government
State Government
Federal Government
Armed Forces
Native Village/Regional Corporation
Working without pay in family business
Other
Self Employed

## APPENDIX C

METHODOLOGY AND QUALITY CONTROL
NSB Census of Population and Economy

A considerable portion of the most current data published in this study is based on demographic and economic data collected by the North Slope Borough in connection with its Census of Population and Economy. The NSB Census project was designed and administered by the Department of Planning and Community Services in 1988-89. The NSB Census data are based on face-to-face household interviews conducted in all eight NSB villages between July 1988 and April 1989. The methods used by the NSB to collect and process these data are reviewed in this appendix.

### Interviewer Training and Public Outreach

The interview questionnaire used for the NSB Census was modeled in part after the federal census with adaptations consistent with the lifestyles of NSB residents. All NSB residential households were canvassed by interviewers hired locally and trained to administer an extensive interview questionnaire. Successful interviewer candidates completed a three-day training course that was conducted onsite in each NSB village by the project manager. Interviewer training involved (1) a review of general interviewer concepts and procedures, (2) a review of the NSB Census questionnaire, (3) practice interviewing, and (4) village mapping. A 25-page training manual was developed to facilitate training and as a reference document for interviewers.

Interviewer training was preceded by public hiring notices for NSB household interviewers and by a letter of notification about the NSB Census project from the NSB Mayor George Ahmaogak sent to all NSB households. In certain cases, interviewers from one village were sent to help facilitate completion of the face-to-face interviews in other NSB villages.

### Database Management

Townsite maps depicting the dwelling composition were used as the basis for defining the universe of households for each NSB community. These maps were available from the Department of Planning and Community Services Geographic Information System (GIS) Division. The GIS maps show the legal and physical layout of parcels in each townsite. These maps were divided into smaller geographic segments that functioned as management units for interviewer contact. The typical NSB village was divided into between six and eight geographic segments. Barrow, by far the largest NSB community, was divided into 36 map segments. A final step in interviewer training involved classifying dwellings according to their occupancy status: occupied residential dwelling, vacant residential dwelling, and commercial dwelling.

Face-to-face household interviews began in Anaktuvuk Pass in June 1988. Between June 1988 and April 1989, 1,581 household interviews were conducted by a total of 78 interviewers. The data from each household questionnaire were entered into a computer database using SPSSPC+ Data

Entry II software (see discussion below). These data were organized in community-specific computer files. The SPSS data entry software made it possible to replicate the form of the interview questionnaire on the compu-ter screen. This helped minimize page-by-page recording errors associated with hundreds of interview booklets, each having 175 variables. In addition, each variable in the data entry form was programmed to reject responses outside of an acceptable range, as dictated by the response codes in the questionnaire itself. The skip patterns implicit in the questionnaire were replicated in the data entry form as well. The data-entry staff were instructed to flag questions in completed interview booklets that were confusing or non-standard. Prior to data entry, completed interview booklets were logged for record-keeping purposes and edited for coding consistency. A preliminary report that summarized the results of the NSB Census was prepared in May 1989.

During July 1989 a series of steps were taken to ensure completeness and quality control. First, SPSS computer records containing demographic characteristics of cases (household members) were converted to a special computer database using software ("Q&A") that provided better search and update capabilities than those available in SPSS. These records were systematically checked against records contained in the physical completed interview booklets. (First and last names were recorded by the interviewer, however, names were specifically excluded from the SPSS data files that contain specific attributes of the individuals.) A data-entry technician cross-checked the birth dates (day, month, and year) in the computer database against records in the interview booklets. Discrepancies between information contained in the Q&A file and those in the physical booklets were noted. Such discrepancies typically included:

- **Missing cases for specific household members,**
- **Duplicate cases (within and across villages), and**
- **Missing or incorrect observations about specific cases.**

All discrepancies were. resolved by checking hard-copy records in the completed interview booklets. In some cases follow-up contact was conducted with respondent households.

Second, once all discrepancies outlined above were resolved, a final mapping inventory was conducted. Here, the physical addresses associated with completed interviews were recorded on the GIS townsite maps. These were classified as occupied residential dwellings. Windshield surveys were conducted in each community to classify the remaining structures on the maps as commercial structures, unoccupied structures (outbuildings, sheds, and warehouses), and vacant residential dwellings. In Barrow, about 75 unclassified structures emerged from this mapping inventory (those that appeared to be occupied but for which interviewer contact was not made). All unclassified residential dwellings were contacted by interviewers for follow-up interviews.

A total of 1,625 completed interviews were logged across the eight NSB communities. The number of completed household interviews in Barrow increased from 988 to 1031. Approximately 30 Barrow households refused to participate in the NSB Census. The NSB Census findings indicate a count of 61 vacant households in Barrow during the 1988-89 period. The incidence of vacancies in the remaining NSB villages was negligible.

