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Barrow Arch Socioeconomic and Sociocultural Description
The Social and Economic Studies Program
Minerals Management Service
Alaska OCS Region

BARROW ARCH SOCIOMETRIC AND SOCIOCULTURAL DESCRIPTION

Prepared by

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NOTICE

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ABSTRACT

The primary objective of this report was to develop an understanding of current conditions and to analyze changes and trends in the socioeconomic and sociocultural structure and organization of the Chukchi Sea communities of the North Slope Borough. This effort is seen to be essential for the later development of forecasts and analyses of potential localized impacts and changes resulting from OCS oil and gas activities in the Barrow Arch lease sale area.

Alaska Consultants, Inc. recently produced a series of reports for the North Slope Borough which provide extensive background information on each village within the Borough. Information from these reports was summarized for use in this report and attention for the 1983 fieldwork specifically for this study therefore focused heavily on the subsistence economy and subsistence land use patterns.

This report both confirms the findings of previous authors and contains new insights into some issues. The major conclusions can be summarized as follows:

- That two distinct population groups inhabit the North Slope Borough -- the group living in the region's traditional communities and the group living in industrial enclaves. There is very little contact between the two groups.

- The North Slope Borough directly accounts for over half of all full-time jobs equivalents in all traditional villages of the region. When Borough-derived construction jobs are included, up to
95 percent of all employment in some villages is for the North Slope Borough.

While the North Slope Borough has a very large amount of taxable property within its boundaries, the extent to which it can tax for operating expenditures is limited by State law to a population-based formula. Furthermore, the Borough's ability to assume further bonded indebtedness is presently being scrutinized by the State. OCS development in the Chukchi Sea area is not expected to change either of these factors.

Increased availability of cash, primarily as a result of North Slope Borough employment opportunities, has accelerated changes in the techniques and timing of the harvests of many marine mammals. Because of the demands of employment, time has become a more important factor in subsistence activities. Thus, there is a much greater dependence on three-wheelers, snowmachines and wooden or aluminum boats with outboard motors to reduce travel time. Such equipment also permits a greater amount of hunting after work, on weekends and on leave periods. In addition, it permits hunters to range over a wide area.

Despite changes in both the wage and subsistence economies, subsistence harvesting, kinship and extended family relationships, and sharing continue to be values which are central to Inupiat culture.
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<td>Composition of Population, North Slope Borough, State of Alaska, Wainwright, 1980</td>
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<td>Land Tenure, Wainwright Area, 1983</td>
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<td>Figure 21</td>
<td>Wainwright Subsistence Land Use Areas: Fish</td>
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<td>Figure 22</td>
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<td>Wainwright Subsistence Land Use Areas: Seal/Ugruk</td>
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<td>Figure 25</td>
<td>Wainwright Subsistence Land Use Areas: Belukha</td>
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<td>Land Tenure, Atqasuk Area, 1983</td>
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<td>Existing Land Use, Atqasuk, August 1982</td>
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<td>Composition of Population, North Slope Borough, State of Alaska, Barrow, 1980</td>
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<td>Figure 33</td>
<td>Barrow/Atqasuk Subsistence Use Areas: Spring Whaling</td>
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<td>Figure 34</td>
<td>Barrow/Atqasuk Subsistence Use Areas: Fall Whaling</td>
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<td>Barrow/Atqasuk Subsistence Use Areas: Belukha</td>
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<td>Figure 36</td>
<td>Barrow/Atqasuk Subsistence Use Areas: Seal/Ugruk</td>
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<tr>
<td>Figure 37</td>
<td>Barrow/Atqasuk Subsistence Use Areas: Walrus</td>
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</table>
INTRODUCTION

The North Slope Borough is a vast 88,000 square mile area which stretches across the northern portion of Alaska (see Figure 1). The Chukchi Sea area, which is the subject under study, covers the western half of the Borough from Barrow to Point Hope.

This report focuses on socioeconomic and sociocultural conditions in the North Slope region generally, where relevant, and in five villages in the Chukchi Sea area -- Point Hope, Point Lay, Wainwright, Atqasuk and Barrow. Much of the information contained in this report, particularly that dealing with the population, economy, land status, village land use, housing and community facilities and utilities, was previously collected by Alaska Consultants, Inc. for the North Slope Borough. That information is summarized here and has been updated, where necessary. Fieldwork undertaken for this report was primarily concentrated on documenting subsistence land use patterns and the subsistence economies of both individual villages and the region as a whole. Additional sociocultural information pertaining to village perceptions and opinions on a variety of issues was also collected in the field in 1983.

As well as regional and village level analyses, this report includes an annotated bibliography of major and lesser references used during the course of the study.
NORTH SLOPE BOROUGH - AN OVERVIEW

Population

PAST TRENDS

The difficulties of accurately tracing population trends for the period between World War II and 1970 in the area now encompassed by the North Slope Borough have been previously discussed by Alaska Consultants (1977) and others. While past population figures are available for individual towns, areas outside the region’s traditional communities have periodically experienced large, though usually temporary, influxes of people for oil and gas exploration, military or scientific purposes. Since the region was within three census divisions for the 1960 and 1970 censuses and within two completely different divisions for several censuses prior to 1960, it is virtually impossible to derive a complete picture of population trends in what is now the North Slope Borough even for the period since World War II.

Three major in-migrations to the North Slope Borough took place between World War II and 1970:

(1) That associated with oil and gas exploration undertaken by the Navy in the then Naval Petroleum Reserve #4 (NPR-4) during the period 1944-1953;
(2) That related to construction of the DEW (Distant Early Warning) Line system and associated AC&W (Aircraft Control and Warning) sites by the U.S. Air Force during the 1950’s; and
That resulting from increased oil and gas exploration, particularly in the Prudhoe Bay area following the State onshore lease sales of 1964, 1965 and 1967 and, more recently, from State and federal offshore lease sales.

The Navy exploration program involved a large influx of military and civilian personnel and brought lasting change to Barrow which had been selected as the main base for exploration activity. A camp was built near Barrow at what later became the Naval Arctic Research Laboratory (NARL), but jobs related to the exploration program ceased when the exploration ended in 1953.

DEW Line stations were constructed during the 1950's across the north coast of what is now the North Slope Borough from Cape Sabine to Demarcation Bay. As part of this program, stations were built near the traditional villages of Point Lay, Wainwright and Barrow, with the major station being located on Barter Island. The latter resulted in several physical relocations of the village of Kaktovik as the station and airfield facilities were constructed. An AC&W site was also constructed at Cape Lisburne, remote from any traditional settlement. When these military facilities were completed, the construction crews left but personnel required to run the facilities remained.

After the Navy's exploration program in NPR-4, limited petroleum exploration activity in the region continued to be generated as a result of non-competitive federal leases. However, it was the State's lease sales of 1964 through 1967 which led to major oil discoveries in 1968.
and the State's "bonanza" lease sale in 1969. Following the 1968 discoveries, in-migration related to oil and gas activities in the region increased and this substantial addition to the North Slope's population has remained although the distribution of workers among the exploration, development, operation and transportation activities has varied.

The population of the traditional communities on the North Slope rose from 1,258 in 1939 to 3,027 in 1970, a 141 percent change in three decades, reflecting continued high birth rates and an increasing life expectancy for the Eskimo population, plus an influx of non-Native government personnel to provide services such as health and education or to undertake scientific research. However, the regional increase in traditional village population was distributed unevenly from community to community as Atqasuk and Point Lay were abandoned as permanent villages by 1960. Between 1939 and 1970, Barrow's population rose 480 percent to 2,104 residents, Kaktovik's population had increased 846 percent to 123 residents, and Point Hope's population had undergone a 50 percent increase to 386 persons. During that same period, Wainwright's population fell from 341 to 315, while the nomadic Nunamiut peoples had established the new village of Anaktuvuk Pass with a population totaling 99 in 1970.

After World War II, Barrow had clearly emerged as the regional center. Not only was there a flow of government personnel into the community but there was also an in-migration of Eskimos from the smaller villages on
the North Slope, Inupiats attracted by the greater opportunities for jobs and the availability of government services in Barrow.

The decade between 1970 and 1980 witnessed some startling changes in the North Slope Borough's population (see Table 1). Three abandoned villages -- Atqasuk, Nuiqsut and Point Lay -- were re-established, although at new sites. All of the smaller communities on the North Slope grew during this period, attracting Eskimo residents from Barrow as well as from outside the Borough. Barrow's population increased the least, only 4.9 percent, and the city's Eskimo population actually declined during the 1970 to 1980 decade. The total population for all traditional villages within the Borough rose about 26 percent, from 3,027 residents to 3,827, with the greatest growth occurring after 1977 as the momentum of construction activities associated with the Borough's capital improvements program picked up.

The re-establishment of traditional villages, the more rapid growth of smaller North Slope villages relative to Barrow and the overall growth of all of the communities resulted in part from passage of the Alaska Native Claims Settlement Act and incorporation of the North Slope Borough. The Claims Act legislation led to the organization of Native corporations which were recipients of both cash and land and which, in turn, provided vehicles for Eskimo economic enterprise with vested interests in the maintenance or re-establishment of traditional villages.
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Traditional Communities a/</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anaktuvuk Pass</td>
<td>78</td>
<td>49</td>
<td>30</td>
<td>107</td>
<td>195</td>
<td>210</td>
<td>231</td>
<td></td>
</tr>
<tr>
<td>Barrow</td>
<td>363</td>
<td>951</td>
<td>1,314</td>
<td>2,104</td>
<td>2,207</td>
<td>2,539</td>
<td>2,882</td>
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<tr>
<td>Kaktovik</td>
<td>11</td>
<td>46</td>
<td>120</td>
<td>123</td>
<td>165</td>
<td>201</td>
<td>189</td>
<td>203</td>
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<tr>
<td>Nuiqsut</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td>208</td>
<td>270</td>
<td>302</td>
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<td>Point Hope</td>
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<td>264</td>
<td>324</td>
<td>386</td>
<td>464</td>
<td>531</td>
<td>544</td>
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<td>Point Lay</td>
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<td></td>
<td></td>
<td>68</td>
<td>105</td>
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<tr>
<td>Wainwright</td>
<td>341</td>
<td>227</td>
<td>253</td>
<td>315</td>
<td>405</td>
<td>410</td>
<td>465</td>
<td>483</td>
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<td><strong>TOTAL</strong></td>
<td>1,258</td>
<td>1,678</td>
<td>2,076</td>
<td>3,027</td>
<td>3,527</td>
<td>4,486</td>
<td>4,912</td>
<td>5,026</td>
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<td>Oil &amp; Gas/Pipeline Camps b/</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prudhoe Bay/Deadhorse/Other</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>279</td>
<td>3,628</td>
<td>4,980</td>
<td>7,735</td>
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<td>NRR-A</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>3</td>
<td>119</td>
<td>163</td>
<td>108</td>
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<td></td>
<td></td>
<td>282</td>
<td>3,787</td>
<td>5,143</td>
<td>7,943</td>
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<td>Military Stations c/</td>
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<td></td>
<td>194</td>
<td>222</td>
<td>127</td>
<td>193</td>
<td></td>
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<tr>
<td>Other d/</td>
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<td></td>
<td>19</td>
<td>19</td>
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<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td>3,503</td>
<td>7,815</td>
<td>9,775</td>
<td>12,964</td>
<td></td>
</tr>
</tbody>
</table>

a/ Population for traditional villages taken from the U.S. Census through 1980; 1981 figures are those accepted by the State Demographer after negotiations with the North Slope Borough and a special State-supervised census for Anaktuvuk, Point Lay and the NPR-Alaska base at Barrow; 1982 figures are those submitted by the North Slope Borough for which a special State-approved census was undertaken by the City of Barrow after the Borough had submitted its population estimate; 1983 figures are based on village censuses except in the case of Barrow.

b/ Population for oil and gas and Pipeline camps taken from the U.S. Census for 1970, but subsequently reflect North Slope Borough estimates. No Borough count of industrial areas was undertaken in 1983.

The 1980 U.S. Census listed only 114 persons at Prudhoe Bay and Deadhorse because of a State-requested change in the method of enumerating people in this area, with the result that almost all petroleum workers in the Borough were re-assigned to other areas of the State and the nation. Changes in State regulations governing local censuses in 1981 resulted in the rejection of the Borough's 1981 industrial area count. A total of 2,466 persons was deemed to be Borough 'Presidents' as a result of a special State-supervised census in January/February 1982. The Borough 1982 industrial area count was undertaken using the guidelines laid down in S.B. 180, as amended. This bill passed the Alaska State Legislature but was vetoed by the Governor and the Borough census was rejected.

c/ Population for military stations in 1970 derived from the U.S. Census. Subsequent estimates based on figures provided annually to the North Slope Borough by station operators.

d/ Population for other sites, primarily Colville River village on the Colville River delta, based on figures provided annually to the North Slope Borough.

e/ Total population accepted by the Alaska Department of Community and Regional Affairs was 7,098 in 1981 and 7,552 in 1982.

Sources: U.S. Census, North Slope Borough.
Incorporation of the North Slope Borough in 1972 provided local residents with a means to levy property taxes on the new oil and gas industry's capital facilities being built in the region. These revenues permitted the North Slope Borough to launch a major capital improvements program (after several court tests of the Borough's tax jurisdiction). It also enabled the Borough to expand the level of public services. In turn, the public facilities and housing constructed by the Borough in the region's traditional communities contributed to their population growth. Furthermore, the wages flowing from local jobs in construction and from direct Borough employment encouraged the relocation of Eskimos back to the smaller traditional villages if families had traditional ties to those villages and preferred living there rather than in Barrow or outside the Borough.

However, the major component of population increase in the North Slope Borough since 1970 has been derived from exploration for and the development and operation of the region's oil fields, plus construction and operation of the Pipeline to transport the oil south to Valdez. The debate as to how this population is to be enumerated has served to cloud the description of such a dynamic workforce. Completion of the Trans Alaska Pipeline (TAPS) in 1977 initiated the marketing phase for Prudhoe oil. The Pipeline construction workers departed but the loss of that workforce has since been partially offset by the arrival of other oil industry workers. Table 1 uses the North Slope Borough's annual reports to the Alaska Department of Community and Regional Affairs for data on the size of the region's oil industry workforce because these figures better reflect the dynamics of the Borough's population. The debate as
to how this workforce should be enumerated, especially with reference to place of residence, has grown with the size of that workforce and of the petroleum industry's taxable property in the Borough.

The military component of the Borough's population has remained small and is likely to decline in the future as a result of the current upgrading of electronic equipment used at the DEW Line stations. In addition, no significant population increases at locations such as Colville River village are expected.

The total number of people inhabiting the North Slope Borough at any given time has been a controversial subject since 1980. Because this subject gives some insight into the political (which also translate into legal) problems faced by the Borough, the recent history of Borough population counts is presented in the following pages.

Borough Population Counts

In terms of population living within the North Slope Borough but outside the region's traditional communities, the important issue in recent years has not been the total number of people but the number which the North Slope Borough has been able to count. The Borough was incorporated on July 1, 1972 as a first class borough under Alaska law. However, as a result of a special session of the Alaska Legislature in 1973, a 20 mill levy was applied by the State against certain oil and gas properties throughout the State. The extent to which local governments could tax such properties under their jurisdiction for
operating purposes (i.e. excluding debt service) was linked to a population-based formula set forth in Section 29.53.045 of the Alaska Statutes, which is quoted in part:

“(a) A municipality may levy and collect taxes on taxable property taxable under AS 43.56 only by using one of the methods set out in (b) or (c) of this section.

“(b) A municipality may levy and collect a tax on the full and true value of taxable property taxable under AS 43.56 as valued by the Department of Revenue at a rate not to exceed that which produces an amount of revenue from the total municipal property tax equivalent to $1,500 a year for each person residing within its boundaries.

“(c) A municipality may levy and collect a tax on the full and true value of that portion of taxable property taxable under AS 43.56 as assessed by the Department of Revenue which value, when combined with the value of property otherwise taxable by the municipality, does not exceed the product of 225 percent of the average per capita assessed full and true value of property in the state multiplied by the number of residents of the taxing municipality. For purposes of this subsection the average per capita assessed full and true value of property in the state shall be calculated without regard to the assessed value of taxable property under AS 43.58.”

Because its tax base is almost entirely derived from oil and gas-related property subject to AS 29.53.045, it has been extremely important to the North Slope Borough to maintain an accurate and complete record of its population. Through 1980, population counts in the Prudhoe Bay/Deadhorse area and at Pipeline camps within the Borough were compiled by BP Alaska, Inc. (and later by Sohio) and submitted to the North Slope Borough. This population count method was essentially similar to that used in 1970 by the U.S. Census.

Using industry-generated counts, total population in the Prudhoe Bay/Pipeline area between 1975 and 1980 trended downward following
completion of construction of the Pipeline but then stabilized, as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Prudhoe Bay/Deadhorse</th>
<th>Pipeline</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>1,835</td>
<td>3,187</td>
<td>5,022</td>
</tr>
<tr>
<td>1976</td>
<td>3,897</td>
<td>4,904</td>
<td>8,801</td>
</tr>
<tr>
<td>1977</td>
<td>3,504</td>
<td>1,814</td>
<td>5,318</td>
</tr>
<tr>
<td>1978</td>
<td>3,052</td>
<td>315</td>
<td>3,367</td>
</tr>
<tr>
<td>1979</td>
<td>2,127</td>
<td>101</td>
<td>2,228</td>
</tr>
<tr>
<td>1980</td>
<td>3,054</td>
<td>537</td>
<td>3,591</td>
</tr>
</tbody>
</table>

At the request of the State, however, normal Census rules for counting population in the Prudhoe Bay area were changed in 1980. The result was that workers were enumerated at places away from rather than at their workplace, so that only 114 persons were counted by the Census at Prudhoe Bay/Deadhorse, less than had been counted here in 1970. Almost all Prudhoe Bay/Deadhorse workers were reassigned to other locations in Alaska and the nation and the only people counted as living in the North Slope Borough were those for whom the Census Bureau had no "home" address. However, these "low" figures did not affect the Borough's 1980 population count for State revenue sharing or for taxation as Census results were not released until later in that year.

In 1981, the Alaska Department of Community and Regional Affairs revised its regulations for the enumeration of population by local governments to conform with Census guidelines, i.e. those which the State had requested to be used by the 1980 Census. The North Slope Borough was subsequently advised that its 1981 count which originally totaled 9,940
was unacceptable 'and that a detailed census count which asked people a standard set of questions to determine their residency in accordance with Census definitions would be required. At considerable cost to the Borough, a State-supervised census was conducted in January/February 1982. Out of a total of 6,306 persons counted on-site in the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor areas, 2,466 were judged by the State Demographer in the Alaska Department of Labor to meet the 1980 Census definition of residency. Together with some adjustments to village populations, the State accepted a final population figure for the North Slope Borough in 1981 of 7,098 persons.

In 1982, a bill (Senate Bill 180) passed the Alaska State Legislature which defined population as follows:

"... population shall include permanent residents and military personnel or employees of a military reservation located in the municipality. Population shall also include all persons working at isolated job sites in a municipality. The Commissioner of Community and Regional Affairs shall determine the number of persons working at isolated sites from information supplied by employers which shows the number of persons employed on the sites as of July 1 of each year, notwithstanding the place of permanent residence of those employees."

Using these guidelines, the Borough counted 7,735 persons in a July 1982 census of the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor areas and a total Borough population of 12,729. (The total 1982 population figure shown in Table 1 is a slightly higher 12,964 because an official count of Barrow's population taken later in 1982 is used instead of the July 1982 estimate). However, Senate Bill 180 was subsequently vetoed by the Governor and the Borough's 1980 count was rejected by the Department of Community and Regional Affairs.
In an effort to accommodate the Borough's problem, the Department of Community and Regional Affairs passed an emergency regulation in November 1982 which said that persons working at remote sites could be counted by a local government if the worker had spent four nights or more at that site during the week that the count was taken. Such a definition was consistent with normal Census procedures. This regulation was challenged in State superior court by several Southcentral Alaska municipalities. The court found that there was no emergency but agreed that the North Slope Borough needed special consideration in determining its population, provided that the method accepted by the Department of Community and Regional Affairs had a rational basis. The Department subsequently certified a 1982 Borough population of 7,552 persons.

No regulations detailing an acceptable method for counting the North Slope Borough's industrial enclave population have yet been drafted by the Alaska Department of Community and Regional Affairs. As a result, the Borough did not conduct a census in 1983. Instead, the Department announced two population figures for the Borough's 1983 population -- one of 5,118 for State revenue sharing purposes and another of 10,427 for use in determining the extent to which the Borough is able to levy property taxes for operating purposes.

The concept of two population figures was apparently designed to appease several Southcentral Alaska municipalities which feel that their State revenue sharing entitlements are being shortchanged by the North Slope Borough's counting of Prudhoe Bay workers. However, the 5,118 figure
excludes all Prudhoe Bay workers, despite the fact that the State Demographer judged 2,466 of these people to be Borough residents in 1981 using 1980 Census guidelines. Furthermore, the fact that there is still no accepted method by which the Borough can count its population in 1984 and following years places it in an untenable political position. It also makes it impossible for the Borough to develop projections of operating revenues with any assurance of accuracy, with possible repercussions on the Borough's ability to assume additional bonded indebtedness.

**POPULATION COMPOSITION**

Difficulties associated with determining the 1970 population composition in what is now the North Slope Borough arose from the need to combine data from three census divisions, a task undertaken by Alaska Consultants (1977). Given these limitations, it was determined the 1970 population of the North Slope region was approximately 83 percent Alaska Native. The distribution of Alaska Native residents within the region's villages varied slightly, ranging from 87.8 percent of the total population in Kaktovik to 98.0 percent in Anaktuvuk Pass. By contrast, three non-traditional settlements for which statistics by race were available (Cape Lisburne, Deadhorse and Prudhoe Bay) all had populations which were at least 90 percent non-Native.

The age and sex characteristics of the North Slope Borough population as measured by the 1970 Census showed the Borough to have some typically Alaska characteristics but to a more extreme degree. The median age of
Borough residents was 18.7 years (21 for males and 16 for females), compared with 22.9 for the State and 28 for the nation. Males outnumbered females by a 57.2 to 42.8 ratio in the Borough in 1970, a slightly more extreme ratio than the State (54.3 to 45.6) and quite unlike that of the nation (49 to 51). Inclusion of the relatively small Prudhoe Bay/Deadhorse population, most of which was male, in Borough totals had some influence on male to female ratios and median ages. This bias caused by male workers was further magnified by the inclusion of military or military subcontractor personnel in Borough population figures.

The 1980 data available regarding age and sex characteristics of the population of the Borough's traditional villages confirm the general characteristics established for 1970 and also substantiate several significant trends. As indicated in Table 2, the median age for all village residents was 23.7 years, significantly lower than the 26.1 years for the State or the 30.0 years for the nation. However, the 1980 median age for North Slope Borough villages reflected the weighting of non-Native residents whose median age was 28.7 years, as the median age of Alaska Natives in Borough villages in 1980 was only 21.2 years.

A striking feature of the age distribution of the Borough's Alaska Native residents in 1980 was the high proportion of persons under 20 years of age. Fully 41.7 percent of the Alaska Native population living in North Slope villages in 1980 was under the age of 20, compared with 36.1 percent for the State and 32 percent for the nation as a whole.
<table>
<thead>
<tr>
<th>Age Group</th>
<th>Median Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
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Note: The table represents the age distribution of the North Slope Borough, Alaska, as compared to the United States. The data includes the median age, male, female, and total population for each age group.
The non-Native proportion of the North Slope Borough's village population rose to 23.1 percent by 1980, with 71.9 percent of this group concentrated in Barrow (see Table 3). In the remaining villages combined, non-Natives made up only 15.3 percent of the population, whereas in Barrow non-Natives accounted for 28.8 percent of that community's population in 1980. This represented a significant increase since 1970.

Males continued to outnumber females in the North Slope villages in 1980. For Alaska Natives, the ratio was found to be 52.7 to 47.3 while that for non-Native residents was a more disproportionate 63.0 to 37.0 percent. All told, the ratio of males to females for North Slope Borough villages in 1980 was 55.1 percent males to 45.9 percent females, slightly more extreme than the State's 53.0 percent to 47.0 percent ratio and quite unlike that of the nation where females outnumbered males by a 51.4 to a 48.6 percent margin.

The changes from 1970 to 1980 in North Slope village population age and sex characteristics as well as an increase in the proportion of non-Natives reflect the dynamics of village society and economics. Although Barrow grew little in that decade, the composition of that community's population underwent a significant change as the number of non-Native residents increased and number of Alaska Natives actually declined, primarily a result of the re-establishment of Atqasuk and Nuiqsut (and, to a lesser extent, Point Lay) by Alaska Natives from Barrow during this period. Barrow's development as the administrative center for the North Slope Borough and as the headquarters for the
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*Source: Alaska Consultants, Inc.*

**Alaska Native Population by Sex and Race**

**Table 3**
Arctic Slope Regional Corporation resulted in the creation of a number of professional, management and technical positions which attracted non-Native persons to the city, primarily because of the high salaries being offered. The in-migration of non-Native residents was particularly noticeable as the Borough's expenditures for its capital improvements program and government services expanded after 1977. The in-migration of non-Natives to the smaller Borough villages outside Barrow was also prompted by an increase in high salaried professional positions, particularly in the school system as high school classes were offered at the village level for the first time during this period. However, the increase in the number of non-Native residents in the smaller villages appears to have leveled off and is not expected to rise significantly in the future. In fact, it could decline in the longer term as trained Alaska Native residents assume some of the positions now held by non-Natives.

There are no comprehensive data available to evaluate the population composition of areas outside the North Slope Borough's traditional villages because these people were not counted as living here by the 1980 Census. However, some analysis of the population at oil-related worksites in the Borough was undertaken by the State Demographer following the State-supervised census for that area undertaken in January/February 1982.

Of the 6,306 persons counted at oil-related worksites in January/February 1982, 90.6 percent were male, indicating that little change in sex ratios had taken place here since 1970. The same census also found
that 2,466 (39.1 percent) of all persons counted at these locations met the 1980 Census definition for residence in the North Slope Borough although North Slope Borough residence was actually claimed only by 3.7 percent (a figure which included persons for whom no residence information was available) of the people counted. In addition, a total of 1,023 people (16.2 percent of the total) was found not to meet the 1980 Census definition of Alaska resident, with the largest number of these Outsiders found to be residents of California, Washington and Texas respectively. Of the 2,817 persons counted who qualified as Alaska residents but not as North Slope Borough residents, the largest share came from the Municipality of Anchorage (53.6 percent), Fairbanks-North Star Borough (22.4 percent), the Kenai Peninsula Borough (9.5 percent) and the Matanuska-Susitna Borough (8.4 percent).

No age or race information was asked as part of the State-supervised census taken in January/February 1982. However, there are no children living at such sites and the population is believed to be heavily concentrated in the 20 to 40 age ranges. There are also few Alaska Natives in such areas.

SOCIAL INTERACTION

As previously indicated, there are two distinct areas of settlement within the North Slope Borough -- that in the region's traditional villages and that in the region's industrial enclaves, with the largest share of the latter being in the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor area. There is little social interaction between
these two major groups. Few people from the North Slope Borough's traditional villages travel to work at Prudhoe Bay. Furthermore, industrial area workers normally fly in and out of Deadhorse directly from Anchorage or Fairbanks and very few have even visited any of the Borough's traditional villages.

As part of the 1983 fieldwork in the Chukchi Sea villages of Point Hope, Point Lay, Wainwright, Atqasuk and Barrow, an effort was made to see how the different groups in these villages interacted with each other, particularly Inupiats and whites. The results of that work are included within the text of this report for each village. Generally, however, Inupiats in the smaller villages of the region expressed few negative feelings against whites, with the exception of transient non-Native construction workers who were viewed with a certain amount of resentment. Most non-Native persons living in these smaller villages are there to provide specialized services such as education and public safety and possess skills which are not available locally, something which is recognized by most Inupiat residents.