Response rates for most questions in the NSB Census questionnaire were above 80%. For example, the relatively-sensitive, household-income question registered a total of 298 missing observations, representing 18% of total occupied households for the entire NSB region.

Third, diagnostic teats were administered to check for errors in content. Here a series of SPSS macros were developed that produced basic frequency distributions and cross-tabulations for a wide range of demographic and economic variables in the NSB Census database. The purpose of these tests was to expose inaccurate and inconsistent results and identify the study number and person number (ie., the case) for which an apparent error may exist. Discrepancies were cross-checked against hardcopy records in the interview booklets. For example, highest level of education was cross-tabulated with age. The study number and person number of (for instance) a seven-year-old high-school graduate would be reported and that case double-checked against actual hard-copy records; the age or education status would be corrected in the computer database. These procedures were administered systematically for NSB Census data in all eight NSB communities. Several hundred errors of this nature were resolved.

## HOUSEHOLD INCOME AND SPENDING -1988
## NSB **REGION**

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 239 | 28 | 267 | 20.1% |
| $20,000 - $40,000 | 257 | 78 | 335 | 25.2% |
| $40,000 - $60,000 | 191 | 112 | 303 | 22.8% |
| $60,000 & ABOVE | 171 | 251 | 422 | 31.8% |
| TOTAL | 858 | 469 | 1327 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 298 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 1s2s | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $44,582 | $73,323 | $53,188 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 62.4% | 30.9% | 53.3% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $354 | $623 | $442 |
| AVERAGE MONTHLY HEATING COSTS | $142 | $115 | $138 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $73 | $56 | $71 |
| AVERAGE FLOOR AREA (SQ FT) | 1,000 | 925 | 963 |

Notes: (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

## HOUSEHOLD INCOME AND SPENDING -1988
## ANAKTUVUK PASS

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 22 | 2 | 24 | 33.8% |
| $20,000 - $40,000 | 17 | 4 | 21 | 29.6% |
| $40,000 - $60,000 | 14 | 3 | 17 | 23.9% |
| $60,000 & ABOVE | 4 | 5 | 9 | 12.7% |
| TOTAL | 57 | 14 | 71 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 2 | |
| TOTALOCCUPIEDHOUSEHOLDS | | | 73 | |

| | VILLAGEHOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $31,447 | $52,321 | $35,563 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 67.4% | 23.1% | 57.6% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $113 | $494 | $190 |
| AVERAGE MONTHLY HEATING COSTS | $216 | $108 | $196 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $100 | $80 | $97 |
| AVERAGE FLOOR AREA (SQ FT) | 833 | 781 | 814 |

Notes: (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

## HOUSEHOLD INCOME AND SPENDING -198$
## ATQASUK

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 14 | | 14 | 31.8% |
| $20,000 - $40,000 | 16 | | 16 | 36.4% |
| $40,000 - $60,000 | 4 | 5 | 9 | 20.5% |
| $60,000 & ABOVE | 2 | 3 | 5 | 11.4% |
| TOTAL | 36 | 8 | 44 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 10 | |
| TOTAL CX%UPIEDHOUSEHOLDS | | | 54 | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $26,944 | $71,563 | $35,057 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 79.9% | 27.5% | 71.0% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $148 | $453 | $190 |
| AVERAGE MONTHLY HEATING COSTS | $259 | $400 | $269 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $107 | $112 | $107 |
| AVERAGE FLOOR AREA (SQ FT) | 1,310 | 1,200 | 1,291 |

Notes: (1) For food, clothing, end other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

## HOUSEHOLD INCOME AND SPENDING -1988
## BARROW

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 103 | 23 | 126 | 15.1% |
| $20,000 - $40,000 | 95 | 68 | 163 | 19.5% |
| $40,000 - $60,000 | 95 | 93 | 188 | 22.5% |
| $60,000 & ABOVE | 143 | 216 | 359 | 42.9% |
| TOTAL | 436 | 400 | 836 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 195 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 1031 | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $52,219 | $73,738 | $62,515 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 59.3% | 35.7% | 48.1% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $475 | $665 | $579 |
| AVERAGE MONTHLY HEATING COSTS | $84 | $73 | $80 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $63 | $56 | $60 |
| AVERAGE FLOOR AREA (SQ FT) | 1,003 | 885 | 947 |

Notes (1) For food, doting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

## HOUSEHOLD INCOME AND SPENDING -1988
## KAKTOVIK

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 13 | | 13 | 24.1% |
| $20,000 - $40,000 | 12 | 1 | 13 | 24.1% |
| $40,000 - $60,000 | 11 | 3 | 14 | 25.9% |
| $60,000 & ABOVE | 7 | 7 | 14 | 25.9% |
| TOTAL | 43 | 11 | 54 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 11 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 65 | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $35,465 | $95,000 | $47,593 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 70.7% | 20.3% | 61.7% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $163 | $531 | $227 |
| AVERAGE MONTHLY HEATING COSTS | $214 | $216 | $215 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $87 | $38 | $85 |
| AVERAGE FLOOR AREA (SQ FT) | 1,121 | 914 | 1,091 |

Notes: (1) For food, doting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1969.