In Barrow, the picture was much more complex as there is a greater diversity of non-Natives in this community, including a complement of Hispanics and Asians. Inupiats in Barrow appeared to harbor little resentment against whites who had made long-term commitments to remain in the community or those who possessed specialized skills not otherwise available locally. However, negative feelings were expressed with varying degrees of intensity against non-Native transient construction workers and against non-Natives who did not possess special skills but
who were nevertheless employed. This latter group was particularly resented by many Inupiats who viewed their presence in the community as an intrusion.

A number of whites in Barrow were also questioned about the amount of interaction they had with Inupiats. In general, long term non-Native residents or those with commitments through marriage to remain in Barrow tended to adopt an Inupiat perspective and socialized freely with both Inupiats and whites in the community. Those who were in Barrow strictly for employment and accompanying financial reasons tended to socialize little with Inupiats and also spent very little money locally. Many people in this group claimed that they were made to feel unwelcome in Barrow by Inupiats. Transient construction workers, especially those living in camp accommodations, basically have no communication with Inupiats outside the workplace.

MIGRATION

Only a limited amount of information is available on the subject of migration into and within the North Slope Borough. Most persons who work in the industrial enclave areas come from outside the region although many are technically Borough residents. Within the region’s traditional villages, a major out-migration of Inupiats from Barrow accompanied the re-establishment of the traditional villages of Nuiqsut and Atqasuk and, to a lesser extent, Point Lay during the 1970's. An in-migration of whites, particularly to Barrow, has also been significant.
As part of his analysis of the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor population counted in a special State-supervised census in January/February 1982, the State Demographer provided some information on migration into this area. As part of that census effort, individuals were asked if they had a place which they considered to be their usual place of residence, as well as a question intended to determine if individuals had spent more days within the Borough in 1981 than outside it.

Of the total of 6,306 persons counted in January/February 1982, 1,432 (22.7 percent) claimed residence outside Alaska, including 35 people claiming to live in other countries plus representatives of every state in the union except Delaware and Rhode Island. A total of 4,874 people claimed Alaska residence. Slightly over half (51.3 percent) of that group claimed residence in the Municipality of Anchorage, followed by those claiming the Fairbanks-North Star Borough (22.6 percent), Kenai Peninsula Borough (9.1 percent), Matanuska-Susitna Borough (8.0 percent) and the North Slope Borough or no usual place of residence (3.7 percent). While individual concepts of “residence” were different from those used by the 1980 Census, they nevertheless indicate the pattern of migration for employment into this North Slope Borough industrial enclave area.

The fact that relatively few permanent residents of North Slope traditional communities presently migrate for employment to the Prudhoe Bay area can be documented through an analysis of the North Slope Borough’s workforce at Service Area 10 (Deadhorse). Of a total of 120
Borough employees at Service Area 10 in September 1983, only 13 (11 Alaska Natives and 2 whites) commuted there from North Slope Borough traditional villages. By most standards, the Borough has a high proportion of Alaska Native employees (35 percent) at Service Area 10, including 20 of its 27 female workers. There is some evidence to suggest that some of these Alaska Native employees are former Borough residents who find it more convenient to commute for employment to Service Area 10 from locations such as Fairbanks, Anchorage and the Kenai Peninsula.

As part of the 1983 fieldwork, people in the villages of the Chukchi Sea area were asked if anyone from those villages was working in the Prudhoe Bay area or had worked on the Pipeline. Given the current high level of construction activity in these villages, there was little incentive for people to migrate for employment to areas such as Prudhoe Bay. However, this could change in the future as the North Slope Borough's capital improvements program winds down.

Within the region, a major shift in Inupiat population occurred during the 1970's as a result of the re-establishment of three traditional villages. These villages, particularly Nuiqsut and Atqasuk, were mainly settled by Inupiats from Barrow. As a result, the number of Alaska Natives living in Barrow actually declined between 1970 and 1980. An in-migration of whites took place during the latter half of the 1970's and has continued into the early 1980's. However, this group tends to have few dependents. As a result, Barrow's population grew the least (4.9 percent) of any of the region's traditional villages during that
period, despite the rapid increase in employment opportunities which took place.

**RECENT TRENDS AND CHANGES**

It is not possible to document recent trends or changes in population in the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor area since the 1980 Census, which should have provided benchmark information, counted almost no one in this area. Furthermore, population counts conducted in 1980 by Sohio, in 1981 by the Borough and by the January/February 1982 special census, and in 1982 by the Borough did not use the same methodology. As a result, these counts are not directly comparable and no real trends can be discerned.

Within the region's traditional villages, the major trend since 1980 has been a sharp increase in population from 3,827 in 1980 to an estimated 5,028 in 1983 (using a 1982 census figure for Barrow). This 31.4 percent increase over a three-year period has already eclipsed the 24.5 percent growth recorded for the entire 1970 to 1980 decade. By village, rates of growth since 1980 have not been even, with the re-established villages of Atqasuk (115.9 percent), Point Lay (85.3 percent) and Nuiqsut (46.6 percent) experiencing the greatest growth. Barrow registered a 30.6 percent increase in population between 1980 and 1982, an abrupt change from the nominal 4.9 percent growth recorded between 1970 and 1980. (Barrow may have been undercounted by the 1980 Census. Alaska Consultants, Inc. counted 2,389 people here in the summer of 1980 which represented a 13.5 percent gain over the 1970 Census figure and
indicated a more modest but still significant gain of 20.6 percent between 1980 and 1982).

The major factor encouraging population growth in the North Slope Borough's traditional villages since 1980 has been the North Slope Borough itself. Temporary construction jobs derived from the Borough's ongoing capital improvements program plus permanent jobs added to operate and maintain new facilities, have served to encourage an in-migration of people to the region's smaller villages. These same reasons, plus an increase in administrative jobs associated with the North Slope Borough and the regional and village Native corporations, have contributed to a rapid increase in population in Barrow. However, except for an increase in the number of non-Natives to provide specialized services such as education and public safety plus a temporary influx of transient construction workers, population growth in the smaller villages has included a growth in the number of Inupiats beyond what could be expected from natural increase. According to observations by Alaska Consultants, Inc. and the 1983 fieldwork, this growth in Inupiat population has involved the return of some former Borough residents who were attracted by the combination of improved economic conditions and subsistence opportunities. The extent to which this is true of Barrow is not clear, as that community has seen a continued influx of non-Natives, including a contingent of Asians and Hispanics. Furthermore, there continues to be a good deal of coming and going of Inupiats between Barrow and some of the smaller villages.
TABLE 4

POPULATION FORECAST
NORTH SLOPE BOROUGH VILLAGES
1982 - 2000

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaktuvuk Pass</td>
<td>215</td>
<td>249</td>
<td>291</td>
<td>321</td>
<td>354</td>
</tr>
<tr>
<td>Atqasuk</td>
<td>210</td>
<td>258</td>
<td>313</td>
<td>346</td>
<td>381</td>
</tr>
<tr>
<td>Barrow</td>
<td>2,882</td>
<td>3,336</td>
<td>4,019</td>
<td>4,659</td>
<td>5,402</td>
</tr>
<tr>
<td>Kaktovik</td>
<td>189</td>
<td>232</td>
<td>281</td>
<td>310</td>
<td>343</td>
</tr>
<tr>
<td>Nuiqsut</td>
<td>302</td>
<td>370</td>
<td>450</td>
<td>497</td>
<td>549</td>
</tr>
<tr>
<td>Point Hope</td>
<td>544</td>
<td>613</td>
<td>703</td>
<td>776</td>
<td>857</td>
</tr>
<tr>
<td>Point Lay</td>
<td>105</td>
<td>128</td>
<td>156</td>
<td>171</td>
<td>189</td>
</tr>
<tr>
<td>Wainwright</td>
<td>465</td>
<td>538</td>
<td>630</td>
<td>695</td>
<td>768</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,697</strong></td>
<td><strong>5,462</strong></td>
<td><strong>6,510</strong></td>
<td><strong>7,376</strong></td>
<td><strong>8,366</strong></td>
</tr>
</tbody>
</table>

a/ 1982 figures based on village censuses taken in that year.

Sources: North Slope Borough.
Alaska Consultants, Inc.
Population projections developed in 1983 for each village by Alaska Consultants, Inc. as part of its work for the North Slope Borough assumed a continued high rate of population growth in the region's traditional villages through about 1987, followed by a rate more suggestive of that of natural increase (see Table 4). These forecasts assumed that the Borough's capital improvements program would continue at a high level for about that period. In addition, they were made with the reservation that any significant slackening in the Borough's capital improvements program could rapidly lead to a deceleration of village growth rates or even a decline in population. This reservation was made since the number of jobs created to operate and maintain Borough facilities is much less than the number required to construct them.

**Economy**

**COMPOSITION OF EMPLOYMENT**

Unlike population, nonagricultural wage and salary employment information collected by the Alaska Department of Labor is recorded by place of work and therefore includes jobs held in the North Slope Borough's industrial areas as well as its traditional communities. However, information compiled by the Alaska Department of Labor on the total civilian labor force is keyed to Census data, with the result that the total civilian labor force in the North Slope Borough has been shown to be less than half that of total nonagricultural wage and salary employment in recent years. Thus, information compiled by the Department on the size of the civilian labor force and on rates of
unemployment (which is computed as a proportion of the labor force) are not meaningful.

A review of nonagricultural wage and salary employment in the North Slope Borough in 1980, the most recent year for which statistics have been published, indicates an annual average of 6,115 jobs in the region (see Table 5). The largest employment sectors were mining and government. Mining jobs made up 45.2 percent of the Borough's nonagricultural wage and salary employment in 1980, with most of these jobs being located in the Prudhoe Bay/Deadhorse and Kuparuk areas. Government jobs accounted for 23.0 percent of the region's total nonagricultural wage and salary employment in that same year, with essentially all of these jobs being based in the region's traditional communities. Of the remaining sectors, it can be assumed that most jobs in trade and in finance, insurance and real estate were based in the Borough's traditional communities. However, it is not possible to disaggregate employment by area in the contract construction, the transportation, communications and public utilities or the services sectors.

Some data are available for the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor area for 1981 as a result of a State-supervised special census undertaken in January/February 1982 which counted a total of 6,306 persons, all of whom were employed. Although it is not possible to determine average annual full-time employment from the data available, the Alaska Department of Labor did provide some information
<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>Annual Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>2,556</td>
<td>2,597</td>
<td>2,566</td>
<td>2,570</td>
<td>2,537</td>
<td>2,585</td>
<td>2,586</td>
<td>2,556</td>
<td>2,571</td>
<td>2,520</td>
<td>2,519</td>
<td>2,585</td>
<td>2,585</td>
</tr>
<tr>
<td>Construction</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>368</td>
<td>466</td>
<td>655</td>
<td>693</td>
<td>552</td>
<td>592</td>
<td>592</td>
<td>562</td>
<td>592</td>
<td>552</td>
<td>592</td>
<td>592</td>
<td>592</td>
</tr>
<tr>
<td>Transportation, Utilities</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trade</td>
<td>346</td>
<td>350</td>
<td>377</td>
<td>372</td>
<td>393</td>
<td>427</td>
<td>427</td>
<td>431</td>
<td>413</td>
<td>390</td>
<td>390</td>
<td>390</td>
<td>390</td>
</tr>
<tr>
<td>Finance</td>
<td>343</td>
<td>322</td>
<td>255</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Insurance and Real Estate</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Services</td>
<td>334</td>
<td>349</td>
<td>374</td>
<td>374</td>
<td>394</td>
<td>422</td>
<td>422</td>
<td>431</td>
<td>413</td>
<td>390</td>
<td>390</td>
<td>390</td>
<td>390</td>
</tr>
</tbody>
</table>

* Employment figures withheld with disclosure regulations.

Source: Alaska Department of Labor, Statistical Quarterly.
As part of its work for the North Slope Borough, Alaska Consultants, Inc. counted annual average full-time employment in all traditional villages of the Borough in 1982. A review of these data indicates the dominant role played by the North Slope Borough government (see Table 7). Local government, almost all of it derived from the North Slope Borough, accounted for 46.7 percent of average annual full-time employment in 1982 in the region’s traditional villages. In addition, almost all contract construction work in the villages was associated with the North Slope Borough’s ongoing capital improvements program (as was a significant share of Borough employment since, depending on the type of contract, the Borough often pays village construction workers directly). Thus, the North Slope Borough directly or indirectly provided about two-thirds of all jobs counted in its villages in 1982, not counting jobs contributed by the Borough to the trade, services and transportation sectors. Further analysis of the dominance of the Borough in village employment is provided for each Chukchi Sea community in subsequent chapters of this report.

The Institute of Social and Economic Research (September 1983) attempted to break down the region’s employment by race, residency status (i.e. permanent residents versus non-permanent residents) and employment category for 1980, using total non-agricultural wage and salary employment data developed by the Alaska Department of Labor as a base (see Table 8). While one can dispute some of the figures, particularly
### TABLE 6

**POPULATION AT OIL-RELATED WORKSITES BY TYPE OF CAMP**

**NORTH SLOPE BOROUGH**

<table>
<thead>
<tr>
<th>Type of Camp</th>
<th>Number of Persons</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>963</td>
<td>15.3</td>
</tr>
<tr>
<td>Trades, Construction</td>
<td>1,884</td>
<td>29.9</td>
</tr>
<tr>
<td>Oil Rig</td>
<td>1,431</td>
<td>22.7</td>
</tr>
<tr>
<td>Seismic Train</td>
<td>219</td>
<td>3.5</td>
</tr>
<tr>
<td>Technical Services and Fabrication</td>
<td>106</td>
<td>1.7</td>
</tr>
<tr>
<td>Government</td>
<td>35</td>
<td>0.6</td>
</tr>
<tr>
<td>Ground Transportation</td>
<td>284</td>
<td>4.5</td>
</tr>
<tr>
<td>Air Transportation</td>
<td>60</td>
<td>1.0</td>
</tr>
<tr>
<td>Supply, Services, Repair</td>
<td>404</td>
<td>6.4</td>
</tr>
<tr>
<td>General</td>
<td>920</td>
<td>14.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>6,306</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

\(\text{a/ Information derived from a special State-supervised census conducted in January/February 1982.}\)

**Source:** Alaska Department of Labor, Research and Analysis Section.
### TABLE 7

**AVERAGE ANNUAL FULL-TIME EMPLOYMENT**  
**NORTH SLOPE BOROUGH VILLAGES**  
**1982**

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mining</td>
<td>50.5 <em>a/</em></td>
<td>2.6</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>435.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
<td>188.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Trade</td>
<td>110.5</td>
<td>5.6</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>80.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Services</td>
<td>108.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Government</td>
<td>1,002.0</td>
<td>50.7</td>
</tr>
<tr>
<td>Federal</td>
<td>(66.5)</td>
<td>&quot;(3.4)&quot;</td>
</tr>
<tr>
<td>State</td>
<td>(13.0)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Local</td>
<td>(922.5)</td>
<td>(46.7)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,975.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*a/* Includes jobs held by village residents in the Prudhoe Bay area except for those from Barrow.

### TABLE 8

**Estimated Full-time Equivalent Employment**

**By Race, Residency Status and Employment Category**

**North Slope Borough**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Inupiat Resident</th>
<th>Non-Inupiat Resident</th>
<th>Total Resident</th>
<th>Non-Resident</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. State and Federal Government</td>
<td>64</td>
<td>39</td>
<td>103</td>
<td>191</td>
<td>294</td>
</tr>
<tr>
<td>2. Borough Operating</td>
<td>517</td>
<td>275</td>
<td>792</td>
<td>0</td>
<td>792</td>
</tr>
<tr>
<td>3. Borough CIP</td>
<td>321</td>
<td>0</td>
<td>321</td>
<td>0</td>
<td>321</td>
</tr>
<tr>
<td>4. Borough-funded Private CIP</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>348</td>
<td>348</td>
</tr>
<tr>
<td>5. Support</td>
<td>299</td>
<td>159</td>
<td>458</td>
<td>0</td>
<td>458</td>
</tr>
<tr>
<td>6. Oil Industry</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>3,892</td>
<td>3,902</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,211</td>
<td>473</td>
<td>1,684</td>
<td>4,431</td>
<td>6,115</td>
</tr>
</tbody>
</table>

**Subtotals**

| Total Borough (2+3) | 838 | 275 | 1,113 | 0 | 1,113 |
| Total CIP (3+4)     | 321 | 0   | 321   | 348 | 669   |
| Total Gov't (1+2+3) | 902 | 314 | 1,216 | 191 | 1,407 |
| Total Gov't Funded  | 902 | 314 | 1,216 | 539 | 1,755 |
| Total Private Funded| 309 | 159 | 468   | 3,892 | 4,360 |
| Total Private       | 309 | 159 | 468   | 4,240 | 4,708 |

the racial breakdown and residency status in several instances, it nevertheless represents an attempt to disaggregate employment in oil and gas-related enclaves from the remainder of the region.

In summary, labor force and employment data currently provided by the Alaska Department of Labor provide only a gross insight into the wage and employment dynamics of the North Slope Borough. While the information provided does provide some understanding of total employment by industry classification, it gives little which would be of use in establishing baselines or for monitoring changes in those baselines for any or all of the region's traditional communities. These deficiencies in current data are even more critical when the object for continuing research is to measure change not only at the community level but also in terms of Inupiat residents. When research directed to isolating the impact of oil and gas-related activities on individual village economies and their Inupiat residents is further refined to detecting the impact of industry activity in a specific geographic area such as the Chukchi Sea, then the labor force and employment data now available are of virtually no use. Given the present state of the art for reporting labor force and employment data in the North Slope Borough region, there appears to be little hope that efforts to monitor future economic impacts of oil and gas-related activities in the Chukchi Sea area upon communities along the Chukchi Sea coast and their residents will be successful unless the State provides much more detailed labor force and employment data on a regular basis or unless funding is provided for other organizations to do so on a continuing basis.
SECTOR ANALYSIS

Government

Based on counts of employment in each North Slope Borough traditional village in 1982 by Alaska Consultants, Inc., a combined annual average of 1,002 full-time jobs in this sector was identified. When government jobs in other areas of the region are included, with North Slope Borough employees at Service Area 10 (Deadhorse) accounting for the major share, the government sector in this region employed an equivalent of about 1,150 persons on an annual average full-time basis in 1982.

The different levels of government (federal, State and local) are not equally represented in the North Slope Borough. In the region's traditional villages, the federal government was significant only in Barrow and Kaktovik in 1982 and the State was not represented in any community but Barrow except for a magistrate at Point Hope. Both the federal and State governments have a minor amount of employment at Deadhorse, mainly associated with airport operations and maintenance.

By contrast, local government is the major employer in the region's villages, directly accounting for 46.7 percent of total village employment in 1982. When Borough-sponsored construction projects are considered, it is estimated that the North Slope Borough directly or indirectly provided close to two-thirds of all jobs in these communities on an annual average full-time basis in 1982.
No significant change is anticipated in the federal government’s presence at the village level in the North Slope Borough. It is assumed that the Barrow hospital will continue to be operated as a federal facility and that other federal employers such as the Federal Aviation Administration, the Weather Bureau and the Post Office will maintain staffing at about current levels. Federal monitoring activities in the National Petroleum Reserve-Alaska, the Arctic National Wildlife Refuge and the Gates of the Arctic National Park and Preserve may require some additional federal manpower, but this should not have any major impact on the number of resident federal employees. Likewise, no significant increase in the number of State employees now working on the North Slope is anticipated.

The North Slope Borough has undertaken an ambitious capital improvements program and an expansion of public services, programs sustained primarily by property tax revenues. The Borough also operates certain utility services at Deadhorse on a service area basis and is currently involved in the development of an industrial park facility in the Kuparuk area. A September 1983 count of Borough employees by the Borough at Service Area 10 (Deadhorse) found 120 employed of whom 42 were Alaska Native. However, all but 11 of the latter group resided outside the Borough during their off-time.

The Borough’s capital improvements program has created temporary construction jobs in the particular communities where projects are being built and has added a lesser number of permanent jobs associated with the operation and administration of completed facilities. The capital
The improvements program has also resulted in the hiring of additional administrative staff at Barrow.

Borough revenues available to sustain operations and capital improvement outlays come principally from property taxes levied upon the Prudhoe Bay/Kuparuk industrial properties and associated oil pipelines. However, the extent to which the North Slope Borough can levy taxes upon certain oil and gas properties (most of the Prudhoe Bay/Kuparuk facilities) is limited by State-imposed restrictions, restrictions which have thus far applied only to the Borough's operating revenues. The nature and significance of these restrictions and the possibility of the State limiting Borough tax revenues by restricting property tax levies for debt service and/or restricting the Borough's ability to assume additional bonded indebtedness are discussed at length in other sections of this report. Unless the present restrictions on the Borough's power to tax for operations are modified, that portion of the Borough's operating budget which must be allocated to the operation and administration of new capital facilities will become an increasing concern and, in the longer term, itself an indirect limit to further Borough capital projects construction.

The Borough is currently considering the need to slow its rate of general obligation bond sales in order to maintain its excellent credit rating in the bond market. Any such reduction in the level of sales will be reflected in the level of Borough capital construction expenditures, as bonds provide the primary revenue source for such outlays. Thus, a reduction in the level of bond sales by the Borough
would lead to a leveling off or even a reduction of temporary construction employment in the region's villages.

**Oil and Gas Exploration and Development**

Since the North Slope Borough government is the largest employer in the region's traditional villages and since it derives almost all of its property tax revenues from oil and gas properties in the Prudhoe Bay/Kuparuk/Pipeline area, future developments in the region's oil and gas industry will continue to play a vital role in the region's economic wellbeing. Thus, although the producing oil fields are physically remote from most of the traditional communities and directly employ few local residents, the oil and gas industry indirectly funds a very large share of local government jobs.

The presence of oil and gas in the North Slope region has long been known. Numerous oil seeps generated interest by private groups as far back as the early 1900’s when mining claims were staked in the Cape Simpson area, but these activities ceased with the creation of Naval Petroleum Reserve #4 (NPR-4) in 1923.

Between 1923 and 1944, no attempt was made to discover petroleum resources in NPR-4 although geological surveys and analyses of surface features did take place. In response to a possibility of oil shortages if World War II continued for several more years, however, a major exploration program in the Reserve was initiated by the Navy in 1944 and was continued by civilian contractors until 1953. During this period,
nine oil and/or gas fields were discovered but, because of high costs and the relatively small scale of the discoveries, only the South Barrow gas field was developed (and its development was feasible only for local use). Exploration activities in NPR-4 ceased in 1953 when it was determined that the Reserve's remote location and its environmental vulnerability, combined with a lack of major finds, were serious obstacles to further development.

After the NPR-4 exploration program, no exploratory drilling took place on the North Slope until ten years later when private companies leased federal lands east of NPR-4 to the south of the present Prudhoe Bay field. However, no commercial discoveries of oil and gas resulted and interest then shifted to State-selected lands along the Beaufort Sea coast.

The State held four competitive oil and gas lease sales on the North Slope during the 1960's - one each in 1964, 1965, 1967 and 1969. Most of the leased area was acquired in the 1965 sale by Humble Oil (now EXXON) and the Richfield Oil Corporation (now ARCO). The discovery well for the Prudhoe Bay field was spudded in 1967 and the find was officially announced in July 1968. The size of the Prudhoe Bay discovery - with proven and probable oil reserves estimated at between 6.17 and 7.34 billion barrels in July 1982 - was the largest ever made in the United States (see Table 9).

The building of a pipeline to carry oil from Prudhoe Bay to Alaska's south coast was delayed until settlement of pending Native claims was
### Table 9

**Proven and Probable Oil Reserves on Currently Leased State Lands**

<table>
<thead>
<tr>
<th>Area</th>
<th>Range of Reserves</th>
<th>Low</th>
<th>Mst Likely</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prudhoe Bay Unit - Sadlerochit Reservoir</td>
<td>6,170</td>
<td>6,950</td>
<td>7,340</td>
<td></td>
</tr>
<tr>
<td>Sag River Reservoir</td>
<td>100</td>
<td>130</td>
<td>220</td>
<td></td>
</tr>
<tr>
<td>North Prudhoe Bay - West Dock Area</td>
<td>50</td>
<td>75</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Kuparuk River Formation</td>
<td>600</td>
<td>1,000</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td>Milne Point Area</td>
<td>30</td>
<td>45</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Gwydyr Bay Area</td>
<td>50</td>
<td>80</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>Prudhoe Bay Lisburne Reservoir and Sag Delta Area and Duck Island Area</td>
<td>460</td>
<td>650</td>
<td>975</td>
<td></td>
</tr>
<tr>
<td>Point Thomson Area and Flaxman Island Area</td>
<td>400</td>
<td>600</td>
<td>900</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL b/</strong></td>
<td>7,860</td>
<td>9,530</td>
<td>11,215</td>
<td></td>
</tr>
</tbody>
</table>

---

*a/ All estimates as of July 1982. Reserves are given in millions of barrels.*

*b/ Total proven and probable reserves minus Prudhoe Bay are Low - 1,690 million barrels; Mst Likely - 2,580 million barrels; and High - 3,875 million barrels.*

**Source:** Alaska Department of Natural Resources, Division of Minerals and Energy Management.
reached with passage of the Alaska Native Claims Settlement Act in 1971, while litigation against constructing the Pipeline itself was resolved with passage of the Trans Alaska Pipeline Authorization Act in 1973. Construction of the Pipeline finally got underway in April 1974 and continued for the next three years, with operation of the Pipeline beginning on June 20, 1977.

Aside from the Prudhoe Bay field, other major discoveries have also been made on State lands in the area between what is now the National Petroleum Reserve-Alaska (NPR-A) and the Arctic National Wildlife Refuge. They include the Kuparuk field, the Lisburne formation, Flaxman Island, Point Thomson, Duck Island-Sag Delta and other lesser fields. Of these, the Kuparuk field is one of the largest fields in the United States with proven and probable reserves estimated at between 0.6 and 1.5 billion barrels as of July 1982. Development of this field began in 1979, with phase I production beginning in 1982. Total field production should peak at close to 250,000 barrels per day (according to ARCO) in 1984 or shortly thereafter.

The Kuparuk field has an estimated life of between 20 and 25 years. However, it is more expensive to develop than the Prudhoe Bay field because the producing zone is relatively shallow and more wells and well pads and other associated facilities are needed. In addition, the field has no gas cap, implying the need to waterflood on a schedule shorter than that for Prudhoe Bay.
The Lisburne formation is a major petroleum resource-bearing formation located east of Prudhoe Bay. This field is deeper than the Prudhoe field and is thought to extend offshore to the north of Prudhoe Bay and east across the Sagavanirktok River. Little exploration of this field has taken place to date. Although it is believed to contain as much as 400 million barrels of oil, it is considered more of a gas than an oil field (see Table 9).

In addition to State onshore lands, approximately 1 million acres of federal land located between NPR-A and the Arctic National Wildlife Refuge are currently being studied by the U.S. Bureau of Land Management to determine their feasibility for future oil and gas leasing. According to the Bureau of Land Management, the study will be completed once State land selections in this area have been finalized.