## HOUSEHOLD INCOME AND SPENDING -1988
## NUIQSUT

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 15 | | 15 | 22.7% |
| $20,000 - $40,000 | 22 | | 22 | 33.3% |
| $40,000 - $60,000 | 20 | 1 | 21 | 31.8% |
| $60,000 & ABOVE | 2 | 6 | 8 | 12.1% |
| TOTAL | 59 | 7 | 66 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 15 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 81 | |

| | VILLAGE HOUSEHOIDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $34,025 | $101,071 | $41,136 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 58.2% | 7.1% | 53.4% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $123 | $663 | $183 |
| AVERAGE MONTHLY HEATING COSTS | $221 | $156 | $215 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $118 | $32 | $114 |
| AVERAGE FLOOR AREA (SQ FT) | 1,113 | 900 | 1,095 |

Notes (1) For food, doting, and other household goods.
(2) Includes rant and mortgage.

Source: NSB Census of Population and Economy, 19S9.

## HOUSEHOLD INCOME AND SPENDING -1988
## POINT HOPE

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 30 | | 30 | 27.3% |
| $20,000 - $40,000 | 45 | 2 | 47 | 42.7% |
| $40,000 - $60,000 | 16 | 4 | 20 | 18.2% |
| $60,000 & ABOVE | 5 | 8 | 13 | 11.8% |
| TOTAL | 96 | 14 | 110 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 34 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 144 | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $30,599 | $78,571 | $36,705 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 71.2% | 29.1% | 66.3% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $142 | $697 | $212 |
| AVERAGE MONTHLY HEATING COSTS | $254 | $196 | $252 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $98 | $53 | $96 |
| AVERAGE FLOOR AREA (SQ FT) | 1,023 | 1,137 | 1,035 |

Notes: (1) For food, clothing, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 19S9.

## HOUSEHOLD INCOME AND SPENDING -1988
## POINT LAY

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 7 | 3 | 10 | 29.4% |
| $20,000 - $40,000 | 11 | | 11 | 32.4% |
| $40,000 - $60,000 | 8 | 2 | 10 | 29.4% |
| $60,000 & ABOVE | 1 | 2 | 3 | 8.8% |
| TOTAL | 27 | 7 | 34 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 12 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 46 | |

| | VILLAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $31,111 | $43,214 | $33,603 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 51.0% | 31.6% | 47.3% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $200 | $455 | $346 |
| AVERAGE MONTHLY HEATING COSTS | $241 | $187 | $230 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $47 | $46 | $47 |
| AVERAGE FLOOR AREA (SQ FT) | 755 | 929 | 798 |

Notes: (1) For feed, doting, and other household goods.
(2) Includes rent end mortgage.

Source: NSB Census of Population and Economy, 19S9.

## HOUSEHOLD INCOME AND SPENDING -1988
## WAINWRIGHT

| HOUSEHOLD INCOME CATEGORY | NUMBER OF HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL | % TOTAL |
|---|---|---|---|---|
| UNDER $20,000 | 35 | | 35 | 31.3% |
| $20,000 - $40,000 | 39 | 3 | 42 | 37.5% |
| $40,000 - $60,000 | 23 | 1 | 24 | 21.4% |
| $60,000 & ABOVE | 7 | 4 | 11 | 9.8% |
| TOTAL | 104 | 8 | 112 | 100.0% |
| NUMBER OF MISSING OBSERVATIONS | | | 19 | |
| TOTAL OCCUPIED HOUSEHOLDS | | | 131 | |

| | WAGE HOUSEHOLDS INUPIAT | NON-INUPIAT | TOTAL |
|---|---|---|---|
| AVERAGE HOUSEHOLD INCOME | $30,216 | $59,375 | $32,299 |
| PROPORTION OF TOTAL HH INCOME SPENT IN VILLAGE (1) | 70.0% | 21.0% | 67.9% |
| AVERAGE MONTHLY HOUSING PAYMENT (2) | $141 | $438 | $158 |
| AVERAGE MONTHLY HEATING COSTS | $261 | $140 | $260 |
| AVERAGE MONTHLY ELECTRICITY COSTS | $71 | $44 | $70 |
| AVERAGE FLOOR AREA (SQ FT) | 872 | 938 | 875 |

Notes: (1) For food, doting, and other household goods.
(2) Includes rent and mortgage.

Source: NSB Census of Population and Economy, 1989.

As the **Nation's principal conservation agency, the Department of the Interior has resp.onsibility** for most **of our nationally** owned public lands and" natural resources. **This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places. and providing** for the enjoyment of life through outdoor **recreation. The Department** assesses our energy **and mineral resources and** works to assure **that their development is in the best interest of** all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. Administration.