Initial aeromagnetic and seismic work is underway in the vicinity of the Arctic National Wildlife Refuge which is administered by the U.S. Fish and Wildlife Service. The coastal plain of the Refuge has been identified as a favorable area for significant accumulations of oil and gas. According to the Fish and Wildlife Service, exploration activities to be conducted in the Refuge will be designed to identify those areas having oil and gas production potential and to estimate the volume of potential resources. Based on these activities, an evaluation of how potential oil and gas resources in the Refuge would relate to the national need for domestic energy sources will be made.
In 1985, the Fish and Wildlife Service must submit a plan to Congress recommending whether or not exploration drilling should take place in the Arctic National Wildlife Refuge and, if so, what stipulations should be attached to the leases. However, a recent land swap between the Department of the Interior and the Arctic Slope Regional Corporation will probably result in exploratory drilling near Kaktovik at an earlier date. This trade involved the transfer of approximately 101,272 acres of the surface estate of Arctic Slope Regional Corporation lands located within the Gates of the Arctic National Park and Preserve for the subsurface estate of approximately 92,160 acres of land within the Arctic National Wildlife Refuge. Any exploration activity on the approximately 92,160 acres of Corporation lands is subject to Section 22(g) of the Alaska Native Claims Settlement Act and must comply with stipulations found in the agreement. The stipulations include a requirement that a "plan of operations" be filed with the U.S. Fish and Wildlife Service before the commencement of exploration activities. The regional director would then make a determination based on the perceived impacts of the proposed activities. Authorization from Congress would still be necessary before the Regional Corporation could begin producing oil or gas from its lands in the Arctic National Wildlife Refuge.

Closer to Barrow, recent federal onshore oil and gas exploration and leasing activity has been concentrated in NPR-A. A comprehensive evaluation of the petroleum potential of the Reserve was begun by Husky Oil for the Navy in 1975 and continued under the Department of the Interior through 1981. All told, 28 test wells were completed during this period. No delineation wells were drilled.
Servicing of camps in NPR-A during the Husky Oil exploration period was handled out of Camp Lonely in the eastern portion of the Reserve. Equipment and supplies were barged in from Seattle during the summer to designated “drop off” points and were then hauled overland as soon as weather conditions permitted. Thus, except for a small Husky camp at NARL, Barrow felt little direct impact from these activities.

In response to a 1980 Congressional mandate, the Bureau of Land Management began an oil and gas leasing program in NPR-A. To date, three sales have taken place, one in January 1982, the second in May of the same year and the third in July 1983. A total of 6.76 million acres have thus far been offered, with successful bids having been received for approximately 1.3 million acres. The Bureau of Land Management plans to offer a total of 8 million acres for lease in NPR-A, averaging 2 million acres per sale.

Despite a long history of government-sponsored exploration activity, the only development in NPR-A to date is that associated with the Barrow gas fields. The most recent estimates of economically recoverable reserves in NPR-A are 1.4 billion barrels of oil. However, it is believed that only about 8 million acres, about one-quarter of the Reserve’s area, have oil potential. Most of this potential falls within an area transcribed by two arcs. The first arc runs from a point 30 miles south of Barrow in a shallow curve to a point 20 miles south of Nuiqsut. The second runs from a point 15 miles north of Umiat in a shape the reverse of the Barrow arc to the middle of the southern NPR-A boundary.
Other onshore oil and gas--related activities on the North Slope in recent years have been on Arctic Slope Regional Corporation lands. According to its 1982 annual report, the Corporation now owns about 4.6 million acres, including approximately 1 million acres of "in lieu" and village subsurface lands. (The land trade agreement between the Regional Corporation and the federal government has subsequently increased the amount of subsurface estate owned by the Corporation by approximately 92,160 acres and has decreased the amount of surface estate by approximately 101,272 acres). According to the Corporation's most recent annual report, it currently has about 4.3 million acres under lease to Chevron U.S.A., Union/Amoco and Shell Oil Company for evaluation and exploration activities. To date, a total of eight exploratory wells have been drilled in areas southeast and west of NPR-A, southeast of Umiat and near Point Lay. All wells drilled thus far, including two drilled in 1982, have been reported as dry holes. Nevertheless, Chevron has indicated its continuing interest in these lands by extending its primary lease term from 10 to 15 years. Low level exploration activities are expected to continue on these lands, at least for the next decade. The relatively low level of interest in Corporation lands for petroleum development does not extend to subsurface estate in the Arctic National Wildlife Refuge which the Corporation recently obtained in a land exchange agreement with the Department of the Interior. According to the Arctic Slope Regional Corporation, it has received 13 proposals from oil companies to explore lands in this area.
Oil and gas exploration activities are not confined to onshore areas on the North Slope. The leasing of offshore tracts in the Beaufort Sea got underway in December 1979 with a joint federal-State sale. A total of 514,202 acres was offered, 323,174 acres of which were State lands, 17,605 acres were State-managed disputed lands, 86,263 acres were federal lands and 87,160 acres were federally-managed disputed lands. Since then, the federal government held a second offshore lease sale in the Beaufort Sea (#71, Diapir field) in September 1982. Another four federal offshore lease sales are scheduled, two in the Beaufort Sea (#87, Diapir field in June 1984 and #97, Diapir field in June 1986) and two in the Chukchi Sea (#85, Barrow Arch in February 1985 and #109, Barrow Arch in February 1987).

The probability for commercial petroleum discoveries in these offshore areas is considered to be high, although this optimism may be tempered in light of disappointing drilling results to date in the promising Mukluk formation. Prior to its 1982 sale in the Diapir field, the federal government predicted a 100 percent probability for the discovery of commercial quantities of petroleum resources, with estimates of 1.66 billion barrels of oil and 8.85 trillion cubic feet of natural gas. For the Barrow Arch area, the federal government predicts a 76 percent probability for the discovery of commercial quantities of petroleum resources. The mean estimates of discoveries expected from the leasing program in this area are lower than those for the Beaufort Sea - 240 million barrels of oil and 1.05 trillion cubic feet of natural gas. All told, the estimated production capability from the Beaufort Sea is 8.129 billion barrels and that from the Chukchi Sea is 2.508 billion barrels.
The State has also been active in both onshore and offshore oil and gas leasing activity on the North Slope during the past few years. Since the 1979 joint federal-State lease sale, it has held four lease sales in the North Slope region, two in the Prudhoe Bay Uplands area which were held in September 1980 and September 1982, and two offshore/uplands sales in the Beaufort Sea in June 1982 and May 1983. During the next five years, the Statewide petroleum leasing program will include two in the Beaufort Sea (#43 and #52), two in the Kuparuk Uplands (#47 and #48) and one each at Camden Bay (#50), Prudhoe Bay Uplands (#51) and Icy Cape (#53). (See Table 10).

A major and as yet unresolved issue affecting oil and gas-related activities in the North Slope region is transportation of natural gas discoveries to outside markets. The Alaska Highway natural gas pipeline route, which envisaged a pipeline paralleling the TAPS line to the Interior and then following the Alaska Highway south, is currently stalled. Resolution of the gas pipeline issue is essential to the full development of North Slope oil fields.

In summary, the North Slope is the major area of interest to petroleum companies in the State of Alaska. Production is currently limited to the Prudhoe Bay and Kuparuk fields. However, additional onshore and offshore fields appear likely to be developed in the future. It is not assumed that region's traditional communities, with the possible exception of Kaktovik, will be directly impacted by such activities. Furthermore, the impact of petroleum activities on the North Slope Borough is related more to possible actions of the State government on
TABLE 10
PLANNED FEDERAL AND STATE LEASING SCHEDULES
NORTH SLOPE REGION

<table>
<thead>
<tr>
<th>Year</th>
<th>Proposed Date</th>
<th>Government Agency</th>
<th>Sale Number</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>5/84</td>
<td>State</td>
<td>43</td>
<td>Beaufort Sea</td>
</tr>
<tr>
<td></td>
<td>6/84</td>
<td>BLM-MMS</td>
<td>87</td>
<td>Diapir Field</td>
</tr>
<tr>
<td></td>
<td>7/84</td>
<td>BLM-NPR-A</td>
<td>--</td>
<td>NPR-A</td>
</tr>
<tr>
<td>1985</td>
<td>2/85</td>
<td>BLM-MMS</td>
<td>85</td>
<td>Barrow Arch</td>
</tr>
<tr>
<td></td>
<td>5/85</td>
<td>State</td>
<td>47</td>
<td>Kuparuk Uplands</td>
</tr>
<tr>
<td></td>
<td>7/85</td>
<td>BLM-NPR-A</td>
<td>--</td>
<td>NPR-A</td>
</tr>
<tr>
<td>1986</td>
<td>1/86</td>
<td>State</td>
<td>48</td>
<td>Kuparuk Uplands</td>
</tr>
<tr>
<td></td>
<td>6/86</td>
<td>BLM-MMS</td>
<td>97</td>
<td>Diapir Field</td>
</tr>
<tr>
<td></td>
<td>7/86</td>
<td>BLM-NPR-A</td>
<td>--</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td>9/86</td>
<td>State</td>
<td>50</td>
<td>Camden Bay</td>
</tr>
<tr>
<td>1987</td>
<td>1/87</td>
<td>State</td>
<td>51</td>
<td>Prudhoe Bay Uplands</td>
</tr>
<tr>
<td></td>
<td>2/87</td>
<td>BLM-MMS</td>
<td>109</td>
<td>Barrow Arch</td>
</tr>
<tr>
<td></td>
<td>5/87</td>
<td>State</td>
<td>52</td>
<td>Beaufort Sea</td>
</tr>
<tr>
<td></td>
<td>7/87</td>
<td>BLM-NPR-A</td>
<td>--</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td>9/87</td>
<td>State</td>
<td>53</td>
<td>Icy Cape</td>
</tr>
</tbody>
</table>

Source: Alaska Department of Natural Resources, Division of Minerals and Energy Development.
limiting Borough operating revenues and bonded indebtedness than it is to the size of oil or gas discoveries.

Tourism

Tourism is a minor and extremely seasonal element in the North Slope's economy. Most tourists visiting the North Slope travel in organized tours offered by Alaska Tour and Marketing Services. Organized group tours to Barrow are operated between June 1 and August 31, with three travel packages currently being offered. The first is a one-day excursion trip with tourists arriving at Barrow in the morning and leaving on the afternoon flight. The second involves arrival in Barrow on the afternoon flight, staying overnight in the community and then leaving the next morning. The third involves a flight to Prudhoe Bay for the morning, followed by a flight to Barrow where visitors spend the night and the following morning and then fly out of the region.

In Barrow, tourists are treated to a program which features an Eskimo blanket toss and traditional Eskimo dancing. Opportunities are also available for tourists to purchase locally made arts and crafts items. Overnight visitors stay at the 40-room Top of the World Hotel which is operated by a subsidiary of the Arctic Slope Regional Corporation. Two other hotels have recently been constructed in Barrow but, to date, they are not patronized by tour groups.

No current statistics are available on the number of tourists who visit Barrow. However, it is believed that the community normally receives

50
between 4,000 and 5,000 visitors on organized tours each year. Few tourists visit Barrow independently of tour groups. Nevertheless, according to Top of the World Hotel operators, individuals do come to the community throughout the year, including some in winter who are attracted by phenomena such as total darkness and the northern lights.

There is a potential for increased tourism in Barrow. This is an interesting area of the State and one which could be further promoted. Increases in tourism would result in increases in services (hotels) and trade (restaurants and souvenir sales) employment, as well as providing additional income to local craftsmen. Despite some growth, however, tourism is likely to remain a significant but highly seasonal element in Barrow's economy through the foreseeable future. The attitude of most Barrow residents towards tourism is an ambivalent one with recognition of economic benefits accruing from the industry but with reservations as to other impacts on the community from increased tourist traffic.

There is also some potential for tourism in several of the smaller villages of the North Slope, particularly Anaktuvuk Pass and Kaktovik. Anaktuvuk Pass is a point of entry to the Gates of the Arctic National Park and Preserve although Bettles (located outside the Borough) is the key air transportation center for most visitors to that area. To date, visitors passing through Anaktuvuk Pass have spent little in the community for supplies or services and no local persons are currently employed as guides. Similarly, Kaktovik serves as a transportation point for visitors to the Arctic National Wildlife Refuge, but here also
little money is spent in the village by Refuge visitors aside from that paid for the services of a locally based airtaxi operator.

Continued improvements in scheduled airline service to jump-off points, expansion of local air taxi services and the gradual development of local guide services should encourage a growth in tourist traffic to Anaktuvuk Pass and Kaktovik as national interest in wildlife and wilderness areas increases. (The regulation of visitors in these areas will also be a factor in attracting tourists). However, the expense of travel, the ruggedness, strangeness and very size of the areas being visited, and the short summer season combine to discourage any growth in tourism at a rate which would soon yield significant economic benefits for the residents of the smaller North Slope villages.

Alaska Tour and Marketing Services has developed a one-day tour package for Prudhoe Bay area visitors which can be combined with its tour packages for Barrow. No data on traffic for the Prudhoe tour are available, but the one-day tour price is close to $500 at midsummer, a rate that could discourage most tourist interest unless favorably combined with a visit to a traditional village.

Alaska Native Claims Settlement Act Corporations

Under terms of the 1971 Alaska Native Claims Settlement Act, twelve Native regional corporations (with provision made for a thirteenth) and a large number of village corporations were established to manage lands and to invest cash payments transferred to Alaska Natives in the
settlement of their claims. The Arctic Slope Regional Corporation is the regional entity for the North Slope.

By authority of Section 12(a) and 12(b) of the Claims Act, the Arctic Slope Regional Corporation is entitled to receive title to several million acres of land within the North Slope region. This includes lands selected by the regional corporation on its own account, to which it receives both surface and subsurface rights, plus subsurface title to lands selected by villages in the region. The latter includes "in-lieu" lands since several North Slope villages (Atqasuk, Barrow, Nuiqsut, Wainwright and Kaktovik) are located either within the former Naval Petroleum Reserve #4 or within the Arctic National Wildlife Refuge where subsurface selections are not normally permitted. As a result, the regional corporation has selected "regional deficiency" lands elsewhere in the region. Under Section 1431(0) of the Alaska National Interest Lands Conservation Act (ANILCA) passed in 1980, however, the Corporation was given the option, under certain conditions, of exchanging "in-lieu" subsurface lands for an equal acreage of subsurface estate beneath village corporation lands in NPR-A or in the Arctic National Wildlife Refuge. Another opportunity for exchanging lands was afforded by Section 1302(h) of ANILCA and Section 22(f) of the Claims Act which authorize the Secretary of the Interior to make land exchanges. Under this legislation, the Arctic Slope Regional Corporation has exchanged approximately 101,272 acres of surface estate within the Gates of the Arctic National Park and Preserve for 92,160 acres of subsurface estate in the coastal plain of the Arctic National Wildlife Refuge.
According to the Corporation’s most recent annual report, which was published prior to the signing of the recent land swap agreement, it now owns approximately 4.6 million acres of land, of which about 1 million acres are in “in-lieu” and village subsurface lands, close to its total entitlement. The same report indicates that the Corporation took advantage of the option afforded by Section 1431(0) of ANILCA during 1982 to acquire a small but important parcel in the Cape Halkett area. The Corporation is pursuing the possible acquisition of other lands through the same option.

Based on an enrollment of about 3,900 persons, the Arctic Slope Regional Corporation was entitled to a cash payment of approximately $51 million to be paid over a 10-year period from the so-called Native Fund. (The Fund included Congressional appropriations and mineral revenues from State and federal lands). In turn, half of the cash payments received by the regional corporation must be redistributed to individuals enrolled in the region and to village corporations. The Arctic Slope Regional Corporation’s cash entitlement has now been paid in full, except for incoming (and outgoing) funds under Section 7(i) of the Claims Act.

To date, the Arctic Slope Regional Corporation has invested its funds heavily in companies doing business on the North Slope. This has resulted in the creation of a significant number of jobs in Barrow. Aside from its corporate headquarters, the Corporation has formed a number of subsidiary companies. These include Eskimos, Inc., SKW/Clinton, Inc., Arctic Slope Consulting Engineers, Tundra Tours, Inc.,
Arctic Slope Alaska General Construction Company, formerly a wholly owned subsidiary of ASRC and now held in partnership with Wright Schuchart, Inc., has been active in both NPR-A and the Prudhoe Bay area. According to the regional corporation's most recent annual report, major projects in which this company has recently been involved include road construction, piling installation, camp operations and drilling pads for oil companies active on the North Slope. Arctic Slope Alaska General is also working under contract to the North Slope Borough as part of a joint venture with Gregory and Cook, Inc. on construction of the Barrow water and sewer utilidor project. The same company operates a construction camp on the south side of the Barrow airport runway, a facility which was expanded to accommodate up to 250 personnel during 1982. In addition, the company is involved in other joint ventures which encompass a wide variety of projects both in and outside the North Slope region.

Eskimos, Inc. was formed in 1974 as a wholly owned subsidiary of the Arctic Slope Regional Corporation. In Barrow, its activities presently include operation of the community gravel pit, a heavy duty equipment repair service, rental of heavy construction equipment, operation of a service station and local storage and distribution of fuel oil, gasoline and other petroleum products. In addition, Eskimos, Inc. has been engaged in a range of construction activities in conjunction with SKW/Clinton, Inc. Since the purchase of all SKW/Clinton, Inc. stock in
1982, both of these companies are now wholly owned subsidiaries of the Arctic Slope Regional Corporation.

Arctic Slope Consulting Engineers was established as a wholly owned subsidiary of the Arctic Slope Regional Corporation during 1982. This firm offers engineering and construction management services and operates on a Statewide basis.

Tundra Tours, Inc. is another subsidiary of the regional corporation. It owns and operates the 40-room Top of the World Hotel (but contracts out the operation and management of the hotel restaurant). Tundra Tours also has contracts to provide student bus transportation services in the Fairbanks and Palmer/Wasilla areas through the Tundra Tours Bus Company.

The other two wholly owned subsidiaries, ASRC Communications, Inc. and Inupiat Drillers, Inc., run the Barrow cable TV station and invest in drilling rigs respectively.

Through the development of its lands (see earlier under Oil and Gas Exploration and Development) and through the operations of its subsidiary companies, the Arctic Slope Regional Corporation exerts considerable economic influence throughout the North Slope region and in Barrow. The company's corporate headquarters are in Barrow and about 40 administrative staff are employed here. Depending on the success of oil and gas exploration activities on its lands and on the activities of its corporate subsidiaries, the Arctic Slope Regional Corporation should continue to play an important role in Barrow's economy in the future.
Each of the eight North Slope traditional villages -- Anaktuvuk Pass, Atqasuk, Barrow, Kaktovik, Nuiqsut, Point Hope, Point Lay and Wainwright -- have village corporations established under terms of the Alaska Native Claims Settlement Act. The land entitlements of those villages within the Chukchi Sea region (Atqasuk, Barrow, Point Hope, Point Lay and Wainwright) are outlined in the sections of this report dealing with individual villages, as are the economic activities in which the various corporations are involved. In general, the corporations have invested locally in village stores and fuel distributorships and most have participated in construction activities, either alone or as part of joint ventures. In some cases, corporations have also invested outside their village. While not large employers, the village corporations are large land owners and, as such, exert a considerable influence on village development.

Minerals

Although the North Slope region is not generally regarded as a favorable area for mineral discoveries, one of the world’s most promising lead/zinc deposits, known as the Red Dog mine, is located in the southwestern portion of the Borough on Northwest Alaska Native Corporation (NANA) lands. Cominco American Inc. has paid $1.5 million to the NANA Corporation for lease rights to the mine and will pay $1 million per year plus a percentage of the profits to the Corporation throughout the estimated 50 year life of the project.
According to reports from Cominco, the Red Dog mine would produce refined ore amounting to 350,000 tons of zinc and 80,000 tons of lead during each of its first five or six years of operation. Following that period, production facilities could be expanded to 580,000 tons of zinc and 120,000 tons of lead per year.

A decision as to whether or not to proceed with development of the Red Dog property will be made early in 1984. Aside from prices and world markets, factors which could affect that decision include transportation of the ore to tidewater and the construction of dock facilities. Both of these factors will involve considerable expense and probably, also, controversy as the route from the mine to tidewater which is presently favored by Cominco passes through a portion of the Cape Krusenstern National Monument.

**NORTH SLOPE BOROUGH FINANCES**

The North Slope Borough's home rule charter provides for the mayor to submit to the Assembly an operating budget and a capital improvements program incorporating a plan for capital improvements proposed for the succeeding six years. The charter also provides that the budget shall be adopted by ordinance and taxes levied in an amount necessary to fund the budget. This is a comprehensive budget suborning the budget of the school board. The Assembly must act upon the budget by May 1. Since July 1 is the due and delinquent date for taxes (except for residential properties), a substantial portion of Borough revenues are therefore collected at the commencement of the Borough's fiscal year on July 1.
The home rule charter provides that any obligation, including a bond, requiring the payment of funds from an appropriation in a subsequent fiscal year must be approved by a majority of the voters authorized to vote on the issue.

**Operating Budget**

The operating budget is essentially a budget for the General Fund. It includes appropriations for operation and maintenance, debt service, a reserve for working capital and a contribution to the Capital Projects Funds. If total revenues (on a cash basis) exceed total expenditures (on an accrual basis), the balance is transferred to the reserve for capital outlays account in the General Capital Projects Fund.

A restricted account within the General Fund has been established for debt service. All debt service is usually paid from property taxes. If an emergency arises, additional funds for debt service could be made available from the reserve for capital outlays in the General Capital Projects Fund.

**Capital Projects Funds**

The capital improvements program is reviewed and adopted by the Assembly concomitantly with the operating budget. The Mayor prepares a capital improvements program each year, consisting of a plan for capital improvements proposed for the next six fiscal years. The Assembly then by ordinance approves and appropriates funds for stipulated projects.
classified by the seventeen Capital Projects Funds by which the Borough accounts for its capital improvements program. The integration of the first year’s capital budget with the operating budget provides a complete financial plan for the fiscal year. The source of funding for capital projects is chiefly bonded indebtedness supplemented by monies provided by federal and State grants.

Currently included in the capital improvements program is an industrial park complex being constructed in conjunction with development of the Kuparuk oil and gas field. The project is expected to be self-liquidating as to debt service by around fiscal year 1986/87.

Enterprise Fund

The Borough maintains sanitary facilities at Prudhoe Bay providing water, sewer, solid waste disposal and landfill services. These operations are accounted for through the Enterprise Fund. Direct operations and maintenance costs (excluding depreciation) are to be recovered primarily by user charges. The debt service on Enterprise Fund obligations is provided by levies on all property within the boundaries of the Borough.

Borough Revenues

The Borough has five principal sources of revenue: property taxes, a sales tax, charges for services and utilities, interest earnings and State and federal intergovernmental transfers. The capability of the
Borough to finance current operations and its capital improvements program depends primarily upon revenues from property taxes levied upon the petroleum industry. State law limits the rate at which the Borough may tax property for operating purposes, whereas the rate of taxation for retirement of bonded indebtedness is not restricted.

Operating Revenues.

Property Taxes. State law restricts property taxes collected by the Borough for operating purposes in two ways. First, the maximum tax rate is limited to three percent (30 mills) of the assessed valuation of property within the Borough. Secondly, and far more important at present, the Borough is limited as to the amount of property tax which may be collected per Borough resident.

Under State law, the maximum property tax for operations which may be collected per Borough resident is limited to:

\[
\frac{\text{Total Assessed Value of Property Statewide}}{\text{Total State Population}} \times 2.25 \times 0.03
\]

The latter formula is a restatement of the State statute limiting property tax collections per Borough resident to three percent of a maximum assessed value arrived at by multiplying 225 percent of the average per capita assessed value of property Statewide.
The limit on total annual property taxes levied by the Borough for operating purposes is the smaller of the values yielded by these two formulas:

\[
\text{Total Assessed Value of Property Within the Borough} \times 0.03
\]

\[
\frac{\text{Total Assessed Value of Property Statewide}}{\text{Total State Population}} \times 0.0675 \times \text{Total Borough Population}
\]

This latter formula was re-expressed in the Mineral Management Service's Technical Report Number 85 (ISER) as:

\[
\frac{\text{Total Borough Population}}{\text{Total State Population}} \times \frac{\text{Total Assessed Value of Property Statewide}}{\text{Total State Population}} \times 0.0675
\]

The restated formula serves to emphasize that the North Slope Borough's maximum property tax revenues for operating purposes are limited by the proportion of the Borough's population to that for the State. The formula also makes clear that Statewide property values, rather than property values within the Borough, currently limit Borough property tax revenues for operating purposes.

Other Operating Revenues. In addition to property taxes, the Borough receives substantial operating revenues from State and federal intergovernmental transfers, from interest earned, from a sales tax and from charges for services and public housing.

Most intergovernmental transfers are for specific purposes. State funds make up the largest proportion of these revenues,
while education grants in aid dominate transfers from both governments. The State's Foundation Program is the principal source of aid for school operations.

Interest earned has been important in recent years, reflecting high interest rates as well as substantial cash funds on hand. Such income exceeded intergovernmental transfers in fiscal year 1982. Much of the interest earned is restricted in use to capital outlays and debt retirement.

The three percent sales tax is limited to the first $1,000 of each sale. The Borough also has a sizable flow of funds from its housing activities, utility operations and other miscellaneous activities. The housing and utility operations are not accounted for as enterprises, so the magnitude of deficits arising from these activities cannot be determined with any accuracy.

Capital Improvement Revenues. As of March 31, 1983 the North Slope Borough had $787,400,000 in general obligation bonds outstanding, with a further $308,474,000 authorized by Borough voters for future sale. In April 1983, $200,000,000 in bond 'anticipation notes were sold and a sale of $15,000,000 in general obligation bonds was made in December 1983. Sale of the remaining $293,474,000 in general obligation bonds is scheduled for February 1984, with $200,000,000 of the proceeds to be used for retirement of the bond anticipation notes.
The Borough's capital improvements program has also been supported by intergovernmental transfers from the State and federal governments. As of June 30, 1982 the Borough had received $2,682,276 in such funds. Further funding of $43,566,239 was then expected in future years.

The State does provide substantial aid for the construction of education facilities. The principal support is provided through appropriations for payment of debt service incurred by a municipality for school construction. State aid is authorized for payment of 100 percent of the debt service incurred prior to July 1, 1977 and 90 percent of such debt service incurred July 1, 1978 and thereafter. The aid is confined to approved costs of basic education facilities as defined by State regulations. To the extent that such costs for additional facilities exceed regulatory standards set by the Department of Education, those costs will not be funded by the State. The State Legislature may appropriate at a level below that authorized by statute.

The State may also provide appropriations contributing directly to the capital cost of specific school structures.

Trends in Borough Revenues

Table 11 summarizes North Slope Borough general revenues for the fiscal years 1979 through 1984. Total revenues increased fourfold during this period. The growing reliance on property taxes is reflected in the
<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Property Taxes</th>
<th>Sales Taxes</th>
<th>Intergovernmental Transfers</th>
<th>Interest Income</th>
<th>Other Revenues</th>
<th>Total Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>$35,138</td>
<td>$1,854</td>
<td>$9,606</td>
<td>$2,551</td>
<td>$6,548</td>
<td>$57,240</td>
</tr>
<tr>
<td>1980</td>
<td>52,445</td>
<td>2,116</td>
<td>11,587</td>
<td>4,577</td>
<td>7,394</td>
<td>79,691</td>
</tr>
<tr>
<td>1981</td>
<td>59,062</td>
<td>3,714</td>
<td>17,992</td>
<td>8,143</td>
<td>22,698</td>
<td>113,948</td>
</tr>
<tr>
<td>1982</td>
<td>109,741</td>
<td>4,313</td>
<td>26,664</td>
<td>7,952</td>
<td>42,208</td>
<td>196,716</td>
</tr>
<tr>
<td>1983 b/</td>
<td>134,205</td>
<td>4,228</td>
<td>$31,162</td>
<td>15,000</td>
<td>3,264</td>
<td>187,859</td>
</tr>
<tr>
<td>1984 b/</td>
<td>152,010</td>
<td>4,222</td>
<td>33,778</td>
<td>24,272</td>
<td>16,509</td>
<td>230,791</td>
</tr>
</tbody>
</table>

a/ All cash receipts except enterprise funds.

b/ Budgeted revenues.


percentage of such taxes to total revenues, moving from 61.4 percent in 1979 to 65.9 percent in 1984. The Borough’s use of property tax revenues has changed more dramatically, as indicated in Table 12. In FY 1979, only 30.9 percent of property tax revenues was dedicated to debt retirement. By FY 1984, 78.2 percent was budgeted for that purpose.

Property taxes allocated to current operations increased from $24,273,000 in FY 1979 to $33,117,000 in FY 1984, a change of 36.4 percent. Property tax revenues used for debt service during that same period increased from $10,865,000 to $118,892,000, a change of 994.3 percent.

While property tax revenues allocated to the Borough’s operations have increased substantially, the proportion of property tax dollars to total operating outlays has decreased. As Table 12 indicates, property tax support of the operating budget declined from 61.4 percent in FY 1979 to 31.7 percent in FY 1984 as revenues other than property taxes assumed a more important role in supporting annual operations.

**Trends in Borough Expenditures**

Table 13 summarizes the Borough’s general expenditures by category. Total expenditures for operations increased from $39,541,000 in FY 1979 to $104,621,000 (budgeted) in FY 1984, or 2.6 times. Expenditures for debt service increased from $10,865,000 to $126,170,000 in the same fiscal years, or 11.6 times. Capital expenditures had increased from $69,143,000 in FY 1979 to an estimated $268,000,000 in FY 1983.
### TABLE 12

**PROPERTY TAX REVENUES**

**NORTH SLOPE BOROUGH**

**FY 1979 - 1984**

*(millions of dollars)*

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Operations Revenues</th>
<th>% of Total Operating Expenditures</th>
<th>Debt Service</th>
<th>Total Property Tax Revenues</th>
<th>Annual Percent Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>$24,273</td>
<td>61.4</td>
<td>$10,865</td>
<td>$35,138</td>
<td>49.3</td>
</tr>
<tr>
<td>1980</td>
<td>26,365</td>
<td>57.4</td>
<td>26,080</td>
<td>52,445</td>
<td>49.3</td>
</tr>
<tr>
<td>1981</td>
<td>26,242</td>
<td>46.6</td>
<td>32,820</td>
<td>59,062</td>
<td>12.6</td>
</tr>
<tr>
<td>1982</td>
<td>34,777</td>
<td>43.0</td>
<td>74,964</td>
<td>109,741</td>
<td>85.8</td>
</tr>
<tr>
<td>1983 a/</td>
<td>33,835</td>
<td>38.7</td>
<td>100,370</td>
<td>134,205</td>
<td>22.3</td>
</tr>
<tr>
<td>1984 a/</td>
<td>33,117</td>
<td>31.7</td>
<td>118,892</td>
<td>152,010</td>
<td>13.2</td>
</tr>
</tbody>
</table>

---

**a/ Budgeted revenues.**

**Sources:**


TABLE 13

GENERAL GOVERNMENT EXPENDITURES a/
NORTH SLOPE BOROUGH
FY 1979 - 1984
(millions of dollars)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Operating Expenditures b/</th>
<th>General Fund Service</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>$39,541</td>
<td>$10,865</td>
<td>$50,406</td>
</tr>
<tr>
<td>% Distribution</td>
<td>78.4</td>
<td>21.6</td>
<td>100.0</td>
</tr>
<tr>
<td>1980</td>
<td>45,915</td>
<td>29,152</td>
<td>75,067</td>
</tr>
<tr>
<td>% Distribution</td>
<td>61.2</td>
<td>38.8</td>
<td>100.0</td>
</tr>
<tr>
<td>1981</td>
<td>56,564</td>
<td>32,820</td>
<td>89,384</td>
</tr>
<tr>
<td>% Distribution</td>
<td>63.3</td>
<td>36.7</td>
<td>100.0</td>
</tr>
<tr>
<td>1982</td>
<td>80,909</td>
<td>74,150</td>
<td>155,059</td>
</tr>
<tr>
<td>% Distribution</td>
<td>52.2</td>
<td>47.8</td>
<td>100.0</td>
</tr>
<tr>
<td>1983 c/</td>
<td>87,489</td>
<td>100,370</td>
<td>187,584</td>
</tr>
<tr>
<td>% Distribution</td>
<td>46.6</td>
<td>53.4</td>
<td>100.0</td>
</tr>
<tr>
<td>1984 c/</td>
<td>104,621</td>
<td>126,170</td>
<td>230,791</td>
</tr>
<tr>
<td>% Distribution</td>
<td>45.3</td>
<td>54.7</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a/ Includes all expenditures except enterprise funds.
b/ Includes transfers to Capital Projects Funds.
c/ Budgeted expenditures.


Alaska Consultants, Inc.
As Table 14 indicates, expenditures for education have remained the largest single item of outlay in the Borough's operating budget. However, the rate of increase in expenditures for education since 1979 has been the lowest for all of the categories of activity. The housing function experienced the steepest rate of increase as the Borough's stock of public housing facilities expanded. Since the Borough does not utilize enterprise fund accounting for activities such as public housing and utilities, it is difficult to assess the rate of change in the net cost for such activities after deducting the revenue from rents and user fees.

The acceleration in capital improvements program spending can be illustrated in terms of the general obligation bond sales essential to support construction expenditures (see Table 13 for annual capital expenditures). The bond sales from 1979 to date have been:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Bonds Sold</th>
</tr>
</thead>
<tbody>
<tr>
<td>1979</td>
<td>$50,000,000</td>
</tr>
<tr>
<td>1980</td>
<td>140,000,000</td>
</tr>
<tr>
<td>1981</td>
<td>140,000,000</td>
</tr>
<tr>
<td>1982</td>
<td>260,000,000</td>
</tr>
<tr>
<td>1983</td>
<td>315,000,000 (Includes $200,000,000 bond anticipation notes)</td>
</tr>
</tbody>
</table>

The remaining authorized but unissued general obligation bonds totalled $308,474,000 when the $200,000,000 sale of bond anticipation notes was made in April 1983. A sale of $15,000,000 in general obligation bonds was made in December 1983. The remainder of the authorized general obligation bonds ($293,474,000) will be sold in February 1984, but $200,000,000 of the sale's proceeds will be used to retire the bond anticipation notes. A special bond election, subject to final Assembly
<table>
<thead>
<tr>
<th>Activity</th>
<th>Fiscal Year</th>
<th>Percent Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1979 b/</td>
<td>1984 c/</td>
</tr>
<tr>
<td>General Government</td>
<td>$6,038</td>
<td>$18,812</td>
</tr>
<tr>
<td>Community Services</td>
<td>5,862</td>
<td>18,768</td>
</tr>
<tr>
<td>Health/Social Services</td>
<td>1,687</td>
<td>6,116</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>500</td>
<td>--</td>
</tr>
<tr>
<td>Housing</td>
<td>537</td>
<td>5,116</td>
</tr>
<tr>
<td>Public Safety</td>
<td>1,702</td>
<td>6,954</td>
</tr>
<tr>
<td>Education</td>
<td>12,636</td>
<td>28,855</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>(28,963)</td>
<td>(84,621)</td>
</tr>
<tr>
<td>Capital d/</td>
<td>10,579</td>
<td>20,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>39,541</td>
<td>104,621</td>
</tr>
</tbody>
</table>

**a/** All expenditures except enterprise funds.

**b/** Actual expenditures.

**c/** Budgeted expenditures.

**d/** Transfers to the Capital Project Funds equal to 5 percent of bonds to be sold.

**Sources:**

approval, is planned to be held in February 1984, at which time Borough voters will be asked to authorize the sale of a further $153,941,000 in general obligation bonds.

Future Borough Property Tax Revenues

The ability of the North Slope Borough to control its property tax revenues is influenced by three sets of factors: legal constraints on the tax rate, total assessed values and the willingness of local taxpayers to tax themselves.

Property Tax Rates. The State may limit municipal property tax rates directly by establishing a maximum rate—or indirectly by limiting the amount of tax dollars which can be collected annually. An even more indirect limitation on that portion of the property tax assessed for debt retirement would be to limit the maximum bonded indebtedness which a municipality can incur.

Local taxpayers can also influence the rate by limiting their authorization of bonded indebtedness and by electing mayors and municipal legislative bodies committed to establishment of certain tax rates.

Property Tax Base. The total assessed value of a municipality's taxable properties is determined by the magnitude of taxable properties as well as the method by which the properties are
evaluated. The State may establish procedures controlling the
property assessment or it may undertake the task itself.

At present, there is no statutory limit to the property tax rate which
the North Slope Borough may establish for servicing its bonded
indebtedness. The State assesses certain oil and gas industry
facilities and these properties make up the bulk of the taxable property
within the Borough.

Under State law, municipalities may levy up to a 30 mill tax on property
for operating purposes. However, a municipality also has a per capita
limit on the total property tax dollars it can collect for operating
purposes. It is this per capita restriction which is presently limiting
the property tax rate which the Borough now establishes for operating
purposes. The State also calculates the total number of Borough
residents each year. This right to determine the total population
figure is of particular importance because the manner in which the
workers at the oil and gas industry camps within the Borough are
enumerated as to place of residence may change the Borough's total
resident population count for tax purposes by as much as 100 percent.

State tax statutes provide for a levy of 20 mills on certain oil and gas
properties directly assessed by the State. However, the industry's
payments of this tax to the State are reduced by the property taxes
which are paid to a municipality for the same properties. The higher
the municipal property tax rates, the lower is the State's tax revenue
from the oil and gas industry property. It is this relationship between
North Slope Borough property tax revenues from the oil and gas industry and the net flow of property tax dollars to the State which strongly influences attitudes of those municipalities with little or no oil and gas properties to tax directly. Such municipalities have taken legal and political action to influence the State's annual computation of the North Slope Borough's resident population and thus control the property tax rate which the Borough can levy for operations (as well as controlling Borough's revenues under the State's revenue sharing program). The 1983 introduction of a bill in the State legislature to establish a maximum per capita indebtedness for municipalities is a variation of the effort to limit the North Slope Borough's taxing powers.

The various forces which could work to limit the North Slope Borough's property tax rates and revenues are discussed extensively in Mineral Management Service's Technical Report Number 85 (ISER). The report concludes:

- That the property tax base of the North Slope Borough will, even without new oil discoveries, remain very high and is not likely to be a constraint on the Borough's revenues for at least the next 15 years;
- That the property tax burden upon Borough residents is not likely to be so high as to constrain property tax revenues;
- That State-imposed limits will continue to be the primary factor limiting Borough property tax revenues, with these limitations being determined in the Statewide political arena; and
That increased uneasiness among private lenders regarding the size of the Borough's debt and the ability of the Borough to finance the cost of operating its expanding facilities is likely to cut back Borough borrowing.

The bond rating bureaus have indeed recently expressed concern regarding the rate and magnitude of the Borough's bond sales. Standard and Poor's cut its rating of the Borough's bonds in June 1983, but other rating bureaus did not follow this lead. The reduction of the Borough's bond credit rating, if maintained, could lead to higher Borough interest expense, a loss of some current markets, increased concern by the State administration and Legislature and, especially, some reduction in overall bonding capacity.

Impact of Federal Offshore Oil and Gas Development

Borough Tax Revenues. The Minerals Management Service's Technical Report Number 85 (ISER) also analyzes the impact of OCS development resulting from Federal Lease Sale 87 upon Borough revenues. The conclusion is reached that expansion of the Borough's property tax base from this OCS development in the Beaufort Sea would not have a significant effect upon Borough revenues because future Borough revenues are more likely to be constrained by politically determined limits rather than by the size of the Borough's tax base and because a large share of the resulting capital investment could be offshore and beyond the Borough's tax jurisdiction.
OCS development in the Chukchi Sea following the Barrow Arch lease sales would, for the same reasons, have a limited impact upon the Borough’s property tax revenues. The Chukchi Sea development might be relatively more important to Borough tax benefits in that it will be occurring at a later date when the decrease in present onshore property values may be accelerating.

It does not seem likely that OCS development will have any significant impact upon intergovernmental revenues which the Borough receives from the State. The State’s revenues from oil and gas development beyond the three-mile zone are limited relative to the benefits realized from development onshore and in State territorial waters. Long range forecasts of State revenues show overall declines by the 1990’s, despite OCS development.

Borough Bond Revenues. Future Borough capital expenditures will depend primarily on the ability of the Borough to sell general obligation bonds and service the attendant indebtedness. The rating bureaus have already evidenced concern about the amount of Borough bonds outstanding and the rate at which the bonds have been sold in recent years. While there is now no legal limit on the rate at which the Borough may tax property for debt service, strong political and economic forces undoubtedly will come into play if the total property tax rate approaches 20 mills. Once the 20 mill rate is reached, the State would receive no property taxes from oil and gas properties which it assesses in the North Slope Borough.
since the Borough would have preempted the entire 20 mills for its own purposes.

A bill was introduced in the 1983 session of the State Legislature to limit municipal per capita indebtedness. If such legislation were passed, the North Slope Borough's ability to sell more bonds and (indirectly) to tax property for debt service could be seriously impacted. Alternative approaches to this proposed State-imposed restriction on the Borough's taxing powers for debt service could be a limit on property taxes for debt service purposes or a limit on property taxes for all purposes.

Since OCS development will have a limited impact upon the Borough's taxable property values, and since State-imposed limitations on the Borough's taxing powers are so significant, OCS development which might result from Barrow Arch lease sales in the Chukchi Sea will not likely alter the probability that the North Slope Borough now faces a much lower level of future general obligation bond sales than has been the case during the past several years.

A report entitled "A Review of Debt Capacity and Debt Management for the State of Alaska", prepared by the Municipal Finance Officers Association for the Alaska Legislative Budget and Audit Committee was released in August 1983. In discussing local government debt, the report notes that the State of Alaska presently places few constraints on the issuance of debt by its local government subdivisions, in contrast to most states where a
**TABLE 15**

**STATE OF ALASKA**

**LOCAL GOVERNMENT DEBT**

<table>
<thead>
<tr>
<th>City/Borough</th>
<th>General Obligation Debt</th>
<th>Revenue-Supported Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Outstndng 07/01/82 a/</td>
<td>Outstndng 12/31/81 b/</td>
</tr>
<tr>
<td>North Slope Borough</td>
<td>$587,400,000</td>
<td>-</td>
</tr>
<tr>
<td>Municipality of Anchorage</td>
<td>261,010,000</td>
<td>$236,660,000</td>
</tr>
<tr>
<td>Kenai Peninsula Borough</td>
<td>98,999,903</td>
<td>-</td>
</tr>
<tr>
<td>City of Valdez</td>
<td>84,460,000</td>
<td>-</td>
</tr>
<tr>
<td>Fairbanks North Star Borough</td>
<td>83,159,350</td>
<td>35,000,000</td>
</tr>
<tr>
<td>Metlakatla-Susitna Borough</td>
<td>65,218,090</td>
<td>-</td>
</tr>
<tr>
<td>City and Borough of Juneau</td>
<td>27,904,000</td>
<td>146,000</td>
</tr>
<tr>
<td>Kodiak Island Borough</td>
<td>20,042,372</td>
<td>-</td>
</tr>
<tr>
<td>City and Borough of Sitka</td>
<td>17,486,200</td>
<td>5,168,000</td>
</tr>
<tr>
<td>Ketchikan Gateway Borough</td>
<td>14,495,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Fairbanks</td>
<td>11,915,000</td>
<td>36,400,000</td>
</tr>
<tr>
<td>City of Ketchikan</td>
<td>8,110,000</td>
<td>12,567,000</td>
</tr>
<tr>
<td>Bristol Bay Borough</td>
<td>3,695,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Kenai</td>
<td>3,695,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Palmer</td>
<td>3,629,401</td>
<td>-</td>
</tr>
<tr>
<td>City of Unalaska</td>
<td>3,500,000</td>
<td>456,000</td>
</tr>
<tr>
<td>City of Kodiak</td>
<td>3,250,000</td>
<td>4,295,000</td>
</tr>
<tr>
<td>City of Petersburg</td>
<td>2,995,000</td>
<td>2,526,000</td>
</tr>
<tr>
<td>City of Homer</td>
<td>2,877,000</td>
<td>1,096,000</td>
</tr>
<tr>
<td>City of Nenana</td>
<td>2,725,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Wrangell</td>
<td>2,578,000</td>
<td>612,000</td>
</tr>
<tr>
<td>City of Skagway</td>
<td>1,826,325</td>
<td>-</td>
</tr>
<tr>
<td>City of Cordova</td>
<td>1,673,200</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Haines Borough</td>
<td>923,310</td>
<td>-</td>
</tr>
<tr>
<td>City of Bethel</td>
<td>805,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Nome</td>
<td>585,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Seldovia</td>
<td>50,000</td>
<td>-</td>
</tr>
<tr>
<td>City of Dillingham</td>
<td>73,000</td>
<td>231,000</td>
</tr>
<tr>
<td>City of Craig</td>
<td>37,498</td>
<td>93,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$1,316,294,221</td>
<td>$347,356,000</td>
</tr>
</tbody>
</table>

a/ From Alaska Department of Community and Regional Affairs, Alaska Taxable 1982.
c/ When two ratings are given, the first applies to general obligation debt, and the second to the majority of revenue bonds.
d/ As of March 31, 1983 the North Slope Borough had $787,400,000 in outstanding general obligation bonds. In April 1983, the Borough sold $200,000,000 in bond anticipation notes and subsequently sold another $15,000,000 in general obligation bonds in August 1983. The Borough is planning a February 1984 sale of all remaining authorized bonds ($293,474,000), with $200,000,000 of the proceeds to be used for retirement of the bond anticipation notes.

NR Not Rated.


<table>
<thead>
<tr>
<th>City/Borough (population)</th>
<th>G.O. Debt Per Capita</th>
<th>Debt as Percentage of Assessed Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Slope Borough *</td>
<td>$77,781</td>
<td>7.10</td>
</tr>
<tr>
<td>Municipality of Anchorage ****</td>
<td>1,278</td>
<td>2.46</td>
</tr>
<tr>
<td>Kenai Peninsula Borough ***</td>
<td>3,064</td>
<td>4.45</td>
</tr>
<tr>
<td>City of Valdez *</td>
<td>22,864</td>
<td>4.97</td>
</tr>
<tr>
<td>Fairbanks North Star Borough ****</td>
<td>1,146</td>
<td>2.78</td>
</tr>
<tr>
<td>Matanuska-Susitna Borough ***</td>
<td>2,508</td>
<td>5.42</td>
</tr>
<tr>
<td>City and Borough of Juneau **</td>
<td>1,267</td>
<td>2.69</td>
</tr>
<tr>
<td>Kodiak Island Borough **</td>
<td>1,576</td>
<td>4.58</td>
</tr>
<tr>
<td>City and Borough of Sitka *</td>
<td>2,127</td>
<td>4.15</td>
</tr>
<tr>
<td>Ketchikan Gateway Borough **</td>
<td>1,166</td>
<td>2.17</td>
</tr>
<tr>
<td>City of Fairbanks ***</td>
<td>463</td>
<td>1.12</td>
</tr>
<tr>
<td>City of Ketchikan *</td>
<td>1,043</td>
<td>2.58</td>
</tr>
<tr>
<td>Bristol Bay Borough *</td>
<td>3,064</td>
<td>4.45</td>
</tr>
<tr>
<td>City of Kenai *</td>
<td>706</td>
<td>1.80</td>
</tr>
<tr>
<td>City of Palmer</td>
<td>1,436</td>
<td>3.93</td>
</tr>
<tr>
<td>City of Unalaska *</td>
<td>1,821</td>
<td>4.76</td>
</tr>
<tr>
<td>City of Kodiak *</td>
<td>533</td>
<td>1.00</td>
</tr>
<tr>
<td>City of Petersburg *</td>
<td>985</td>
<td>2.32</td>
</tr>
<tr>
<td>City of Homer *</td>
<td>993</td>
<td>1.85</td>
</tr>
<tr>
<td>City of Nenana *</td>
<td>5,046</td>
<td>30.39</td>
</tr>
<tr>
<td>City of Wrangell *</td>
<td>1,085</td>
<td>2.94</td>
</tr>
<tr>
<td>City of Skagway *</td>
<td>2,312</td>
<td>3.21</td>
</tr>
<tr>
<td>City of Cordova *</td>
<td>747</td>
<td>1.44</td>
</tr>
<tr>
<td>Haines Borough *</td>
<td>499</td>
<td>1.30</td>
</tr>
<tr>
<td>City of Haines *</td>
<td>746</td>
<td>0.23</td>
</tr>
<tr>
<td>City of Bethel *</td>
<td>159</td>
<td>0.41</td>
</tr>
<tr>
<td>City of Juneau *</td>
<td>148</td>
<td>0.32</td>
</tr>
<tr>
<td>City of Seldovia *</td>
<td>590</td>
<td>2.26</td>
</tr>
<tr>
<td>City of Dillingham *</td>
<td>40</td>
<td>0.11</td>
</tr>
<tr>
<td>City of Craig *</td>
<td>02</td>
<td>0.17</td>
</tr>
<tr>
<td>** Statewide Average</td>
<td>$4,648</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Moody's Local Debt Medians

<table>
<thead>
<tr>
<th>Population</th>
<th>Median Debt as % of Assessed Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>200,000 - 300,000</td>
<td>361</td>
</tr>
<tr>
<td>50,000 - 100,000</td>
<td>301</td>
</tr>
<tr>
<td>25,000 - 50,000</td>
<td>289</td>
</tr>
<tr>
<td>10,000 - 25,000</td>
<td>422</td>
</tr>
<tr>
<td>Under 10,000</td>
<td>600</td>
</tr>
</tbody>
</table>

Source: Alaska Department of Community and Regional Affairs. Alaska Taxable, Fiscal Year 1982, as published by Municipal Finance Officers Association in A Review of Debt Capacity and Debt Management for the State of Alaska, p. 120.
limit is placed on the amount of local government debt which may be issued. After discussing the high levels of debt which have been issued by the State's local governments (see Tables 15 and 16), the higher than average interest costs of Alaska's local government debt, and the loss to the State of revenues from property taxes levied by certain localities to meet annual debt service requirements, the report authors suggest that the State might wish to further analyze the bond market experience of local governments and State policies regarding local debt management to encourage prudent use and guard against misuse of local debt issuance. The authors also conclude that:

“Currently the State is being short-changed by those localities that levy a high amount of taxes on oil production property in order to finance debt service. Because taxes paid to the locality are credited towards State property tax liability, this represents a direct revenue loss to the State. It is, therefore, in the State's interest to address the absolute level of debt issuance by its localities.”

The point here is not to judge the appropriateness of the study's conclusions but to suggest that the conclusions are probably shared by a number of municipalities in Alaska as well as by the State legislators representing them.

SUBSISTENCE ECONOMY

As previously discussed, economic opportunity in terms of wage and salary employment for North Slope communities has greatly increased in the past ten years, primarily related to the discovery and development of oil and gas reserves in the region and to the subsequent
incorporation of the North Slope Borough. This section considers 1) the interrelationships between the subsistence and more modern wage economies and 2) the impacts which increased wage and salary employment has had on subsistence activities, including the amount of time available for subsistence, scheduling, harvest ranges and equipment. It should be noted that the quantity of wildlife resources harvested is beyond the scope of this report.

Increased employment opportunities have affected the subsistence activities of North Slope Borough residents in two ways. First, greater opportunities for employment have increased the amount of money readily available for investment in subsistence equipment. Second, employment has reduced the amount of time available for the pursuit of subsistence activities. These two impacts have resulted in changes in harvest techniques, the timing/scheduling of specific harvests, the amount of time necessary for the successful harvest of specific wildlife resources and, in some cases, they have influenced hunting ranges and changed the hunting emphasis on specific resources. On the other hand, techniques used, the range and the timing of the harvest have remained the same for some species.

To understand the technological changes in harvest tools and techniques presently used by North Slope Borough residents requires a brief discussion of the time frame during which these advances were incorporated, as well as how technology, settlement patterns, harvest ranges and scheduling, and the wage economy are all interwoven. For example, the introduction of the rifle in the late 19th century focused
interest on ice edge hunting and altered settlement patterns as more people gradually moved to suitable coastal locations to hunt seals during the winter months. Although the rifle required some access to money and/or trade goods, it did not necessitate the high level of cash as did later equipment. On the other hand, the use of snowmachines, large outboard motors and three-wheelers which has occurred on the North Slope has become widespread in the past fifteen years. Such equipment requires considerable amounts of cash to purchase, maintain and operate.

It is beyond the scope of this report to discuss how seal hunting gradually changed from the long vigil at the breathing hole to the type of open lead hunting which is practiced today, or how the caribou skin tent was replaced by the canvas wall tent. Rather, this discussion addresses the major technological innovations of the past twenty years which have become commonly available and used largely as a result of the increased buying power of local residents. These changes include the replacement of dog teams by snowmachines, the use of wood and aluminum boats with increasingly powerful outboard motors, the addition of the three-wheeler and, in some communities, the airplane to the repertoire of subsistence harvest tools.

**Snowmachine**

The replacement of the dog team by the snowmachine began on the North Slope in the mid-1960's and was virtually completed by the late 1970's. While there are still a few active dog teams, most families presently use snowmachines for travel and hunting during the winter. Local
residents indicated that the snowmachine has numerous advantages over the dog team including speed, mobility and a reduction of the quantity of food necessary to feed sled dogs. Perhaps most important is the increased travel speed which snowmachines provide. Trips which used to take villagers four days with a dog team are now accomplished in a single day (fieldwork for this study). Snowmachines also allow villagers to travel further from the village and cover a greater area while hunting, thus bettering their chances of a successful hunt. In addition, because the hunter can cover such large areas rapidly, he can be more selective in what he harvests.

The speed, hauling power and mobility of the snowmachine have enabled villagers to balance local employment and subsistence pursuits. For example, snowmachines have facilitated weekend hunting by allowing hunters to travel faster and harvest a week's worth of game in a single day. As one resident stated, "Because less time is spent traveling, the snowmachine gives you more time to hunt and more time to work." Thus, the single most important advantage which snowmachines provide is to reduce travel time to and from harvest areas.

Another advantage of snowmachines is that they do not have to be fed except when they are being used. Dog teams must be fed year-round, including the summer when they are rarely used. Also, under present schedules where many hunters mix subsistence activities with wage employment, dogs have to be fed all week during the winter although the hunters may only use them on the weekend. In this case, the snowmachine
is much easier to own. It can sit idle with no effort expended by the hunter during the week and only requires fuel while in use.

Conversely, there are also disadvantages to snowmachines. These include dependability, price and operating costs. One resident summed up the dependability of dog traction when he said, “Dogs will always bring you back home.” Also, as discussed below, residents noted that dog teams are much better on sea ice where they are better suited to negotiate pressure ridges and, because of the distribution of weight over a large area, safer than the heavy snowmachines. Snowmachines are also costly to repair. Their continual use in harsh conditions (especially rough ice), and the high cost of replacement parts makes them one of the most expensive items to maintain and repair. Some families average $1,000 each winter on repairs. New machines average $3,500 and generally only last two to three years. Families with several adult sons who continually use the household snowmachine reported that they only got one winter out of a new machine. Thus, as with all hunting equipment, the useful life depends on the use and care given to the tools. A further difficulty related to snowmachine repair is the large variety of brands now available which makes interchanging parts difficult.

The unreliable nature of snowmachines has led to a change in hunting patterns. First, the solitary hunter is no longer the norm. Rather, on long distance expeditions, hunters often travel with a partner. As a result, there is more teamwork than in the past. If hunters do go out alone, they travel on well used trails so that if they break down, other hunters are likely to pass them. Second, the fieldwork indicated that
there has been a change in the use areas for winter sealing in some villages. Because snowmachines are unsuitable on the pack ice, more time is spent along the landfast ice margin, with hunters traveling further distances from the village but staying closer to shore.

**Three-Wheelers**

In recent years, three-wheelers have come into use in the study communities. These all terrain vehicles travel on gravel beaches, hard packed snow, mud, shallow water, ice and land. They are fast, economical to operate and, according to the 1983 interviews, well-built. Less expensive than snowmachines ($1,600 to $2,400), they require fewer repairs and reportedly travel in excess of 60 miles on one tank of gas. Villagers indicated that three-wheelers lasted approximately two to three years.

Three-wheelers are used year-round in some villages and therefore many families consider them more practical than snowmachines. Most importantly, they provide overland access during the snow-free summer when inland travel is difficult. As discussed under the separate communities, three-wheelers provide rapid access to subsistence use areas, especially at Point Hope. In this sense, they provide quick access to previously inaccessible areas in certain seasons, reduce travel time to harvest areas, expand the seasonal hunting range and allow additional time for hunters to devote to wage employment. Three-wheelers also facilitate travel within the villages which have recently become more spread out, largely because of subdivisions.
developed by the North Slope Borough for new housing. Three-wheelers are commonly used to travel to the airport, to and from the store and to other houses in the village. An indirect effect of three-wheelers is that they have extended the life of snowmachines by providing an economical alternative to summer use of snowmachines.

**Boats and Outboard Motors**

Both outboard motors and wooden boats have been used by residents of the study area for decades. However, in the past ten years, increasingly more powerful outboard motors and lighter aluminum or fiberglass boats have become more available to North Slope residents. While each village of the study area has adopted equipment suitable to the particulars of its local environment, the general tendency has been to use more powerful motors and primarily aluminum boats. This equipment has had a variety of effects on the subsistence economy, including reducing the number of marine mammals harvested to maintain skin boats (now primarily used only for whaling) and increasing hunter speed, mobility and harvest ranges for some sea mammals.

When the dog team was replaced by the snowmachine, it became unnecessary to hunt seals continually throughout the winter. However, the desire for seal oil and sea mammal meat for human consumption did not necessarily decrease and, while some hunters continued to hunt seals during the winter months, many altered their seasonal rounds to obtain seal oil and meat later in the year. The advent of more powerful outboard motors and sturdy aluminum boats enhanced this process.
Presently in all villages in the study area, the majority of seal, ugruk and walrus hunting occurs during the open water season as the hunters travel in and among the numerous ice pans and floes looking for sea mammals asleep on the ice. The increased mobility provided by these larger motors allows the hunters to travel to hunting areas faster, cover larger areas while hunting and travel into areas which would have been considered too far and dangerous in the slower man-powered skin boats.

The increased affluence of many residents of the study area allows them to have different boats for different subsistence activities. Boats with outboards are now also the common means of river transport, although both the boats and motors are generally smaller than their oceangoing counterparts. Prior to the adoption of outboard motors, dog teams were often used to pull boats upriver to inland fishing and hunting areas. Outboard motors also have the same advantage over dogs as do snowmachines in that they do not have to be fed when they are not in use.

Some marine hunting activities have not been directly altered by this new equipment. For example, in Point Hope and Barrow, the skin covered umiak is still used for spring bowhead whaling. However, because the umiaks are now no longer used in these communities for other subsistence activities, their skins now last longer before they need to be replaced. In Wainwright, on the other hand, the lead conditions are different and the majority of whaling captains presently use aluminum boats with powerful outboards to pursue and harvest bowhead whales. This practice
is especially effective late in the whaling season when the leads are wide and bowheads travel further from shore. In addition, in those villages which no longer use skin covered umiaks (Point Lay and Atqasuk), the harvest demand for ugruk has decreased and, in some instances, altered the seasonal subsistence activities of local residents.

Perhaps the most important change which has occurred since the adoption of boats and outboard motors is the reduced amount of traveling time to and from harvest areas. Hunters can now travel to hunting areas for a particular species and return in a fraction of the time formerly necessary, allowing them to maintain steady employment and still hunt and fish for the desired quantity of food.

**Costs Associated with Subsistence Activities**

From the preceding discussion of new equipment used by North Slope hunters and fishermen, it is apparent that in order to actively participate in the contemporary seasonal round of subsistence harvests, it is necessary for a hunter to have access to cash. The equipment is expensive to acquire, maintain and operate. In addition, because of the harsh Arctic conditions and the intensity of seasonal use, much of it (especially snowmachines) has a very short life span. Equipment needed and other annual costs include: boats, outboards, snowmachines, three-wheelers, repairs, ammunition, rifles, tents, sleeping bags, cook stoves, fuel, sleds and nets.
Table 17 presents a partial list of subsistence expenses in the study area. It indicates that a hunter who is not a whaling captain spends an estimated $3,800 annually for fuel, ammunition and repairs. Combining the estimated life of the four major equipment expenditures with their average purchase price results in an annual average cost of $3,927 for the purchase of an aluminum skiff, outboard motor, snowmachine and a three-wheeler. Although a hunter does not purchase each of these items every year, the relatively short life span of this equipment in the study villages requires that he often purchases at least one of them annually. Thus, in order to replace this equipment as it wears out, the hunter currently spends approximately $4,000 per year. Combining this with the annual costs for fuel, ammunition and repairs, results in an estimated annual cost of $7,727. That figure represents the capital outlay for an individual hunter and is not necessarily representative of the collective subsistence costs for a household or family unit. If there are two hunters in a household, the costs would increase but not necessarily double because not all equipment is duplicated. In addition, some related families living in separate households hunt together and purchase some equipment collectively. Although each hunter may have a snowmachine, the group may only purchase one seagoing boat and outboard motor. If the hunter is a whaling captain who only whales in the spring (Point Hope, Wainwright and some Barrow captains), his annual subsistence costs are approximately $12,227. If he also whales in the fall (Barrow captains only), his average annual subsistence expenditures rise to approximately $15,227.
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Cost Range</th>
<th>Average Cost</th>
<th>Estimated Life</th>
<th>Estimated Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Skiffs</td>
<td>$1,800-3,000</td>
<td>$2,400</td>
<td>5-6 years</td>
<td>$436</td>
</tr>
<tr>
<td>Outboard Motors</td>
<td>1,500-4,000</td>
<td>2,750</td>
<td>2-5 years</td>
<td>786</td>
</tr>
<tr>
<td>Snowmachines</td>
<td>2,800-4,500</td>
<td>3,650</td>
<td>1-3 years</td>
<td>1,825</td>
</tr>
<tr>
<td>Three-wheelers</td>
<td>1,800-2,600</td>
<td>2,200</td>
<td>2-3 years</td>
<td>880</td>
</tr>
<tr>
<td></td>
<td>$7,900-14,100</td>
<td>$11,000</td>
<td></td>
<td>$3,927</td>
</tr>
</tbody>
</table>

Estimated Annual Cost of Fuel: $1,600-2,000

Estimated Annual Cost of Ammunition: 200-600

Estimated Annual Cost of Repairs: 1,200-2,000

Estimated Annual Cost of Spring Whaling: $3,000-6,000

Estimated Annual Cost of Fall Whaling: $2,000-4,000

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a/ Does not include the cost of rifles, sleeping bags, cook stoves, tents or binoculars.

b/ Information is based on interview data from 34 subsistence harvesters in Point Hope, Point Lay, Atqasuk and Barrow. Generally, all of the interviewers were employed during the past year (either seasonal construction, full-time permanent, or part-time permanent). Four were unemployed at the time of the interview.

c/ The estimated life of aluminum skiffs represents the number of years they can be used safely in the ocean. Often, after they are considered unsafe for ocean use, villagers (especially from Barrow) may take them upriver to fish camps.

The recent availability of local temporary and permanent jobs associated with or resulting the North Slope Borough's capital improvements program has greatly contributed to villagers' ability to obtain, maintain and operate their hunting equipment. In many cases, it is not only the job opportunity which has enhanced subsistence activities but also the type and location of job. For example, there are a relatively large number of jobs available in the villages which enable individuals to both work and participate in local subsistence activities. Most jobs in each village are either construction-related or permanent North Slope Borough positions. The North Slope Borough has a generous leave policy for permanent employees which allows them time to pursue subsistence interests. Construction jobs are generally high paying, seasonal and temporary. Many local males prefer to participate in temporary construction work rather than in full-time, year-round employment because it allows them more time to pursue subsistence activities. They can hunt during periods of unemployment, and the new equipment, which greatly increases hunters' mobility and travel speed (previously discussed), allows these workers to harvest wildlife in the evenings and on weekends while still employed. Finally, it is the current high levels of local employment which enables so many villagers to purchase the desired new equipment.

Although not every hunter owns all four major pieces of equipment, the expanded employment opportunities and resulting financial rewards have provided individuals with wider access to them in recent years. Most of the hunters who were interviewed worked (or had in the recent past and were temporarily unemployed), owned a snowmachine, an aluminum skiff, an
outboard motor and a three-wheeler. In many cases, a household had more than one snowmachine or three-wheeler because of younger hunters who lived there.

The relatively high costs associated with the purchase, maintenance and operation of boats, outboard motors, snowmachines and three-wheelers has probably resulted in a higher financial cost of harvesting a given amount of meat than twenty years ago. Thus, although hunting is more efficient in terms of the effort necessary to harvest meat, it is less efficient in terms of the amount of money it costs. Under present circumstances of high local employment opportunities, the cost of subsistence harvesting is not a disadvantage. -Hunters in the study communities are presently able to earn the necessary money but this will not necessarily continue to be the case.

Subsistence Leave

From the villager's perspective, local employers generally allow adequate leave time for employees to pursue subsistence activities. For example, the North Slope Borough provides two types of leave which employees may use for this purpose: subsistence leave and personal leave. Under the Borough's subsistence leave policy, any full-time permanent employee is entitled to 10 working days of non-paid leave per fiscal year to pursue subsistence activities. Borough personal leave accrues on a monthly basis and is based on the length of employment. Previous employment for the federal government and the State counts as years of service when the employee begins to work for the Borough. If
an employee has worked for the Borough for less than two years, he or she accrues 2.5 days of annual leave per month, or 30 days of paid leave per year. This leave expands into 45 days per year for employees who have worked for the Borough for 10 years or more. Thus, North Slope Borough employees who work the entire year have between 30 and 45 days of paid annual leave per year.

Workers often take this leave in smaller chunks of time to coincide with various subsistence pursuits. For example, if an hunter had 36 days of personal leave and 10 days of subsistence leave, he might take two or three weeks for spring whaling, two weeks for spring sea mammal hunting, two weeks for fall fishing and caribou hunting and occasional days throughout the winter for caribou hunting. In addition, he would probably hunt on weekends and evenings when the weather permitted. Because of increased mobility afforded by improved travel technology, hunters waste little time traveling to the harvest area and are more mobile. Thus, by manipulating employment, leave time and free time (i.e. evenings and weekends), allowing for seasonal wildlife availability, as well as taking advantage of improved technology, local hunters participate in the major harvests of the year and generally harvest as much meat as they desire (except when regulations or quotas limit hunting).

Generally, construction contractors in the villages do not have any formal subsistence leave policy for local workers, but they indicated that they let villagers go hunting and fishing when they so desired. This absence from the job, however, was without pay. When the hunters
return to the village, they have a job if one is available. There are no limits on the length of time a worker can be gone. All of the contractors noted that absenteeism was highest during the spring whaling season. In many other cases, employees went hunting for a weekend and took an extra day or two. Most village corporations and their subsidiaries do not have formal subsistence leave policies, but leaders said they were very flexible, especially during whaling season.

In conclusion, considering the cash requirements for contemporary subsistence activities, the availability of local jobs, the seasonal and/or temporary nature of much of the employment and the generous policies related to annual and subsistence leave for permanent workers, the recent employment opportunities in the North Slope are compatible with current subsistence activities.

Changes in Target Species

Because of changes in resource population abundance and migration patterns, as well as fluctuating and unpredictable weather and ice conditions, a viable subsistence economy must be flexible and capable of adapting from season to season as well as from year to year. A change in one or two of a number of variables can result in a change in target species hunted in a particular area. Consequently, a healthy subsistence economy in the Arctic relies not on just a few species, but rather is based on a broad range of available wildlife resources to allow hunters to select species as availability and other conditions change. An example of how new hunting technology interacts with
employment and other variables to change the hunting emphasis of specific resources is the decline of winter seal hunting in the study area.

With the replacement of sled dogs by snowmachines, it was no longer necessary for villagers to harvest vast quantities of wildlife for dog food. Prior to the use of snowmachines, sled dogs, which consumed an average of 2-3 pounds of meat per day per dog, often outnumbered people in the village and hence doubled the harvest requirements of the local hunters. Although the disappearance of dog traction has greatly reduced the amount of meat needed by subsistence hunters, it has not affected the hunting of all species equally. In many coastal villages (including the study communities), seal, walrus and, to a lesser extent, fish provided the bulk of food for the sled dogs. Walrus were large and therefore efficient to hunt and not a preferred human food, and seal and fish were generally available year-round. In particular, seal was readily available in the winter.

Not only a lack of dogs but a combination of factors contributed to the decline in winter seal hunting. Snowmachines are not very compatible with sea ice hunting as they are heavy and do not offer the weight distribution advantages of dog teams. Dogs are able to individually climb over ice ridges and the hunter can then lift and push the sled over while the dogs pull. The heavy snowmachine does not offer this advantage and rough sea ice often forms an impassable barrier. On the other hand, snowmachines are very useful for hunting caribou inland. Thus, when snowmachines replaced dogs, hunters tended to spend more time
inland hunting. The recent abundance (i.e. past five years) and availability of caribou has also encouraged hunters to concentrate on this species during the winter. Caribou is also a more preferred meat for human consumption than seal (Alaska Consultants, Inc. and Stephen Braund Associates, 1983). In Point Hope, the three-wheeler also enhanced inland hunting for caribou as villagers can easily travel along the beach and inland in pursuit of this species. Furthermore, the need for winter seal meat as a staple is not presently as vital to the villagers because of the recent availability of both store-bought meat and local employment opportunities to provide the necessary money to purchase the meat if needed. Thus, the reduced demand for dog food, new technology which favored inland travel, presently abundant terrestrial alternatives and the availability of local employment, money and store-bought meat reduced the need to continually hunt seal during the winter.

As explained above, while snowmachines facilitated inland hunting, they are unwieldy and difficult to use on winter sea ice. On the other hand, the availability of sturdy aluminum and wooden boats and more powerful outboard motors facilitated the spring (and summer if ice is present) marine mammal hunt. This more efficient equipment, presently available to increased numbers of North Slope villagers because of recent employment opportunities, has increased hunters' mobility and concentrated sea mammal hunting during this period. Hunters now concentrate on larger and therefore more efficient species (i.e. ugruk). Finally, without dogs to feed, local hunters only need to harvest half as much meat and can do so in much less time because of the more efficient equipment available (boats, motors, snowmachines and
three-wheelers). Both of these factors allow villagers more time to devote to presently available wage employment. However, if local wage employment opportunities fall off and/or the caribou population decreases, local hunters may resume more active winter seal hunting efforts. Flexibility is a necessary component of any subsistence economy.

Conclusion

In summary, increased supplies of cash provided by local economic opportunities have changed the harvest techniques and the timing of the harvests of many marine mammals. Because of wage employment, free time is an increasingly scarce commodity which local residents use to the fullest. High levels of local employment have resulted in greater use, if not dependence, on the three-wheeler, snowmachine and wooden or aluminum boats with outboard motors. These modern subsistence tools have minimized "down time" normally spent in preparation for and traveling to and from harvest areas. This increase in mobility has made weekend and evening hunting feasible and productive. North Slope residents stated that not only does employment have little effect on hunting participation but also that weekends and evenings, in combination with a few longer seasonal trips (i.e. bowhead whaling, fall fishing), provide sufficient time to harvest the desired amount of wildlife resources. Thus, increased cash provided by employment is seen as a complement to subsistence pursuits. As one village hunter stated:

"The best mix is half and half. If it was all subsistence, then we would have no money for snowmachines and ammunition. If it was all work, we would have no Native foods. Both work well together."
The successful mix of cash and subsistence presently visible in the study communities is dependent on a few variables which could change in the future. First, the most important aspect of current village employment opportunities is that the jobs are local. Working at Prudhoe Bay or some other site outside a community would not provide village hunters with as much flexibility as local employment and leave time would not necessarily coincide with the availability of the specific resource which the hunter would like to harvest. Furthermore, hunting on weekends and in the evenings would be impossible and the flexibility to hunt when the weather, ice conditions and local availability of resources were favorable would be lost. Villagers prefer to work in their own communities. Second, the recent abundance of caribou in the study communities enables local hunters to have successful hunting trips in a relatively short time. Caribou populations and migration routes fluctuate greatly over time. During periods of lower local abundance, villagers would probably have less hunting success during short trips (i.e. evenings and weekends).

Political Organization

FORMAL POLITICAL ORGANIZATION

North Slope Borough

The North Slope Borough is considered a municipality under Alaska law. It was incorporated on July 1, 1972 as a first class borough and a home rule charter was adopted on April 30, 1974. A resolution calling for
the formation of a charter commission to propose a unification charter, the nomination of charter commission candidates and setting an election date for charter commission members and the question of unification was approved by the Borough assembly on August 9, 1983. These matters will be voted upon by Borough voters in the regular Borough election scheduled for October 1984.

Governing Bodies and Offices. The Borough executive and administrative power is vested in the Mayor who is elected for a term of three years. The legislative power is vested in the Assembly which is made up of seven members. Management and control of the schools is provided by a seven member school board. The membership of each elected for staggered terms of three years. The Borough's home rule charter provides that operating budget of the school board is subsumed in the operating budget submitted annually by the Mayor to the Assembly.

The North Slope Borough currently exercises the following areawide and non-areawide powers within its jurisdiction:

0 **Areawide Powers**

**Assessment and Collection of Taxes.** AS 29.33.030 states:

"Boroughs shall assess and collect property, sales and use taxes levied within their boundaries, subject to Chapter 53 of this title. Taxes levied by a city and collected by a borough are returned in full to the levying city."
Education. AS 29.33.050 states:

"Each borough constitutes a borough school district and establishes, maintains, and operates a system of public schools on an areawide basis as provided in AS 14.14.660. . ."

Planning, Platting, and Zoning. AS 29.33-070 states:

"a) First and second class boroughs shall provide for planning, platting, and zoning on an areawide basis."

In addition to mandatory areawide powers assumed by the North Slope Borough upon its incorporation on July 1, 1972, the following areawide powers were assumed as a result of a Borough election held April 30, 1974.

(1) sewage and sewage treatment facilities;
(2) watercourse and flood control facilities;
(3) health services and hospital facilities;
(4) telephone systems;
(5) light, power and heat;
(6) water;
(7) transportation systems;
(8) streets and sidewalks;
(9) airport and aviation facilities;
(10) libraries;
(11) garbage and solid waste collection and disposal services and facilities;
(12) housing and urban renewal, rehabilitation and development;
(13) preservation, maintenance and protection of historic sites, buildings and monuments.

Since that time, the areawide police power was transferred to and assumed by the North Slope Borough as the result of an election held July 1, 1976. In addition, fire protection powers were transferred to the North Slope Borough from the cities in late 1980, with the Borough assuming full operational responsibility in FY 1981/82.
Certain local government powers have not been assumed by the Borough, most notably the power of recreation. Thus, except for recreation facilities associated with its schools, the Borough cannot expend capital improvements program funds for that purpose.

Several services for which the Borough has assumed areawide responsibility, such as hospital facilities and telephone services, are already provided by other agencies. Hospital services are presently furnished by the U.S. Public Health Service. Telephone services are owned and operated by the Arctic Slope Telephone Associated Co-op, Inc. or private for-profit firms.

Non-Areawide Powers and Duties in the Area Outside Cities

As specified by AS 29.38.010:

“The first class borough may exercise in the area outside cities any general law municipal power. Before exercising a power outside the cities only, the borough shall seek to have the identical power transferred from cities within the borough or propose joint borough-city exercise of the power.”

Per Ordinance 73-10, the Borough assumed all the general law municipal powers in the area outside the cities. In addition, in the same ordinance, it provided for the exercise of any power within any city transferring the power to the Borough if said powers are transferred from less than all cities of the Borough.

The North Slope Borough, in seeking to protect the environment and subsistence resources of the North Slope, has used a variety of
strategies. Mineral Management Service's Technical Report Number 85 (ISER) discusses these strategies as they relate to offshore oil and gas development.

Insofar as OCS development is concerned, the Borough finds itself without jurisdiction beyond the three-mile limit and constrained by overlapping State and federal jurisdictions ashore and within the three-mile limit. The Borough is seeking to utilize federal and State coastal zone planning legislation to assert its influence out to the three-mile demarcation line through the development of its own Coastal Management Program. Official adoption of the Coastal Management Program would strengthen the Borough's legal standing to influence development activities in the coastal zone by establishing the Borough's right to monitor for violations of federal and State laws and regulations. However, the Borough's function would remain a monitoring one. Continuing observation by the Borough can lead to increased State and federal accountability, but no transfer of enforcement powers to the Borough can take place.

The effectiveness of the Coastal Management Program is further restricted in that it would not apply to federally controlled coastal lands such as those in the National Petroleum Reserve-Alaska and the Arctic National Wildlife Refuge. The Coastal Management Program would bolster the Borough's regulatory efforts related to subsistence resources where OCS development was
necessarily coupled with development in the coastal zone area and onshore where the Coastal Management Program was applicable.

Technical Report Number85 (ISER) concluded that the Borough's opportunities to protect the offshore environment and its subsistence resources are indeed limited. The Borough does have the option to pursue political alliances with federal and State government agencies with mandates which most closely parallel those of the Borough in resource protection. However, it appears that the present orientation of executive policy in federal and State government is toward further offshore development.

The Borough also has access to the courts to alter or prevent offshore development, challenging such development under existing federal and State legislation and regulation in its efforts to protect subsistence resources. The Borough's success in such litigation has been limited to date.

Arctic Slope Regional Corporation

The 1971 Alaska Native Claims Settlement Act (ANCSA) established twelve Native regional corporations (with provision for a thirteenth) and a large number of village corporations. The Act set forth certain responsibilities for the corporations and provided for the distribution of benefits in the form of lands and cash to these entities and their shareholders. The Arctic Slope Regional Corporation is the regional entity for the North Slope. It is incorporated as a private, for-profit
organization under Alaska statutes. It is to receive and disburse money
distributed to it under the Act, to select, own and manage land made
available under the Act (presently estimated to be approximately 5
million acres) and to conduct business for profit, all for the benefit
of its shareholders.

Ownership of the regional corporation rests with those Alaska Natives
entitled to enroll in the Corporation under terms of the Claims Act.
Each owner received 100 shares of the Corporation's stock which may not
be sold, pledged, assigned or otherwise alienated, except in certain
circumstances by court decree or death until December 18, 1991. As of
June 30, 1982 the Arctic Slope Regional Corporation had 3,820
shareholders. The Corporation has received its full cash entitlement of
$46,888,936. It has allocated $24,217,600 for redistribution to its
shareholders and to village corporations.

Included in the lands to which the regional corporation was entitled
under Section 12(a) and 12(b) of the Claims Act were lands to be
selected for its own account (to which it receives both surface and
subsurface rights), plus title to the subsurface estate of lands
selected by villages in the region. The latter includes "in-lieu" lands
since several North Slope villages (Atqasuk, Barrow, Nuiqsut, Wainwright
and Kaktovik) are located either within the former Naval Petroleum
Reserve #4 (now National Petroleum Reserve-Alaska) or within the Arctic
National Wildlife Refuge where subsurface selections are not normally
permitted. As a result, the Arctic Slope Regional Corporation has
selected "in-lieu" lands elsewhere in the region. However, Section
1431(0) of the Alaska National Interest Lands Conservation Act (ANILCA) passed in 1980 gave the Corporation the option, under certain conditions, to exchange “in-lieu” subsurface lands for an equal acreage of subsurface estate beneath village corporation lands in the National Petroleum Reserve-Alaska (NPR-A) or in the Arctic National Wildlife Refuge.

As of June 30, 1982 the Corporation reported ownership of approximately 4.6 million acres of land, of which about 1 million acres were “in-lieu” and village subsurface lands. The Arctic Slope Regional did exercise the option under Section 1431(0) of ANILCA to acquire a small but important parcel of land in the Cape Halkett area in 1982. In August 1983, the Corporation also completed a land swap with the Secretary of Interior (as provided for under ANILCA) involving the transfer of approximately 101,272 acres of the Corporation’s surface estate located within the Gates of the Arctic National Park and Preserve for 92,160 acres of subsurface estate located in the Arctic National Wildlife Refuge. The latter consists of the subsurface estate to lands to be transferred to the Kaktovik Inupiat Corporation plus Native allotment applications within the village corporation’s selection area.

While the Arctic Slope Regional Corporation legally is a private for-profit corporation, its large and widespread resident shareholder body, its extended ownership of surface and subsurface estates on the North Slope and its numerous business activities on the Slope do, in fact, make it a significant political force within the North Slope Borough. In the summer of 1983, four of the seven Borough Assembly
members were either officers or employees of the regional corporation, although this changed later in the year.

The Arctic Slope Regional Corporation has not established an official policy regarding OCS development generally. However, a policy adopted by its Board of Directors in 1979 relating to the Beaufort Sea Lease Sale provides an insight to corporate thinking on the subject. That policy:

- Supported the Beaufort Sea lease sale;
- Encouraged local planning and management of development activities by local institutions;
- Advocated that all development be conditioned upon the unique experience and understanding of local people and local corporations relating to the environment and resources;
- Joined the Arctic Slope Regional Corporation with government and industry in efforts to safely develop those resources necessary to sustain a healthy Borough and State and to ensure that the development proceeded in ways benefiting the local economy, lifestyle and subsistence;
- Opposed (at that time) development of the resource potential in areas where obvious risks were posed in light of existing technology and knowledge, such as outside the barrier islands in the Beaufort Sea, and urged that onshore exploratory programs precede exploration outside the barrier islands; and
- Encouraged research on the bowhead whale being continued, urging that the U.S. government have the Alaska Eskimo Whaling Commission participate in this research.
The Arctic Slope Regional Corporation's capability to exercise Inupiat influence related to offshore development in its business relationships with the oil and gas industry is limited by the competitive nature of that industry. While there are advantages for the industry to contract with and/or joint venture with Native-owned companies, there are also limits to the additional economic costs (if any) which can be absorbed from such relationships. These economic limitations when combined with the Corporation's needs to be a part of the North Slope oil and gas development, do limit its leverage in advancing Inupiat causes. It would seem that the Corporation's greatest opportunity to do so would be where it is leasing much sought after land to the industry.

ICAS—

The Inupiat Community of the Arctic Slope (ICAS) was established with the ratification of its constitution and bylaws on August 26, 1971 by qualified Inupiat electors. It was organized in accordance with the U.S. Indian Reorganization Act of 1934 (48 Stat. 378), as amended in 1936 to include Alaska (49 Stat. 1250). The legislation enabled Alaska Native groups under certain conditions to organize as business units and/or governments.

The Arctic Slope Native Association was the parent organization of ICAS, both representing Alaska Native people north of the Brooks Range. The Association encouraged establishment of ICAS for the positive tribal powers and authorities perceived flowing to ICAS under the federal IRA legislation. These authorities included contracting to administer
Bureau of Indian Affairs and Indian Health Service programs such as education, social services, business assistance and health aid. Additionally, there were tax exemption possibilities as a business entity and other potential advantages, not the least being the powers of "tribal sovereignty".

ICAS has in the past contracted to administer several federally funded programs on a Borough-wide basis. However, the possibility of ICAS receiving additional federal contracts is now in question, since the Bureau of Indian Affairs has alleged that ICAS cannot provide an adequate accounting for certain funds received under prior contracts in 1982 and 1983. In September 1983, the Alaska Area Director for the Bureau of Indian Affairs officially announced that he would not authorize a recontracting of Bureau services by ICAS for FY 1984. During the next year, the Bureau has said that it will help ICAS to develop management systems which would allow ICAS to reapply for its contractual services in FY 1985.

A more significant political issue than ICAS's present contractual difficulties is that of "tribal sovereignty", a matter which has been raised statewide regarding the legal relationships between Alaska IRA organizations and ANCSA corporations, between the IRAs and the State (as well as the State's political subdivisions) and between the IRAs and the federal government. What special relationship exists between Alaska Native peoples and the federal government? How does this relationship affect State jurisdiction, ANCSA corporate authority and future federal funding of Native programs? ICAS has interpreted "tribal sovereignty"
to mean Inupiat sovereignty over all lands of the North Slope as well as offshore over the Beaufort Sea and other ocean waters beyond the three-mile zone, a challenge to the State-created North Slope Borough, to the State and to some federal agencies. The divergence of opinion as to the meaning of “tribal sovereignty” among legal authorities is significant.

In May 1983, State tribal organizations formed the United Tribes of Alaska as an advocacy group for the sovereign rights of the IRAs. This resurgence of interest in IRA rights and powers could have profound and far-reaching results, but the ultimate impact appears to rest with the courts and perhaps in legislation. ICAS's request in federal court for a legal determination of Inupiat rights beyond the three-mile limit was dismissed in 1983.

**Inuit Circumpolar Conference**

The Inuit Circumpolar Conference (ICC) is an international Inuit (Eskimo) organization with representatives from Alaska, Canada and Greenland. Its membership and operations are governed by a charter adopted at the 1980 Greenland conference and subsequently ratified by its 20 member organizations, six of which are from Alaska, including the North Slope Borough.

The ICC's primary aims are to strengthen unity among the Inuit of the circumpolar region, to promote Inuit rights and interests at the international level, to ensure adequate Inuit participation in relevant
political, economic and social institutions, to ensure the endurance and growth of the Inuit culture and societies and to encourage nations to develop Arctic policies which focus on the wise management and use of non-renewable resources in a manner which protects Arctic and sub-Arctic wildlife, environment and biological activity and also benefits Inuit economies.

The ICC's General Assembly is made up of an equal number of Inuit delegates (18) from each participating country. It meets regularly every two years, alternating the location among the three countries. The General Assembly elects a President and Executive Council, establishes policy, receives and expends funds and approves the Conference's budget, directs reports and studies, establishes commissions, committees and working groups related to formulation and implementation of policy, and makes recommendations to member or international organizations regarding matters pertaining to the purposes of the Conference. The Executive Council is made up of the President and six executive members, two from each country. The Executive Council establishes the Secretariat to carry out administrative and program functions. It also seek funds for the Conference, consults with qualified persons on questions relative to the Conference's objectives and draws up a provisional agenda for each conference of the General Assembly. The ICC President is elected for a two-year term by a two-thirds majority vote of each country's delegation. The President presides over General Assembly meetings, calls special meetings of the Executive Council, approves expenditures of funds and directs the administrative functions of the Secretariat.
The General Assembly establishes ICC commissions, committees and working groups. The Executive Council defines the functions and powers of these groups and establishes the frequency of their meetings. Typical of the groups established to date are the International Committee of Inuit Education, Culture and Language; the Arctic Coastal Zone Management Committee and the Circumpolar Whaling Commission.

The ICC receives no funds from national governments but has derived funds from some local governments, including the North Slope Borough ($300,000 in 1982) and the home rule government of Greenland.

On May 21, 1983 the Economic and Social Council of the United Nations gave its final approval to the ICC's application to become a Non-Governmental Organization in consultative status. This arrangement enables the Council to secure expert information or advice from organizations having special competence in the subjects for which consultative arrangements are made and enables organizations which represent important elements of opinion in a number of countries to express their views.

The North Slope Borough has been a significant force in organizing and supporting the ICC, with the first conference having been held at Barrow in 1977. In 1983, the ICC established the Alaska Native Review Commission with the charge to analyze the consequences of the Alaska Native Claims Settlement Act (ANCSA). While the Commission's findings are intended primarily for the international Inuit community and the United Nations, the review will undoubtedly be of assistance to Alaska
Native organizations in submitting their own findings at the time of the Secretary of the Interior must submit a status report on ANCSA to the first session of the U.S. Congress in 1985.

At this stage of its development, ICC has not mobilized strong international support of the Inupiat position relating to OCS oil and gas development and particularly that development off the North Slope.

INFORMAL POLITICAL ORGANIZATION

While a great deal has been written about traditional Inupiat organization, it is not intended to repeat that information in this report. Instead, attention was limited to one organization which, because of the composition of its membership, exerts considerable political influence and commands a great deal of respect. That organization is the Alaska Eskimo Whaling Commission.

Alaska Eskimo Whaling Commission

The Alaska Eskimo Whaling Commission (AEWC) is an organization representing the nine Inupiat and Yupik villages which have traditionally included the taking of bowhead whale as a part of their subsistence harvest activities. The Commission's board of directors is made up of nine Eskimo whaling captains, each elected by the whaling captains of their respective village. The AEWC's organization resulted from the attention given by the International Whaling Commission (IWC) to the subsistence harvest of bowhead whales, prompted by an historic
decline in the bowhead whale population and by the present lack of adequate knowledge regarding bowhead whale population size and dynamics.

The National Oceanic and Atmospheric Administration (NOAA), which has primary responsibility within the federal government for management and enforcement programs associated with the bowhead whale, had established regulations covering the harvest of the bowhead by Alaska Eskimos as a result of the International Whaling Commission concerns over a possible continuing decline in the bowhead whale population. In the spring of 1981, NOAA contracted with the Alaska Eskimo Whaling Commission to oversee the whaling activities of its nine member villages. This was to be done in accordance with a management plan drafted by the Commission which preserves traditional Eskimo methods of harvesting the bowhead whale while observing the agreement reached between NOAA and the Commission on the total number of whales taken and the total number of strikes allowed in a given season. Quotas for whales taken and struck are allocated among the nine villages, but there may be transfers among the villages under certain circumstances once a season is underway. All active whaling captains must register with the Alaska Eskimo Whaling Commission.

The Alaska Eskimo Whaling Commission provides NOAA and the whaling captains of each member village with daily reports once the season is underway on the number of whales taken and strikes made in each village. In turn, the whaling captains keep the Commission current on whaling activities in their respective villages. The Commission has the power, subject to NOAA review, to levy fines against whaling captains or to
suspend the right of individual captains (and their crews) to whale if captains are found guilty by the Commission of violating the management plan.

The Alaska Eskimo Whaling Commission also assists NOAA in that agency's efforts to gather data on the bowhead whale and its harvest, including the contracting by the Commission for related research and services. In addition, the Commission sponsors scientific conferences on the bowhead whale and has also undertaken a program of public education regarding the significance of bowhead whale in the Eskimo subsistence economy and the traditional harvest practices. Since the Commission is so concerned about the environment of the bowhead whale, as well as activities which might affect the Eskimo harvest of this species, it has sent representatives to observe and advise the International Whaling Commission. The Commission has also taken strong public stances in Alaska against those activities, particularly those related to the oil and gas industry, which it believes could interfere with the traditional harvest of bowhead whales or negatively impact the whale population.

Traditionally, the whaling captain's position has been a respected one in the Eskimo community. The Alaska Eskimo Whaling Commission board therefore has the respect of the Eskimo community, not only as a representative group of whaling captains, but also one whose members have a broad knowledge of Eskimo culture and traditions.
Land Use

LAND STATUS

State and federal lands, regional and village corporation lands, North Slope Borough lands and Native allotment applications are the major forms of land tenure in the North Slope Borough area. More detailed land status information for individual communities in the study area is discussed separately under the land status section for each village.

Federal Lands

The largest area of federal land within the North Slope Borough is the National Petroleum Reserve-Alaska (NPR-A). This 23.7 million acre reserve was established in 1923 by President Harding and was called Naval Petroleum Reserve No. 4 (NPR-4). With the transfer of the Petroleum Reserve in 1977 from the Navy to the Department of the Interior through passage of the Naval Petroleum Reserves Production Act, the name was changed to National Petroleum Reserve in Alaska (NPR-A). Of the eight Borough villages, three (Wainwright, Barrow and Atqasuk) are located wholly within NPR-A, while Nuiqsut is partially within the Reserve. This has had an impact on Native land selections pursuant to the Alaska Native Claims Settlement Act of 1971 because the Act reserved the subsurface estate of lands within the Petroleum Reserve for the federal government. Section 1431(o) of the Alaska National Interest Lands Conservation Act (ANILCA) has, however, made subsurface selections within the Petroleum Reserve possible under certain conditions. This
Another large federal land holding within the North Slope Borough is the Arctic National Wildlife Refuge which was established in 1960 by Public Land Order 2214. At that time, the Arctic National Wildlife Refuge occupied a total of approximately 8.9 million acres. An addition of approximately 9.16 million acres was made to the Refuge in 1980 pursuant to Section 303(2)(A) of ANILCA, while the Secretary of the Interior accepted another addition of approximately 991,800 acres from the State in October 1983. The Refuge thus now encompasses approximately 19.03 million acres, with an estimated two-thirds of this acreage being located within the Borough.

One of the eight North Slope Borough villages (Kaktovik) is located within the Arctic National Wildlife Refuge. Although the Claims Act restricted Native selections within the Refuge to the surface estate only, a land swap agreement with the Department of the Interior has made the subsurface estate of village lands available to the Arctic Slope Regional Corporation. Land swaps between the federal government and Native corporations were made possible by Section 22(f) of ANCSA and Section 1302(h) of ANILCA.

By signing the land trade agreement, the federal government agreed to exchange approximately 92,160 acres of the subsurface estate of land in the Arctic National Wildlife Refuge for approximately 101,272 acres of the surface estate of Arctic Slope Regional Corporation lands located
within the Gates of the Arctic National Park and Preserve. Although the approximately 92,160 acres of subsurface estate involved in the land swap seems insignificant in comparison with the total Refuge acreage, it is located within the coastal plain and thus has a high potential for oil and gas development. This land is, however, subject to a variety of restrictions concerning oil and gas and other natural resource development.

The Gates of the Arctic National Park and Preserve was established in 1980 pursuant to Section 201(4)(a) of ANILCA, and encompasses approximately 7,952,000 acres. This park is located in the Brooks Range west of the Arctic National Wildlife Refuge, with roughly one third of its area being located within the boundaries of the North Slope Borough.

Another national interest land area located partially within the Borough’s boundaries is the Noatak National Preserve which was established in 1980 pursuant to Section 201(8)(a) of ANILCA. This preserve is located directly west of the Gates of the Arctic National Park and Preserve, with over half of its area falling within the Borough. The total acreage of the Preserve is approximately 6,460,000 acres.

In addition to national parks, preserves and refuges and the National Petroleum Reserve-Alaska, there are other federal lands on the North Slope still withdrawn for purposes of classification, plus some small parcels of land set aside for military purposes. These national defense lands are classified as Distant Early Warning (DEW) sites, with the
exception of one classed as an Aircraft Control and Warning (AC&W) site. Active DEWline stations are located at Point Lay (LIZ-2), Wainwright (LIZ-3), Point Barrow (POW-Main), Lonely (POW1), Oliktok (POW2) and Barter Island (Bar-Main). An inactive DEWline site at Bullen Point is still held by the Air Force and is currently under lease to the North Slope Borough which has been evaluating its potential as a base to service oil and gas exploration activities in that area. The AC&W site is located at Cape Lisburne.

Regional and Village Corporation Lands

The Alaska Native Claims Settlement Act (ANCSA) of December 1971 established Native village and regional corporations entitled to select specified acreages of land. The Arctic Slope Regional Corporation was established under terms of this legislation and is the regional corporation with the largest land holdings within the Borough's boundaries. According to its 1982 annual report, approximately 4.6 million acres of land is currently owned by the Arctic Slope Regional Corporation, including about one million acres of "in lieu" and village corporation subsurface lands.

The Alaska Native Claims Settlement Act placed some restrictions on regional selections within the Arctic National Wildlife Refuge and NPR-A which have subsequently been changed by Section 1431(0) of the Alaska National Interest Lands Act (ANILCA). This section enables the Corporation, at its option, to obtain subsurface rights to lands selected by a village corporation in the Arctic National Wildlife Refuge
or NPR-A if public lands are opened for the purpose of commercial development of oil and gas within 75 miles of the lands selected by the village through Section 12(a)(1) of the Claims Act. The regional corporation would then be required to exchange in lieu subsurface lands which it had selected earlier under Section 12(a)(1) of the Claims Act.

To date, the Arctic Slope Regional Corporation used this amendment during 1982 to acquire a small but important parcel in the Cape Halikett area. The corporation is also pursuing the possible acquisition of other lands through the same amendment.

Another opportunity for exchanging lands was afforded by Section 1302(h) of ANILCA and Section 22(f) of the Claims Act which authorize the Secretary of the Interior to make land exchanges. Under this legislation, the regional corporation has exchanged approximately 101,272 acres of surface estate within the Gates of the Arctic National Park and Preserve for 92,160 acres of subsurface estate in the coastal plain of the Arctic National Wildlife Refuge.

Village corporations organized under provisions of the Alaska Native Claims Settlement Act are also entitled to select specified acreages of land. Exact acreage figures and a discussion of village corporation land holdings are included in land status discussions for individual villages in the Chukchi Sea area.

The only other regional corporations with valid selections in the North Slope Borough area are the Northwest Alaska Native Association (NANA) and Doyon Limited. Section 1418(a) of ANILCA withdrew some of these
lands for selection under Section 14(h)(8) of the Claims Act. NANA has selected lands under this section and both NANA and Doyon Limited have selected historic and/or cemetery sites within the Borough under Section 14(h)(1) of the Act. The NANA selections within the boundaries of the North Slope Borough have all been in the vicinity of Point Hope, while those by Doyon have been concentrated in the southeastern section of the Borough.

**State Lands**

Although the federal government is the largest land owner in the North Slope Borough, through its ownership of the Prudhoe Bay, Kuparuk and other oilfields, the State of Alaska controls what is presently the most commercially valuable property in the region. As of December 1, 1983, the State of Alaska had patent to 3,347,169 acres, tentative approval to 3,928,481 acres and had selected an additional 4,872,188 acres of land within the North Slope Borough. State patented and tentatively approved selections are concentrated in the area between the Canning and Colville Rivers and extend south to the borders of the Arctic National Wildlife Refuge and the Gates of the Arctic National Park and Preserve. Additional lands have been applied for in the vicinity of Nuiqsut. On the western side of the Borough, tentatively approved State land selections are concentrated in the Icy Cape/Point Lay area. Large amounts of land in this and the Point Hope area have also been applied for by the State.
In addition to onshore lands, the State of Alaska is the owner of offshore lands out to the 3-mile limit. The probability of commercial oil discoveries in some of these offshore areas, especially those in portions of the Beaufort Sea, is judged to be very high. However, because of differing federal and State interpretations of whether or not certain areas qualify as uplands (i.e., lands from which the three mile limit is measured), the ownership of certain offshore areas is disputed. In the case of the December 1979 joint federal-State lease sale in this area, for example, a total of 104,765 acres (17,605 acres currently managed by the State and 87,160 acres managed by the federal government) is still in dispute.

North Slope Borough Lands

Aside from individual parcels which it has acquired for the construction of housing and community facilities, the North Slope Borough is presently not a significant land owner. However, this will probably change in the near future as a result of an agreement signed on September 22, 1983 by the Borough and the Department of the Interior. Under that agreement, which must be ratified by Congress, the Department of the Interior would convey to the North Slope Borough the right to explore for and remove fluid hydrocarbons within the Barrow gas fields and the nearby Walakpa discovery site. In addition, the Department of the Interior would convey the surface estate to lands at the former Cape Simpson DEW Line site and other lands west of the Canning River, not to exceed a further 320 acres, to the North Slope Borough. The Department also agreed to make certain other sources of fluid hydrocarbons

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available to the population of the North Slope Borough. In return, the
Department of the Interior would no longer be required to provide gas
service to Barrow or to other communities at or near Barrow after
October 1, 1984 and would pay $30 million to the Borough for the
purposes of satisfying the energy demands of North Slope residents once
that agreement had been approved by the U.S. Congress.

Native Allotments

Native allotments are essentially homesteads of up to 160 acres of
non-mineral land which were granted to Alaska Natives, generally for
subsistence purposes. However, because the former Naval Petroleum
Reserve No. 4 was withdrawn by the federal government in 1923, the only
potential allottees in this area were those who could prove use and
occupancy of sites prior to that time. Despite this, a significant
number of Native allotments were filed within the Reserve and a court
suit (Leavitt vs. Andrus) challenging the validity of allotment
rejections in this area was instituted. An attempt to rectify the issue
was made by ANILCA but a January 1983 ruling by the Regional Solicitor
found that ANILCA did not adequately address the problem and suggested
that the original court suit be reinstated for a final determination on
this issue.

Indian allotment authority in Alaska was cancelled with passage of the
Alaska Native Claims Settlement Act. However, applications which were
pending at the time of passage of the Claims Act are still eligible for
consideration. Like restricted Indian lands, Native allotments are not
subject to taxation or local or State regulation. There are Native allotments scattered throughout the Borough but they are primarily concentrated along the coast and inland along rivers.

SUBSISTENCE LAND USE PATTERNS

For the purposes of this study, subsistence land use patterns involved a review of local (Chukchi Sea village Inupiat) use of coastal lands and offshore areas for subsistence activities. Furthermore, because this study is related to offshore oil and gas development, this discussion and associated subsistence maps are marine oriented with little attention given to terrestrial resource use. The subsistence maps accompanying descriptions of individual communities identify marine and coastal harvest ranges by species for key marine resources (i.e. bowhead whales, belukha whales, seals, ugruk, walrus, fish and birds) in each of the various Chukchi Sea villages. Available subsistence information for these villages was uneven. For example, considerable data were available for Wainwright (see John Muir Institute 1983 and Nelson 1981) and therefore no additional subsistence fieldwork was done for this village. Some data were available for Point Hope, but relatively little subsistence range information existed for Point Lay, Atqasuk or Barrow. Consequently, fieldwork efforts related to mapping coastal subsistence harvest ranges concentrated on Point Hope, Point Lay, Atqasuk and Barrow. As part of the subsistence mapping, coastal areas of critical subsistence importance (i.e. intensive use areas) were identified. In the discussion of marine resource use, the harvest seasons for each species are also identified.
An assessment of recent changes in the coastal harvest ranges of the Chukchi Sea villages indicated that recent technological improvements (i.e. snowmachines, powerful outboard motors and three-wheelers) have allowed subsistence hunters to travel to harvest areas much faster and cover more area while hunting. Hunters can now travel in a few hours what used to take a day or longer. Thus, although they may spend less time hunting then twenty years ago, they are much more efficient (i.e. it takes less time to harvest the same amount of meat) and the harvest ranges have not diminished. Discussions with elders indicated that present ranges are similar to traditional use areas. In some cases, the range has expanded (i.e. fall whaling in Barrow).

Although the fieldwork indicated recent technological improvements have not altered the range of species harvested, in some cases there was a shift in the intensity of utilization among species. For example, as discussed in the regional overview of the subsistence economy, a combination of variables, including the replacement of dog traction by the snowmachine and the present abundance of caribou led to an increased emphasis on caribou hunting in the winter and a reduction in overall winter hunting effort for seal. In addition, more powerful outboard motors have facilitated an increased hunting emphasis on large sea mammals, especially during the spring and summer sea mammal season. Thus, snowmachines and powerful outboard motors have changed the emphasis of particular species during certain seasons.

Limited fieldwork time necessitated the collection of subsistence resource data by interviews with knowledgeable subsistence harvesters in
each community. Active harvesters between the ages of 20 and 60 were interviewed. Harvest areas of inactive or retired hunters were not mapped. The number of interviews is identified under each community discussion. Each interview consisted of a checklist of marine and coastal species, the timing or seasonality of harvest activities, the level of effort and mapping of the area used to harvest each species. Because the focus was on present land use patterns, local harvesters were asked to concentrate their responses on the activities of the past five years. Hence, the intensive use areas identified on each map depict this focus and do not represent an historical land use inventory. The maximum areal extent used for harvesting each species is a dynamic factor which is affected by species abundance and range and changes in harvest technologies, as well as physical parameters such as weather and ice conditions. As a result, the maximum use boundary does not correspond with the intensive use areas, but represents the furthest limits respondents remembered going for the harvest of a particular species. In addition to the field interviews, materials from the scientific literature and agency documents were reviewed.

Subsistence land use patterns are delineated on 1:500,000 scale maps for the villages of Point Lay and Point Hope. Barrow and Wainwright land use patterns are presented on 1:1,000,000 scale maps. This is because the areal extent of land use patterns in Barrow is greater, a result of both the larger population of this community as well as the greater diversity in the seasonal round among Barrow residents. In Wainwright's case, the 1:1,000,000 map scale was dictated by the large area used by
local subsistence hunters, in contrast to the concentration of effort by Point Hope hunters within a relatively small area.

Community Facilities and Utilities

BOROUGH PROGRAMS

The North Slope Borough is a home rule municipality which has adopted a wide range of local government powers and, through the use of those powers, provides a broad spectrum of local government services. Prior to the Borough's existence, North Slope communities had few amenities. There was no high school in the region except for a junior high school program at Barrow. Although there was a hospital at Barrow, health care facilities and services in the smaller villages were rudimentary; police protection was limited; fire protection was non-existent; and utility services were generally deficient or lacking.

The provision of a broad range of community facilities and services in the traditional North Slope villages by the North Slope Borough has brought lasting change in village life. Children no longer have to leave the region to attend high school; each village has (or will shortly have) modern, state of the art health clinics staffed by trained aides; two trained public safety officers are stationed in each of the smaller villages, with considerably more in Barrow; fire stations equipped with a fire truck and tanker have been built in each village and the two fire stations in Barrow upgraded; superior recreation facilities are available at the schools, including swimming pools in all
but the smallest villages; cable television is being installed in all villages; and the range of utilities services has been much improved. In addition, the North Slope Borough has constructed a large number of housing units in each village which are designed to provide safe, sanitary and decent housing for village residents.

CULTURAL IMPACTS

Because of the wide ranging nature of Borough programs and the changes in village life that they have encouraged, some attention was given as part of the 1983 fieldwork to finding out how people felt about these changes. Questions centered around education and housing since these two areas appeared to have been associated with the most dramatic changes.

The construction of new education facilities, especially the addition of high schools, in each North Slope village has raised concerns over the impacts which these new schools are having on village life. These concerns related to the rate of attrition in the student body prior to graduation from high school, to the number of students moving on for post-secondary education or technical/vocational training and to the adequacy of the basic education the village students are now receiving.

The limited time permitted for fieldwork in this study did not permit a detailed evaluation of these questions. Furthermore, the information gained is not sufficient to conclude that an increasing proportion of young people are now completing high school. Discussions with the
director of the Arctic Education Foundation (sponsored by the Arctic Slope Regional Corporation), which provides scholarships for most Native students attending college, tend to indicate that more Alaska Native students are now attending college and graduate schools. Six years ago, only 10 or 12 scholarships were granted by the Foundation. In 1983, 36 were issued, with only 4 students dropping out before the school year ended. A total of 45 scholarships was granted for the 1983/1984 school year. Other scholarships are offered to students regardless of race by the City of Barrow.

An interview with a representative of the North Slope Borough School District confirmed that few Borough students were attending grade or high school outside the Borough (only 19 attended Mt. Edgecumbe during the 1982/83 school year), that more female than male graduates of North Slope Borough schools pursued advanced education or training beyond the high school level, and that about two-thirds of the students attending college came from Barrow. Other fieldwork confirmed that about 10 Point Hope graduates were currently attending college or graduate school and that 2 or 3 persons were attending college or graduate school from Wainwright. Respondents in Point Lay and Atqasuk said few students had ever gone to college from those villages.

The interviews with village residents and school officials indicated general agreement that so long as high paying temporary construction jobs were available in the village, there would be much less inspiration for young people to seek further education or technical/vocational training beyond high school. However, a recent Nuiqsut study
(Galginaitis et al. 1983) indicated that a greater number of Inupiat women completed high school and pursued advanced training or education out of necessity due to the types of jobs defined as women's work.

There were concerns that having students attend local high schools would result in fewer students completing high school, that students would not receive an adequate social education, that students would not get out to see more of the world and that it was more difficult to discipline students while attending school in the village than when they attended outside institutions. A more common concern was that students were not receiving an adequate academic education in local high schools, a perception generally shared by adults who had attended Mt. Edgecumbe as students.

Other respondents favored having local high schools in the villages as they believed it was difficult for students to adjust emotionally to being away for high school, that families were happier when the students were not separated, that students learned the Inupiat language better when they remained at home and that the basic education being provided was adequate, especially for a subsistence economy. Nelson (1982) also suggested that the recent increased interest in subsistence activities by young people can be at least partially attributed to their no longer having to leave the village to obtain a high school education.

Questions were asked during the fieldwork for this study about the impact upon the Inupiat society of the North Slope Borough’s housing programs. Alaska Native respondents generally agreed, insofar as the
Inupiat tradition of the extended family was concerned, that the new housing had not weakened the larger family which had formerly occupied a single family dwelling but now was able to live in several units. The trend towards more homes with smaller households had not noticeably reduced the interaction within the extended family, especially in sharing foods and for cooperation in subsistence activities. Improvements in local transportation and the addition of telephones have also aided in keeping the extended family ties intact within the village.

Concerns were expressed that the Department of Housing and Urban Development (HUD) program used by the Borough to sell the new homes to their occupants had not been utilized to the extent originally proposed, leaving too many families with only the option of renting the Borough units. Another area of concern was the rising cost of maintaining the new homes (a concern expressed for older homes as well). Certain features of the new homes’ design were criticized, but there was general agreement that the new houses were far more comfortable than were the more traditional ones and that Inupiat residents generally preferred living in the new houses. Point Lay Inupiat respondents noted that the new housing had actually reinforced the extended family tradition by making possible the return to the village of former families which had been broken up several decades before when Point Lay’s population had declined and its residents had dispersed to a number of places both within and outside Alaska.
Transportation

INTER-COMMUNITY LINKS

It is beyond the scope of this report to deal with transportation systems or services. However, as part of the 1983 fieldwork, people in the various Chukchi Sea villages were asked their opinions of formal land links between their village and other communities or other areas. This question was prompted by a request from the City of Nuiqsut to the North Slope Borough for a road linking that village to Prudhoe Bay. While construction of such a route is not now being seriously considered, the fact that the question was raised was of interest, given long-expressed views against formal connections with the outside world.

As expected, almost all people interviewed in the five Chukchi Sea villages generally opposed land links to other villages. Those who favored road development generally did so because they believed it would be easier to visit their friends or relatives. Those opposed generally expressed a wish to live in semi-isolation and believed that roads would have a negative impact on wildlife resources. Several people also thought that their village might have more problems with the importation of liquor if it became more accessible.

From a quick overview, it is apparent that the desire for greater accessibility to the outside world expressed by Nuiqsut is not shared by villages in the Chukchi Sea region. To some extent, the villages serve as a retreat from urbanized society and there is every indication that,
at least in the Chukchi Sea area, residents wish the status quo to continue.

Social Organization

TRADITIONAL SOCIAL ORGANIZATION

Traditional Inupiat society was strongly kinship oriented. Kinsmen were essential elements in the network of interpersonal relationships. Villages were also kinship units. Kinship formed “the axis on which the whole social world turned” (Burch 1975:22). Two or more local families formed the community. The communities formed the society which was composed of all the people in the region (Burch 1975:235-245).

Alliantes in traditional Inupiat society were formed through both actual and ideal kinship ties. Such ties were formed through adoption, betrothal, namesake relations, spouse exchange, marriage, divorce and widowhood. Outside the dimension of kinship, alliances were formed through serious joking partnerships, feasts and trade fairs; meat sharing, dancing, singing and wrestling partnerships; amulet relationships and ritual sponsorship, work and hunting associations (Guemple 1972:2). These alliances provided a mechanism for the individual to adapt to the environment by reducing the threat from outside one’s own regional group and by providing an important means for individuals to deal with crises within their own region, particularly in times of war but also in times of famine (Burch 1971:28). This social
organization served to extend and ensure cooperation within the society, thus reducing individual risk.

RECENT SOCIAL ORGANIZATION

As noted by Burch (1975), Guemple (1971), VanStone (1962) and Spencer (1959), the traditional Inupiat social organization has changed somewhat since the time of contact with European explorers. These alterations in the structure of Inupiat society have occurred as a result of changes in the economy, religion, education process and social welfare. Such changes in society have continued to occur in recent years. The major issues related to social organization considered in this study include: 1) the effects of new housing projects; 2) the effects of employment on cooperative subsistence hunting and fishing; and 3) identification of intra-village sharing networks.

The strength of kinship ties in Inupiat society has not abated. Kinship continues to be an adaptive mechanism for survival both in the Arctic environment and in a changing world. Kinship alliances and the security they offer continue to give an inner strength to the Inupiat which helps them adapt to their environment. The Inupiat society is cooperative with emphasis placed on sharing subsistence resources which enhances and strengthens Inupiat kinship structures.

With the construction in recent years of additional housing in all North Slope traditional villages, there has been a trend towards a predominance of local families rather than domestic families. The local
family occupies different dwellings but members generally operate as if they were still living under one roof. The family still continues to be the basic social and, to some extent, economic unit particularly through its sharing networks. The 1983 fieldwork indicated, as previously noted, that residents generally preferred living in separate houses.

Cooperation in Inupiat culture is enhanced by group efforts in hunting and fishing activities. Increased employment has the potential to decrease subsistence hunting and fishing effort and therefore lessen the cooperation which exists in hunting and fishing and ultimately weaken the social structure in Inupiat society. However, the whaling survey (Alaska Consultants and Braund & Associates 1983) indicated that even though the amount of time respondents spent hunting and fishing decreased in relation to the number of months worked, the amount of Native meats eaten did not necessarily decrease. In addition, 88 percent of the respondents in Point Hope, Wainwright and Barrow usually hunted and fished during the year. These data are consistent with the information obtained in this study which indicates that hunting and fishing have become more efficient in terms of the time necessary in order to harvest a given quantity of meat (see regional overview of the subsistence economy). Key seasonal harvests and weekend and evening hunting are presently very important in the study communities. Furthermore, greater efficiency in hunting and fishing enables fewer individuals to harvest larger quantities of subsistence resources. The fieldwork for both this study and the whaling survey indicated that key individuals often harvested a substantial amount of fish and game and, through distribution networks, provided meat to other members of the
community. Conversely, key wage earners in the family network provide the necessary cash to support the subsistence harvester. In these cases, a high degree of cooperation exists within the family network.

In some ways, improved transportation technology has increased cooperative hunting. For example, as discussed in the regional overview of the subsistence economy, the unreliability of snowmachines has caused hunters to hunt in pairs, especially on long distance hunting trips. This results in more cooperative teamwork than was the case in the past when solitary winter hunting by dog team was more common. Also, in Point Lay, increased economic opportunities have enabled past village residents to return to their community and have enhanced cooperative hunting of belukha whales. As discussed in the regional overview of subsistence land use patterns, Point Lay villagers now use aluminum boats with powerful outboard motors to herd and harvest belukha whales. This seasonal, communal harvest is time efficient and therefore allows villagers to return to work quickly. Although the belukha harvest does not compare in cultural significance with the bowhead whale hunt in other communities, it is an important cultural and community unification force because all members of the community are involved. Finally, there is no evidence, either from the fieldwork in this study or the whaling survey, that employment has disrupted the communal nature of bowhead whaling. The crews are still primarily comprised of kinsmen. Entire villages continue to participate in the whale butchering and feasts and whale meat and muktuk are widely distributed, not only within the village, but also among other communities (Alaska Consultants Inc. and Stephen Braund & Associates 1983).
Sharing subsistence resources occurs between family and friends within the village as well as with other villages. Based on fieldwork for this study, kinship ties and need continue to play a major role in the determination of sharing patterns. Successful harvesters share subsistence meats with extended family members within the village, in other villages and in more urban areas such as Anchorage and Fairbanks. Improved transportation networks throughout the North Slope, particularly the at least hi-weekly flights from Barrow to each village, as well as inter-village flights, have greatly enhanced sharing networks. Traditionally, sharing was primarily done upon arrival of friends or relatives in the village. Both the guest and host would share foods common to their area. Today, foods are often sent between villages without personal contact. For example, an Atqasuk man stated that he had received seal on several occasions from his son in Barrow, announced simply by a phone call for him to meet the next plane.

The whaling survey indicated that bowhead whale meat and muktuk is shared among all five of the study communities (Alaska Consultants and Braund & Associates 1983: Table 133). For example, Barrow residents shared bowhead with Wainwright, Atqasuk, Point Lay and Point Hope. Wainwright also sent meat and muktuk to all four of the other study communities, and Point Hope residents distributed bowhead to Point Lay, Wainwright and Barrow people.

The fieldwork for this study indicated that, because Point Lay's location is a favorable one for harvesting belukha whales, the village is able to provide belukha muktuk to other villages. Many Point Lay
Residents said that during years when they harvest sufficient belukha, they send meat and muktuk to relatives and friends "all over Alaska". Point Lay people also indicated that during years when Barrow's harvest of bowhead is low, they send belukha meat and muktuk there. As noted in the discussion of Point Lay's land use patterns, a few local men currently go to Wainwright and Barrow to participate in whaling crews. Additionally, villagers travel to Wainwright, Barrow and Point Hope to help butcher landed whales. Because Wainwright bowhead whalers often hunt as far south as Icy Cape, it is convenient for Point Lay residents to travel to Icy Cape and help butcher whales for a share.

Atqasuk's inter-village sharing network is strongly oriented towards Barrow. A majority of Atqasuk residents lived in Barrow prior to the re-establishment of Atqasuk and virtually all Eskimo residents of Atqasuk have relatives in the larger community. As noted in the analysis of Atqasuk's land use patterns, residents from this village frequently travel to Barrow to visit relatives, to pick up supplies or to hunt sea mammals. A high level of sharing exists between these communities as a result of this continuous interaction. Sharing of bowhead whale is common among Atqasuk, Barrow and Wainwright and, in this case as well as others noted above, kinship ties are an important reason for the high level of sharing.
TRADITIONAL INUPIAT VALUES

As described by Lantis (1959:37-38), traditional Inupiat values were centered on the Inupiat's close relationship with the natural resources, specifically to game animals, thereby creating an interconnection with their subsistence lifestyle. Traditionally, the Inupiats also had a close relationship to the supernatural with specific beliefs in animal souls and of beings who controlled the movements of animals. Inupiats placed an emphasis on the community and its needs; support of other individuals, especially those within the family; and self-reliance and individualism. Each of these spheres of values were of equal importance and were intertwined with one another.

Other values, or “model standards”, listed by many authors including Lantis (1959:37), Chance (1966:22, 70-77), Milan (1964) and Worl et al. (1981), describe the “ideal” Inupiat. Generosity, cooperation and hospitality were highly valued. From the time children were born they were taught to share with others. In addition Inupiats were taught to be industrious, honest, patient, able to accept suffering, to be modest, dignified, good humored, attentive to others, resourceful and to possess a sense of equality rather than superordination and subordination.

According to Lantis (1959:43), the only forces powerful enough to alter the basic values of a society are:

“(1) a seriously disturbing change in the physical conditions of life, or (2) a fundamental cultural change imposed or induced from without, for example, when a conquering group requires acculturation of the conquered, or (3) when a series of fundamental
inventions changes the physical and social conditions, for example, as in the recent Industrial Revolution."

Material and social innovations of the past century have changed the cultural, social and physical conditions of the Inupiat. As a consequence, some change in Inupiat values as well as social organization have occurred. Such changes in values are often difficult to perceive in a short period of research because values usually change slowly and imperceptibly over more than one generation.

RECENT INUPIAT VALUES

Much of this report discusses recent changes which are visible in the study communities (i.e. increased employment opportunities, new housing projects, improved transportation and communication networks, new community facilities and utilities, and changes in subsistence technology). Despite these rapid changes, key elements of the Inupiat culture are persisting, including subsistence land use patterns, sharing, cooperative activity and strong extended family relationships. This section discusses current Inupiat values as they are reflected in participation in subsistence land use activities and increased wage employment sharing and extended family relationships.

The 1983 fieldwork indicated that the basis of the Inupiat system continues to be the environment and subsistence harvests. Although recent employment opportunities have significantly increased the number of residents who have jobs, villagers use a substantial portion of their income to pursue subsistence activities (see the regional overview of
the subsistence economy). Major investments in snowmachines, three-wheelers, boats and outboard motors to be utilized in hunting and fishing in traditional harvest areas for customary resources reflect a continuing value in subsistence activities. Despite the availability of store-bought meats, both the whaling survey (Alaska Consultants, Inc. and Stephen Braund & Associates 1983) and the 1983 fieldwork indicated a strong cultural preference for Native meats. Furthermore, considerable free time (including weekends, evenings and leave time from work) is used for subsistence hunting and fishing. Hence, cash is typically used to enhance more efficient subsistence pursuits (in terms of time and effort, if not cost).

The whaling survey indicated that over 88 percent of the Inupiat respondents in Wainwright, Barrow and Point usually hunt and fish during the year (Alaska Consultants, Inc. and Stephen Braund & Associates 1983: Table 85). Although North Slope whaling village respondents hunted and fished fewer months of the year than residents of whaling villages outside the Borough, this is probably a result of the present relationship between high wage employment in the Borough villages and corresponding time-efficient subsistence activities. Thus, many villagers spend less time hunting and fishing but, as discussed throughout the overview and individual village sections on the subsistence economy, subsistence pursuits remain an integral part of Inupiat life.

Cooperation in hunting and fishing activities also remains an important part of community life on the North Slope. For example, the whaling
survey indicated a high level of cooperative behavior through participation in bowhead whaling activities in Point Hope, Wainwright and Barrow. Over 93 percent of those respondents not on a whaling crew said they participated in whaling in some way (either through assistance in butchering the whale, or in hauling meat and muktuk, hauling supplies, cooking and other activities). Without the assistance of other village residents, whaling would be an extremely arduous task for the whaling crews alone. In addition, Point Lay's most important sea mammal harvest is a cooperative hunt of the belukha whale which involves the entire community.

Sharing wildlife resources creates cooperative bonds throughout both individual Inupiat villages and between communities. Through sharing, those who do not have the necessary hunting skills can obtain meat. Also, sharing enables hunters to distribute wildlife resources quickly after a sizable harvest. The 1983 fieldwork indicated that sharing of Native subsistence meats remains high in all of the study communities. According to the whaling survey data, nearly 98 percent of the respondents in Point Hope, Wainwright and Barrow shared (gave or received) Native meats in 1982. However, the traditional sharing of food is limited primarily to Native wildlife resources.

Kinship and extended family relationships, evidenced primarily through sharing and cooperative hunting and fishing, remain strong despite rapid change in the study communities. Household size fluctuates as people come and go from the villages, but recent housing programs have led towards increasingly smaller households as more and more nuclear
families move into single family homes. Nevertheless, this pattern does not appear to have weakened extended family bonds. Nuclear families living in single family homes continue to interact with extended family members living in other houses, especially in sharing foods and cooperation in subsistence activities. Households do not operate independently from each other, but maintain traditional social and economic ties. This represents a conscious effort by villagers to maintain traditional social forms and values (i.e. kinship and "subsistence). Although there are many visible changes in the villages, fundamental Inupiat values persist and sharing and cooperation integrate the nuclear and extended families.
POIN T HOPE

Introduction

Point Hope is located near the end of a triangular spit which extends about 15 miles into the sea from the Lisburne Peninsula and is the westernmost extension of Northwest Alaska into the Chukchi Sea. The village is about 315 miles southwest of Barrow and 140 miles northwest of Kotzebue. It was first incorporated as a fourth class city in 1966 and was reclassified as a second class city in 1972.

Two gravel bars which converge to form the Point Hope spit enclose several large shallow lagoons. The Kukpuk River, the major river system in the Point Hope area, flows into one of these lagoons, Marryat Inlet. Warm coastal currents flowing north from the Bering Sea through Bering Strait into the Chukchi Sea strike the Alaska coast a few miles south of Point Hope. These warmer waters support a wider variety of life forms than is normally the case for Arctic waters. The mainland from which the Point Hope spit extends is the westernmost foothill area of the Brooks Range. This setting, combined with a milder climate than that of more northern Eskimo villages on the Chukchi Sea, provided a favorable environment for supporting a population in the Point Hope area which historically was the largest in the Alaska Arctic.

The old village sites along the north side of the Point Hope spit were subject to steady erosion and sometimes flooding by storm surge tides. These conditions resulted in a decision to relocate the village. A new
site was selected to the east of the old village on somewhat higher ground between Marryat Lagoon and the southern edge of the spit. The new village site is thought to be generally free of flooding problems and sufficiently remote from the eroding areas to permit long term development of the new village. The movement of village structures from the previous site was accomplished in 1978 and 1979.

Much of the information on Point Hope contained in the following pages was collected by Alaska Consultants, Inc. for the North Slope Borough and was published in the June 1983 report entitled "Background for Planning: Point Hope". That information was supplemented by fieldwork conducted specifically for this project during the summer of 1983 and by observations from ongoing work in this village being conducted for the North Slope Borough. Information on the subsistence economy and subsistence land use was collected in the field in 1983 specifically for this study.

**Population**

**Past Population Trends**

Point Hope's population had stabilized at about 140 people in the decade between 1920 and 1930 (see Table 18). From this plateau it rose to 257 by 1939, confirming the reported consolidation of people from very small outlying settlements into the larger village as reindeer herding efforts declined and the trapping of furbearers became less lucrative. Point Hope's population remained stable through the decade of the 1940's,
<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>1929</td>
<td>139</td>
<td>- 1.4</td>
</tr>
<tr>
<td>1939</td>
<td>257</td>
<td>84.9</td>
</tr>
<tr>
<td>1950</td>
<td>264</td>
<td>2.7</td>
</tr>
<tr>
<td>1960</td>
<td>324</td>
<td>22.7</td>
</tr>
<tr>
<td>1970</td>
<td>386</td>
<td>19.1</td>
</tr>
<tr>
<td>1980</td>
<td>464</td>
<td>20.2</td>
</tr>
<tr>
<td>1983</td>
<td>570</td>
<td>22.8</td>
</tr>
</tbody>
</table>

\( a/ \) 1983 population based on a July 1983 count by the North Slope Borough.

totaling 264 in 1950. However, during the next twenty years, the village's population grew steadily at a rate of 2 percent a year, reaching 386 in 1970. This growth rate was about that of natural increase.

A Borough-sponsored census in July 1975 counted 384 residents in Point Hope, close to the 386 reported in 1970, suggesting that some out-migration had offset growth from natural increase after 1970. The 1980 U.S. Census found 464 Point Hope residents, indicating a jump of 80 persons in the latter portion of the 1970's. Such a rapid change could only have resulted from an in-migration of people to the village.

Point Hope's annual growth rate averaged about 4 percent during the last half of the 1970's. A Borough-sponsored census in July 1982 found 544 residents, indicating that the average annual growth rate had risen to 8 percent between 1980 and 1982. A July 1983 census, again sponsored by the North Slope Borough, counted 570 people in the village, representing a further 4.8 percent population increase. It appears that expanded employment opportunities, coupled with new housing and improved government services, have provided increasingly stronger incentives for people to move to or back to Point Hope.

POPULATION COMPOSITION

The most striking feature of Point Hope's population composition is that most residents of this community are Eskimos. According to the 1980
Census, 94 percent of the village's total population was listed as Alaska Native.

The continuing influence of strong family and other ties among today's Point Hope residents is reflected in the stability of the community's population. According to the 1980 North Slope Borough housing survey, about 71 percent of the Alaska Native heads of household had lived in Point Hope since before 1960 (see Table 19).

A review of the age and sex characteristics of Point Hope's population was undertaken, based on information collected by Alaska Consultants, Inc. as a part of a Boroughwide housing survey conducted during the summer of 1980 (see Figure 2 and Table 20). This survey found that Point Hope's population was the youngest of any village in the North Slope Borough. The median age for Point Hope males was 20.9 years while that for females was 18.1. When non-Natives were excluded, the median age of the population changed slightly to 20.3 years for males and 18.2 years for females, the lowest for Alaska Natives in all of the North Slope villages. The median ages of Point Hope residents were also well below those of the State (26.1 for males and 26.3 for females) and of the nation (28.8 for males and 31.3 for females) in 1980.

A closer look at the age breakdown of Point Hope's 1980 population indicated that there were relatively more children in this village than the other smaller North Slope villages (i.e. excluding Barrow). Children under 15 years of age made up 36.6 percent of Point Hope's population in 1980 compared with 31.9 percent in the smaller villages.
TABLE 19
LENGTH OF RESIDENCE OF HEADS OF HOUSEHOLD a/
POINT HOPE
JUNE 1980

<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Race</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alaska Native</td>
<td>Non-Native</td>
</tr>
<tr>
<td>1975-1980</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>1970-1974</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1960-1969</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Before 1960</td>
<td>66</td>
<td>0</td>
</tr>
<tr>
<td>No Response</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>93</td>
<td>12</td>
</tr>
</tbody>
</table>

a/ For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.

### TABLE 20

POPULATION COMPOSITION BY RACE AND AGE a/ POINT HOPE 1980

<table>
<thead>
<tr>
<th>Age</th>
<th>Native</th>
<th></th>
<th>Non-Native</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>0 - 4</td>
<td>28</td>
<td>33</td>
<td>61</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>5 - 9</td>
<td>20</td>
<td>22</td>
<td>42</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10 - 14</td>
<td>24</td>
<td>24</td>
<td>48</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>15 - 19</td>
<td>34</td>
<td>30</td>
<td>64</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>20 - 24</td>
<td>27</td>
<td>18</td>
<td>45</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25 - 29</td>
<td>20</td>
<td>14</td>
<td>34</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>30 - 34</td>
<td>11</td>
<td>6</td>
<td>17</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>35 - 39</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>40 - 44</td>
<td>8</td>
<td>8</td>
<td>16</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>45 - 49</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>50 - 54</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>55 - 59</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>60 - 64</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>65 - 69</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>70 - 74</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Over 74</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>215</td>
<td>192</td>
<td>407</td>
<td>10</td>
<td>9</td>
<td>19</td>
</tr>
</tbody>
</table>

Median Age 20.3 18.2 19.3 31.0 17.5 30.2 20.5 18.1 19.5

a/ Figures exclude a total of 54 persons (17 Alaska Native males, 18 Alaska Native females, 10 non-Native males and 9 non-Native females) for whom no age information was provided.

COMPOSITION OF POPULATION 1980

Sources: U.S. Census

Figure 2
Furthermore, the under 5 age group accounted for 14.7 percent of Point Hope’s total population compared with 12.8 percent in the smaller villages. A review of the age composition of Point Hope’s population recorded by a July 1982 Borough-sponsored census suggests that Point Hope’s population continues to be very young. In 1982, 16.8 percent of the village’s population was under 5 years of age, compared with the 14.7 percent in this age group in 1980.

The 1980 North Slope Borough housing survey found that Point Hope males outnumbered females by a 52.8 to a 47.2 percent margin. The 1982 Borough-sponsored census did not indicate that any significant changes in local male to female ratios had occurred since 1980.

SOCIAL INTERACTION

According to the 1980 North Slope Borough housing survey, 38 of the 480 people (7.9 percent) then living in the village were non-Native. The survey included transient white construction workers. As a result, it found the proportion of non-Natives to be slightly higher than did the 1980 Census (6.5 percent). The proportion of non-Native residents at Point Hope is not believed to have changed significantly since 1980 because much of the community’s recent growth has been derived from Inupiats moving back to the village and because Point Hope has not had the large transient construction worker population experienced by several other villages in the region.
In an effort to view how the different groups at Point Hope interacted with each other, questions were asked about relationships between Inupiat and whites in the village as part of the 1983 fieldwork. While there were some negative feelings on this subject, they were obviously not universal. The Point Hope city council has one white member and several other non-Natives who were permanent village residents appeared to be generally well accepted. Generally, people interviewed in Point Hope in 1983 felt that there were very few jobs held by whites in the village which would be better held by local Inupiats. In fact, hostility directed toward certain non-transient white residents tended to be based more on personal animosity than racial bias.

As in other villages, some resentment was expressed over the presence of transient white construction workers. However, this was less of a problem in Point Hope where most projects in recent years have been built by Tikigaq Construction, a subsidiary of the local village corporation. One community leader interviewed in 1983 thought there were too many Alaska Natives from other villages holding jobs in Point Hope, suggesting that resentment against “outsiders” might not always be restricted to whites.

MIGRATION

Since 1980, there has obviously been a good deal of in-migration to Point Hope as the community’s 22.8 percent growth rate between 1980 and 1983 is well in excess of what could be expected from natural increase. Much of the increase during that period is believed to have been derived
from the return of former village residents to Point Hope in response to the increase in local construction employment opportunities. Several city councilmen indicated to Alaska Consultants, Inc. in May 1983 that this was the case. They tended to view the growth positively, seeing it as a trend back toward Point Hope’s old population level.

At the time of the 1980 North Slope Borough housing survey, one person in each household was asked how long he or she had lived in Point Hope. Fully 82.5 percent of these people indicated that they had lived in the village since at least before 1960. Only 8 persons (6 of them Alaska Native) said they had moved to the village between 1975 and 1980. Thus, most migration into Point Hope has occurred since 1980.

Given the relatively short duration expected for North Slope Borough capital improvements program construction employment and the lack of other comparable economic activity to fill the void which will be left when scheduled construction projects are completed, Point Hope residents were queried about their mobility as part of the 1983 fieldwork. These questions were framed in terms of past or present employment on the Pipeline and at Prudhoe Bay/Deadhorse and what such persons liked most and least about such experiences.

In September 1983, 3 persons from Point Hope (including at least one non-Native) were working at Prudhoe Bay. None of these people were interviewed as part of the 1983 fieldwork. However, 6 of the 25 persons interviewed in 1983 had worked on construction of the Pipeline and 5 (including some of those who had worked on the Pipeline) had worked in
the Prudhoe Bay/Deadhorse area. When asked about their motives for seeking these jobs, the answer was universally “the money”. The length of time that these people were employed in petroleum-related occupations was not clear. However, when asked their main reason for leaving, all indicated that they had left mainly because they missed their families and their village. Some also mentioned the difficulty in traveling between Deadhorse and Point Hope (jet flights to Kotzebue/Point Hope now all originate in Anchorage) and others indicated that they had felt a need to be home during key subsistence seasons. Few people expressed interest in working in these types of jobs again, mainly because well-paying construction jobs are readily available in the village. However, such sentiments could very well change as the Borough’s capital improvements program winds down.

RECENT TRENDS AND CHANGES

As previously indicated, Point Hope’s population underwent a significant amount of growth (22.8 percent) between 1980 and 1983, much of it related to in-migration of former village residents in response to construction employment opportunities in the village. These jobs, although temporary, have been mainly derived from the North Slope Borough’s ongoing capital improvements program. In Point Hope, a high proportion of Borough construction projects have been funneled through Tikigaq Construction, a subsidiary of the local village corporation. The Borough’s capital improvements program has also resulted in the addition of a smaller number of permanent jobs associated with the operation and maintenance of new Borough facilities.
Major Borough construction projects underway during the summer of 1983 included new housing, gravel crushing and road construction, a new fuel tank, clean-up of the village dump and development of a new water source and water transmission line. Although there are a couple of construction camps in Point Hope (one of them operated by the village corporation), transient workers are less of a factor here than they presently are in the other smaller villages in the Chukchi Sea portion of the North Slope Borough.

Economy

The Point Hope spit is the largest continuously occupied Eskimo site in the Alaska Arctic. The local subsistence area had a combination of physical and climatic features which favored the substantial harvest of marine and terrestrial mammals, as well as fish and waterfowl, on a sustained basis. It was Point Hope's favorable location for the harvesting of bowhead whales which led to the village's initial contacts with the whaling fleets in the mid-1800's and to subsequent disruptions in the local Eskimo society which occurred as the exposure to Western culture--including new diseases, alcohol and the aggressive harvest of natural resources for commercial purposes--became more extensive and continuous.

Point Hope's population stabilized during the 1940's at about 260 and then grew slowly to 386 persons by the 1970 Census. However, the local economy remained heavily oriented to subsistence harvesting and, even
today, the village's Eskimo residents continue to give this portion of their local economy significant attention.

While Point Hope is accessible by water during the short ice-free summer period, development of regularly scheduled air service has significantly reduced the community's isolation on a year-round basis. Initial development of air services emphasized the linkage between Point Hope and Kotzebue (a distance about half that between Point Hope and Barrow) and Point Hope residents were also attracted by temporary employment opportunities in the Kobuk region, by government services such as those offered by the Public Health Hospital in Kotzebue, and by the availability of direct air service out of Kotzebue to other Alaska cities.

The discovery and development of the Prudhoe Bay oil fields and associated construction of the oil pipeline to Valdez provided job opportunities for interested Point Hope workers. More significantly, these activities led to the incorporation of the North Slope Borough in 1972. Since its incorporation, the Borough has assumed responsibility for a wide range of local government services and has embarked on an ambitious capital improvements construction program. Together, these activities have led to the creation of a number of service and temporary construction jobs for village residents.

Passage and implementation of the Alaska Native Claims Settlement Act (ANCSA) in 1971 has also had an impact on the local economy. This legislation, with its land and financial settlements, has provided
additional economic leverage for village residents through the creation of village and regional profit corporations. In Point Hope, the Tigara Corporation has been a very active force in the community's non-government business activities. It acquired and now operates the community store. Tikigaq Construction, a subsidiary of Tigara, has been heavily involved in building Borough capital improvement projects in both Point Hope and Point Lay. The village corporation has also invested in business ventures outside the community, particularly those which generate employment opportunities for the corporation's stockholders.

**COMPOSITION OF EMPLOYMENT**

Employment statistics published by the Alaska Department of Labor cover the North Slope Borough as a whole, including Prudhoe Bay, and therefore do not provide meaningful employment data for individual communities. To understand local employment conditions in Point Hope, a special count of employment was undertaken here in September 1982.

The September 1982 employment count identified a total of about 113 jobs in Point Hope on an annual average full-time basis (see Table 21). This included 3 jobs held by local residents at Prudhoe Bay as well as jobs held by itinerant construction workers then residing in Point Hope.

Government employment provided 50 jobs or 44 percent of the total. Except for the postmaster's position and a part-time magistrate, all government positions in the village were provided by the North Slope
### TABLE 21
AVERAGE ANNUAL FULL-TIME Employment / POINT HOPE

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>0.0</td>
<td>--</td>
</tr>
<tr>
<td>Mining</td>
<td>3.0</td>
<td>2.7</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>38.0</td>
<td>33.8</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.0</td>
<td>--</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
<td>0.0</td>
<td>--</td>
</tr>
<tr>
<td>Trade</td>
<td>9.0</td>
<td>8.0</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>7.0</td>
<td>6.2</td>
</tr>
<tr>
<td>Services</td>
<td>5.5</td>
<td>4.9</td>
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<tr>
<td>Government</td>
<td>50.0</td>
<td>44.4</td>
</tr>
<tr>
<td>Federal</td>
<td>(1.0)</td>
<td>(0.9)</td>
</tr>
<tr>
<td>State</td>
<td>(0.0)</td>
<td>--</td>
</tr>
<tr>
<td>Local</td>
<td>(49.0)</td>
<td>(43.5)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>112.5</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

*Includes three local residents employed in construction activities at Prudhoe Bay.

Source: Alaska Consultants, Inc.
However, the role of the Borough as an employer was even greater if the 38 jobs (34 percent of the total) in temporary contract construction were considered, since all of this construction employment was derived from Borough capital improvements projects then being built in Point Hope. (Of these 38 temporary construction jobs, 27 were provided through Tikigaq, the construction arm of the Tigara Corporation). Thus, 88 of the 112.5 full-time job equivalents in the village (or 78 percent of all employment) were directly related to Borough service or construction programs.

The Point Hope store was the largest non-government employer in 1982, providing about 9 jobs in the trade sector. The Tigara Corporation's central office provided another 7 jobs in the finance, insurance and real estate sector.

There were about 6 full-time jobs in the services sector, most related to the operation of camps for temporary construction workers and other itinerants. Finally, 3 persons worked regularly at job sites away from Point Hope. There were no local jobs in agriculture, forestry, fishery or manufacturing activities. The local Wien Air Alaska agent's duties were handled by the village store but did not consume enough time to be shown separately under the transportation category.

**UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT**

There are no reliable statistics which document rates of unemployment in Point Hope or other North Slope Borough villages. The data published by
the Alaska Department of Labor for the Borough are regional totals only, including Prudhoe Bay where most jobs in the region are located and where everyone is employed. As a result, conditions in the region's traditional villages are obscured.

Despite the lack of firm statistics, it appears that there may have been at least some under-employment in Point Hope in 1982. A July 1982 census sponsored by the North Slope Borough identified 269 persons in Point Hope between the ages of 18 and 65, including 157 males. When this is compared with the 113 full-time job equivalents counted here in September 1982, the gap between population and jobs seems large. However, a significant proportion of Point Hope females is outside the labor force (i.e., they are not seeking work) and many local males in the same age range choose to engage in temporary construction activities rather than in full-time year-round work.

A factor which must be taken into account in assessing the amount of unemployment in Point Hope and other North Slope villages is the amount of time that working age persons devote to subsistence activities. Such activities are very important in the lives of local residents but appear to fit well with temporary employment such as is provided by construction work. Occupations" associated with the Prudhoe Bay area which feature long hours of work plus extended leave periods may also be fairly compatible with subsistence activities.

A key determinant in the level of local employment has been the North Slope Borough which is the source not only of steady jobs associated
with the provision of services such as education and utilities but also of temporary construction employment arising from its ongoing capital improvements program. Once the major capital improvement projects in Point Hope have been built, however, the opportunities for temporary or seasonal construction employment in the village will be greatly reduced. At that time, local unemployment levels can be expected to rise unless other economic opportunities are present.

Weather conditions cause some seasonal variations in local temporary construction employment. The main variations in temporary construction employment, however, are related to the number and type of capital improvements projects being constructed locally. Uneven scheduling of construction work from year to year can result in local unemployment or it may necessitate the importing of labor for jobs which otherwise could have been filled by local residents.

INCOME LEVELS

The 1980 Census found the median household income for the North Slope Borough to be $31,378. The median household income Statewide in 1980 was $25,421, while the mean household income for all Alaska Natives Statewide was $21,865. The same census indicated a median household income of $23,929 for Point Hope.

While household income levels at Point Hope do not appear to be much lower than those recorded Statewide, the purchasing power of the dollar in remote and isolated communities such as Point Hope is greatly
diminished by high local prices for goods and services. Most freight and all commercial passengers move into the village by air, the major exceptions being fuel and some heavy or bulky materials which arrive by barge during the short summer season. Because of the great distances involved as well as the mode of transport, store-bought food prices are probably about double those in Anchorage and subsistence activities remain an economic necessity for most local residents.

Housing costs in Point Hope, especially for fuel, are high, absorbing a significant portion of household income. Heating oil cost $110 per 55-gallon drum in 1982. The average home reportedly uses about 3 drums per month during the coldest winter periods, placing the household heating cost at about $330 per month for a substantial part of the year.

ECONOMIC GROWTH PROSPECTS

Point Hope presently has a relatively simple economic base. The primary driving force in the local cash economy in recent years has been government spending, particularly by the North Slope Borough. Another force has been the Tigara Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act. The North Slope Borough is the major employer of Point Hope residents. In 1982, it directly provided 44 percent of the identified full-time job equivalents in the village. Another 34 percent of village jobs was directly related to contract construction for the Borough's capital improvements program in Point Hope.
Borough employment in Point Hope and other North Slope villages can be divided into two types. The first is services associated with the operation and maintenance of Borough facilities such as the school, the health clinic, utilities and the public safety building. The second type is employment associated directly with the construction of capital improvement projects. It is important to recognize the difference between these two types of Borough-related employment. Jobs associated with operations and maintenance are permanent and relatively few in number, whereas construction jobs are temporary and their number can fluctuate considerably from year to year.

In addition to relocation of the village, major capital improvement projects at Point Hope have recently included the new school, new housing units, a new generator plant, a central water facility and washeteria, a sewage lagoon, a public safety building and local road improvements. New projects either underway or scheduled include additions and modifications to the generation plant and power distribution system; additional housing, improvements and additions to the central water system; additions to the school, warehousing facilities and a new vehicle maintenance and warm storage building. However, in the longer term the level of construction employment derived from the North Slope Borough capital improvements program in Point Hope can be expected to level off and even decrease as community capital needs are met. Unless other economic activities can pick up the "slack" at that time, some reduction in Point Hope's economic growth can be expected.
The Tigara Corporation received a cash distribution and rights to select the surface estate of 138,240 acres of land in the general vicinity of Point Hope under terms of the Alaska Native Claims Settlement Act. Tigara acquired and now operates the community store. It also distributes all fuel consumed in Point Hope, including that used by Borough-operated facilities. Tikigaq Construction, a subsidiary of the Tigara Corporation, has been active in contracting directly or through joint ventures for the construction of Borough capital improvement projects both in Point Hope and Point Lay. Tigara is also a stockholder in Pingo Corporation, a construction management firm organized by several North Slope villages which has operated primarily in the Prudhoe Bay area. The Tigara Corporation, through a subsidiary, is also active in developing and managing a sizable real estate project in Anchorage. Finally, Tikigaq Construction maintains an office in Anchorage which provides employment for several Point Hope people now residing there.

There are presently no oil and gas exploration activities underway, either onshore or offshore, along the Chukchi Sea coast which could provide Point Hope residents with employment or offer business opportunities to the Tigara Corporation in contract construction, service or supply activities. Furthermore, concern has been expressed by Point Hope residents--about the possibility of damage to subsistence resources resulting from petroleum exploration activities and from the possible development of oil and gas resources if they are discovered in commercial quantities.
The Department of the Interior's Outer Continental Shelf leasing program for petroleum development, as currently scheduled, contemplates offshore sales in the Chukchi Sea area (Barrow Arch) in 1985 and 1987. Historically, exploration work preceding such offshore sales has had limited economic spinoffs for communities near or within the areas being explored. Furthermore, estimates of the probability of discovering commercial oil and gas resources along the Alaska coast of the Chukchi Sea are much lower than those for the Harrison Bay area in the Beaufort Sea. Nevertheless, the probability of oil and gas development in the Chukchi Sea is still high enough to make the area one of considerable interest to the petroleum industry.

Future exploration and perhaps development of oil and gas resources in the Point Hope area may present residents with difficult decisions as to economic development, particularly because such development could impact subsistence resources. (The ability of Point Hope residents to control offshore exploration and development is limited but still significant). Once the North Slope Borough capital improvement projects scheduled for Point Hope have been built, the level of local employment will probably decline. At that time, Point Hope residents may have greater interest in obtaining employment with the petroleum industry either in the Chukchi Sea region or elsewhere in order to meet the increasing cash requirements of maintaining their homes in Point Hope.

There are significant coal deposits in the general Point Hope area. However, further exploration of these resources and more careful
consideration of their development on a commercial scale are dependent on long term worldwide energy market conditions.

The long-term association of Point Hope people with those from the Kobuk region and the community's proximity to the Kobuk region could encourage villagers to consider employment opportunities that could develop if the several major mineral prospects being investigated on NANA Corporation lands are moved to production. One such prospect is located within the North Slope Borough in the Wulik River area to the northeast of Kivalina.

SUBSISTENCE ECONOMY

Since the establishment of the new village site in the late 1970's, Point Hope residents have enjoyed a relatively steady source of local employment opportunities. As of September 1982, only three of the 112 employed residents of Point Hope worked outside the village (see Table 21). This is substantially different than previous employment patterns where residents seasonally (i.e. summer) left the village to work (Foote and Williamson 1966). As discussed in the overview of the region's subsistence economy, this increase in local employment opportunities has affected subsistence activities in two ways: it has increased the amount of cash available for investment in subsistence equipment and it has reduced the overall amount of time available for subsistence pursuits. These two factors have altered the harvest schedules for some subsistence resources, increased the use of technologically advanced harvest tools and have reduced the amount of time spent in subsistence
activities. Nevertheless, Point Hope residents stated that they are still able to harvest the desired amount of subsistence resources.

The technological advances in harvest tools and techniques presently used by Point Hope residents are integral to the success of this new subsistence/cash economy. The introduction of the snowmachine has probably had the most dramatic effect in Point Hope as well as throughout the Arctic. The parameters of the subsistence economy which have been altered by the snowmachine are presented in the overview and include a reduction in the amount of meat harvested (no dog food), increased mobility, and increased speed to and from harvest areas. These factors have facilitated weekend hunting by allowing Point Hope residents to gather sufficient game in shorter periods of time. The benefits of the snowmachine are balanced by the expense of both the initial purchase (between $2,800 and $4,500) and operating and repair costs. In addition, the snowmachines' unwieldiness on the ice has been a major factor in re-directing winter subsistence activities inland toward caribou.

Although three-wheelers are widely used, their use is more pervasive in Point Hope than in any other community in the study area. Virtually every family has at least one three-wheeler. Villagers commonly use these vehicles for travel within the village: to and from the store, to the airport or to a neighbor's home across town. However, the most important reasons that three-wheelers have become so common in the past ten years is the access which they have provided to subsistence use areas. The barrier beaches in the Point Hope area are natural roadways
and villagers note that one can travel from Cape Thompson in the south to Sinuk in the north without interruption. In addition, three-wheelers are now used in the Kenegrak Hills during the summer and fall, providing access to caribou hunting areas which snowmachines could not reach at that time of year.

The general consensus in the village was that three-wheelers are better built than snowmachines, require fewer repairs and are more affordable ($2,000 to $2,400). Because they can be used year-round, many families find them more practical than snowmachines which cannot be used during the summer. According to the interviews, three-wheelers last approximately two to three years.

The use of three-wheelers has had an effect similar to snowmachines on subsistence activities; they have reduced the amount of time spent traveling to and from harvest areas. These machines have become very important during the spring marine mammal hunt as they allow Point Hope residents quick access to their camps located along the beach. Many families spend the evenings at their hunting camps rather than in the village. This allows people who are employed the opportunity to participate in both the subsistence and wage economies. Three-wheelers are also used by summertime fishermen to check their nets. In conclusion, the popularity of three-wheelers is due to their versatility, relatively inexpensive price, durability and to their speed which reduces traveling time to subsistence use areas.
Outboard motors and wooden or aluminum boats have become increasingly common in Point Hope in the past ten years. Like the snowmachine and the three-wheeler, these boats and motors have enhanced the relationship between the subsistence and wage economies. Hunters spend less time traveling between the village and harvest areas and increased speed has allowed productive evening and weekend hunting. In addition, unlike the skin boats formerly used, which had to be continually maintained and dried after each trip, the new equipment can be left on the shore ready to go at short notice. After years of use in harsh, ice-ridden, Arctic conditions, these new boats become unsafe and must be replaced. Point Hope hunters indicated that the speed and flexibility of this equipment provides justifies the $1,222 average yearly cost of owning outboard motors and boats (see section on regional subsistence economy).

The equipment used by Point Hope residents in their seasonal round of subsistence activities requires considerable amounts of cash to purchase and maintain. As noted in the section on the regional subsistence economy, the average Chukchi Sea village hunter must be prepared to spend $7,727 annually for fuel, ammunition, equipment purchasing and repairs. If the hunter takes on the added responsibility of being a whaling captain, his subsistence costs rise to $12,227 each year. Because of the high price of this equipment, more money is expended to obtain the desired amount of subsistence food than in the past. At the same time, hunting techniques have become less time consuming and more efficient.
Perhaps the single most important factor in the compatibility of the wage and subsistence economies is the local nature of the employment. Residents who had worked out of the village in the past repeatedly indicated their preference for the present system. The short-term rotation schedule common in oil-related industries often results in the worker/hunter being in the village at inopportune hunting times due to inclement weather or the migration patterns and seasonal nature of most game resources. Presently, residents can hunt evenings and weekends when game is available, weather permitting. Furthermore, close to half of all jobs in Point Hope in 1982 were provided by the North Slope Borough which has a generous leave program that is often used for subsistence activities. The other major source of employment in Point Hope is temporary construction jobs which also allow residents ample time for subsistence activities.

In summary, the present high level of employment in Point Hope provides the necessary amount of cash for local residents to harvest the desired amount of fish and game without having to leave the village to work. Foote and Williamson (1966) noted that Point Hope residents in the 1960's were able to obtain the necessary cash for their subsistence lifestyle by leaving the village in the summer for a few weeks to several months. Traditionally, the summer was less important than other seasons for subsistence activities. However, the recent concentration on broken-ice sea mammal hunting for seals, walrus and ugruk has resulted in the early summer (i.e. June) becoming an increasingly important period in the seasonal round of Point Hope residents. Consequently, as local employment opportunities decline after the
conclusion of the Borough's capital improvements program, Point Hope residents will be forced to look elsewhere for employment. If this occurs, subsistence harvest patterns will be likely to change and again show the adaptability of Point Hope hunters.

Political Organization

FORMAL POLITICAL ORGANIZATION

There are two primary political or quasi-political organizations in Point Hope. These are the City of Point Hope and the Tigara Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act. Although the latter is not a public body, its board is elected by corporate stockholders and the corporation is in fact a potent political force in the community. In addition, the North Slope Borough has an appointed village coordinator in Point Hope and the village also has an inactive IRA (Indian Reorganization Act) tribal government plus a local representative of the regional IRA government, the Inupiat Community of the Arctic Slope (ICAS).

North Slope Borough

The North Slope Borough has an appointed village coordinator in each North Slope Borough village except Barrow whose job is to maintain a liaison between the village and the Borough mayor's office. The effectiveness of the coordinators varies widely, depending on their
position in the village and the diligence of particular individuals. Several cities, including Point Hope, indicated that it was often more effective for them to deal directly with the Borough administration. They also noted that the Borough itself often bypassed the coordinators and dealt directly with the cities. Village coordinators work out of their homes since no office space is provided for them in any Borough facilities.

**Point Hope IRA Council**

The Point Hope IRA (Indian Reorganization Act) council is a recognized tribal government entity. However, according to information collected as part of the 1983 fieldwork, the local IRA council was inactive from 1975 until the early 1980's when it was able to operate for a time with very limited grant monies. The council was unsuccessful in obtaining additional funding from the Bureau of Indian Affairs which, at that time, was funneling tribal funds for the North Slope through the Inupiat Community of the Arctic Slope (ICAS). Although the Point Hope IRA council received financial support from the Tigara Corporation for a limited period, it has since been inactive. However, the current funding problems of ICAS, coupled with a feeling by some in the village that such programs would be better managed locally, could well result in the reactivation of the local IRA council. The issue was raised at a May 1983 city council meeting attended by Alaska Consultants, Inc. when the local ICAS representative requested that Point Hope designate the regional entity as its official IRA representative.
City of Point Hope

The City of Point Hope was first incorporated as a fourth class city under Alaska law in 1966 and was reclassified as a second class city in 1972. Funds for the city's operation are derived from a 2 percent local sales tax, State shared revenue and occasional State or federal grants.

The city's present corporate limits take in approximately 1,260 acres extending eastward from the end of the Point Hope spit. However, since the relocation of the village in the 1970's, about half of the village has been outside Point Hope's corporate limits. The city petitioned the Alaska Department of Community and Regional Affairs in November 1982 to annex an area east of its present boundaries to a line coinciding with 166° 35' West longitude but the earliest that the proposed incorporation can be finalized is 1984.

Consistent with State law for second class cities, Point Hope has a 7-member city council. However, while second class cities are normally empowered to undertake a wide range of local government functions, Point Hope has few municipal powers since most have been assumed by the North Slope Borough on an areawide basis. Despite this limitation, the city government is the so-called "voice" of Point Hope and is the group which represents local desires for community improvements to the North Slope Borough. It is helped in this by having a local North Slope Borough assembly member.
The City of Point Hope and the Tigara Corporation have not yet reached a “14(c)(3) agreement, i.e. lands to be conveyed to eligible municipalities under terms of Section 14(c)(3) of the Alaska Native Claims Settlement Act, as amended. In fact, there is still some question over ownership of certain lands conveyed to the Tigara Corporation because of pending Native allotment claims, including a portion of the new townsite area. As a result, although it reviews sites for proposed Borough facilities, the city does not normally receive financial benefit from the sale of land for such facilities.

The city government maintains a permanent office which is staffed by a full-time clerk and often by the mayor. Council meetings are held in the same building.

When asked if the city had developed any formal positions on offshore oil and gas development, the answer was “no”. The subject has not been a major issue in the village since no offshore leasing activity has yet been proposed in the immediate Point Hope area. However, five councilmen who were interviewed as part of the 1983 fieldwork nevertheless expressed concern over the possible effects of offshore oil and gas development on the marine environment and resulting potential impacts on subsistence lifestyles. The mayor added that oil companies would first have to be able to convince the village that offshore development would not adversely impact marine subsistence resources before the community would be willing to consider such activities in the Point Hope area.
Individuals questioned on the subject of possible oil and gas development were generally negative but were more receptive to onshore than offshore petroleum activities. One villager expressed concern that no public hearing on the subject had yet been held in Point Hope.

**Tigara Corporation**

The Tigara Corporation was created under terms of the Alaska Native Claims Settlement Act and is the major land owner in the Point Hope area. Its stockholders are persons who enrolled as Point Hope residents and this, its landholdings and its ownership of the local store, a construction company and the local fuel dealership (aside from its activities outside the village), make it a strong political as well as economic force in the community.

Tikigak Corporation, a subsidiary of the Tigara Corporation with offices in both Point Hope and Anchorage, has been particularly successful in participating in Borough construction projects in the village. It has also been involved in constructing Borough projects at Point Lay.

Unlike some other village corporations in the North Slope Borough, the Tigara Corporation is presently also a strong political force in the region outside the village. The chairman of the Tigara Corporation board is currently president of the North Slope Borough assembly. In addition, a former corporation president is now president of the Pingo Corporation, a construction and service firm owned by several North
Slope village corporations and which operates primarily in the Prudhoe Bay area.

Like the City of Point Hope, the Tigara Corporation has thus far taken no official position on offshore oil and gas development. However, the corporation did indicate to Alaska Consultants, Inc. in May 1983 that it had opposed a proposal by the Arctic Slope Regional Corporation about 5 years ago to have Chevron conduct a stratigraphic test on land between the present village site and the airport and had held a public meeting on the subject. No drilling ever took place.

INFORMAL POLITICAL ORGANIZATION

Aside from the City of Point Hope, the village IRA council and the Tigara Corporation and its subsidiaries, there are a number of other groups in Point Hope which have some political significance. These include the Episcopalian church, the National Guard, the local Alaska Eskimo Whaling Commission, the Lions and Lioness clubs, a dog mushers' club, a health committee and a recreation committee, plus the search and rescue/firefighting group.

The dominant religious group at Point Hope is the Episcopal church. In addition, a small number of people attend the Assembly of God and at least one person was actively attempting to establish the Church of Christ here during 1983. The present Episcopalian minister is Inupiat but is retiring this year. He is scheduled to be replaced by a younger Inupiat from Point Hope.
The National Guard has long been an important organization in Point Hope, with local Guard leaders being accorded a certain amount of status. According to the Alaska Department of Military Affairs, there are about 30 guardsmen in the village. People interviewed as part of the 1983 fieldwork felt that the Guard’s importance in the community had lessened in recent years. This probably reflects the length of time since World War II when Guard units were first established in this area plus the fact that income received by guardsmen for drills is now very minor when compared with that being earned by village residents in construction activities.

The local Alaska Eskimo Whaling Commission is an important group in the community. Prior to the whaling season, the local Commission holds meetings to discuss management of the hunt in relation to agreements with the full Alaska Eskimo Whaling Commission and the federal government. Federal regulations require that all whaling captains be registered with the Alaska Eskimo Whaling Commission. All whaling captains in Point Hope are members of the local Commission, with one member also serving on the full Commission. Given the importance of subsistence whaling activities, the local Commission is accorded a certain amount of influence and status. While that influence and status does not necessarily transfer to individual whaling captains, being a captain is nevertheless a strong political asset.

Search and rescue is a significant group in the village, as it is in other North Slope communities. Search and rescue functions have recently been assumed by the North Slope Borough and search and rescue
and firefighting volunteers are now one and the same group. Despite the changes in organization, search and rescue/firefighting remains a volunteer group and its members continue to be accorded status.

Of the remaining groups in the village, the Health Committee is probably the most active. It is involved in a memorandum of agreement for operation of the village health clinic, a memorandum which also includes the Mauneluk Association Health Division and the North Slope Borough Health and Social Services Agency. Funding for the second health aide in the village, plus supplementary travel funds for patients needing medical care and/or hospitalization, are raised locally by weekly bingo games sponsored by the Point I-lope Health Committee. Bingo sessions are also sponsored by several other groups in the village.

Land Use and Housing

LAND STATUS

City of Point Hope

The present Point Hope village site was selected to minimize the threats of sea erosion and storm surge flooding. The actual-move from the old village took place in 1978 and 1979.

Land for 'the new townsite was part of that selected by the Tigara Corporation under terms of the Alaska Native Claims Settlement Act (ANCSA). Under Section 14(c)(3) of the Claims Act legislation, as
amended, the village corporation is required to reconvey up to 1,280 acres of land to the City of Point Hope for community development purposes. No agreement has yet been reached by Tigara Corporation and the City of Point Hope on this subject.

The Tigara Corporation's land selections on the Point Hope spit include the entire area embracing the old village site and the new townsite. The corporation has received interim conveyance to this land, except for the airport tract which is patented to the State of Alaska and a Bureau of Indian Affairs school reserve located in the old village area. If the Bureau of Land Management determines that this school reserve is not actually used in connection with the administration of any federal installation, the reserve is eligible for selection by and conveyance to the Tigara Corporation.

Land ownership in the immediate vicinity of the present Point Hope townsite, including portions of the surveyed townsite area, is complicated by the existence of Native allotment applications covering lands which have already been interim conveyed to the Tigara Corporation. Passage of ANILCA in 1980 reopened certain Native allotment applications which had previously been relinquished. The validity of these applications must be determined before such lands can be patented to the Tigara Corporation. Furthermore, the precise location of lands covered by Native allotment applications cannot be determined until official surveys are made. To date, lands covered by these applications have been the subject of field investigations by the
Bureau of Land Management. Only rough sketches of the sites were prepared as part of the field investigations.

Native allotments are essentially homesteads of up to 160 acres of non-mineral lands which were granted to Alaska Natives, generally for subsistence purposes. Indian allotment authority in Alaska was cancelled with passage of the Alaska Native Claims Settlement Act. Like restricted Indian lands, Native allotments are not subject to taxation or to local or State regulation.

Point Hope’s municipal boundaries were established before the village moved to its present site. These municipal boundaries do not include all of the new Point Hope townsite, leaving the eastern portion of the village outside the city. In November 1982, the City of Point Hope filed a petition with the Alaska Department of Community and Regional Affairs to annex an additional area, including that portion of the new village townsite now lying outside the municipality. However, the earliest that these lands can be formally annexed is 1984. The requested annexation would move the municipality’s eastern border to a line coinciding with 166° 35’ West longitude as it intersects the Point Hope spit between Marryat Inlet and the Chukchi Sea. The area proposed to be annexed takes in about 1,200 acres.

A portion of the land selected by the Tigara Corporation at the end of the Point Hope spit was included in U.S. Survey 3515. This survey anticipated establishment of a Native Townsite at Point Hope. However, although the survey was completed and recorded, approval of a Native
Townsite here by the Bureau of Land Management was never given. In
1981, the Point Hope City Council passed a resolution requesting that
the Bureau consider the petition for a Native Townsite revoked since
there was no longer a need for a townsite in that area.

Point Hope Area

Lands on the Point Hope spit outside the city's present municipal
boundaries were selected by the Tigara Corporation under Section 12(a)
of the Alaska Native Claims Settlement Act (ANCSA) (see Figure 3). That
legislation entitled the Tigara Corporation to select the surface estate
to 138,240 acres in the Point Hope area. To date, the corporation has
received interim conveyance to approximately 134,143 acres of the lands
it has selected.

A number of Native allotment applications are on file for sites on the
spit other than those abutting the present Point Hope townsite. These
applications are for land which has already been conveyed to the Tigara
Corporation, a predicament arising from a provision of the Alaska
National Interest Lands Conservation Act (ANILCA) which reopened certain
previously relinquished Native allotment applications. As in the case
of these Native allotment applications abutting the present townsite,
only field investigations have yet been made. The validity of these
Native allotment applications remains to be adjudicated and official
surveys need to be made before their impact on the Tigara Corporations's
selections will be fully known. If the applications are determined to
be valid, the Tigara Corporation would be permitted to select other
Land Tenure
Point Hope Area
1983

Legend
- Tigara Corporation — Interim Conveyance
- State
- Federal — Bureau of Indian Affairs
- Native Allotment Applications
- Ipiutak National Historic Landmark Boundary

Alaska Consultants, Inc.
Anchorage, Alaska
* Adapted from cartography by Northwest Cartography, Inc.
Seattle, Washington

Figure 3
lands in the Point Hope area in order to make up its total entitlement of 138,240 acres.

The existence of the Native allotment applications complicates community development in Point Hope in that the construction of roads or utility lines across such lands must be preceded by the obtaining of easements or rights-of-way from the applicants.

A portion of the Point Hope spit is classified as a federal National Historic Landmark. The area under this classification extends from the tip of the spit eastward to include Jabbertown, encompassing the old village site, the airport and the present village townsite. This federal classification officially recognizes the historical significance of the Point Hope spit but has little other impact on land development except when federal funds are involved.

SUBSISTENCE LAND USE PATTERNS

This section describes contemporary subsistence land use patterns of Point Hope residents. While Point Hope villagers enjoy a diverse resource base, including both terrestrial and marine animals, this discussion concentrates on marine-oriented subsistence activities. Thus, subsistence activities which revolve around land-based or riverine resources are considered to be outside the present scope of work and have therefore not been addressed. The subsistence land use maps for Point Hope are based on interviews with 1.2 local hunters and fishermen.
A description of the field methodology is given in the overview of the region's subsistence land use patterns.

Before describing the current subsistence use patterns of Point Hope residents, a brief discussion of the physical setting is useful. Point Hope is located on a cuspate spit which is the westernmost point of land on the Chukchi Sea. The spit, formed by the merging of two opposing long shore drift systems, juts out into the Chukchi Sea over ten miles from the associated headlands to the north and south. This location provides several physical advantages to the local residents who harvest marine resources. These advantages are associated with the seaward extension of the spit, currents and prevailing winds.

First, because most of the marine mammals which Point Hope hunters harvest are migratory, the point forms a natural barrier in the animals' migration route and places hunters in a strategic location. On the annual migrations north to summer feeding grounds, the animals are concentrated in the waters off the point as they pass around this natural barrier. Traditionally and, according to local residents, presently the most important sea mammal which Point Hope residents harvest is the bowhead whale, the yearly migration patterns of which demonstrate the significance of Point Hope's location. Each year, bowhead whales migrate through open leads in the pack ice of the Bering and Chukchi seas to summer grounds in the Canadian arctic. The leads through which these animals migrate do not parallel the Alaska coastline but are often many miles from shore. At Point Hope, the leads are closer to shore than at any other place south to Cape Prince of Wales.
placing local hunters in an ideal location to harvest this immense species.

A second advantage for local subsistence users results from the currents around Point Hope. The dominant surface currents which flow north through Bering Strait are relatively warm Alaskan coastal waters. These currents generally flow north along the coast and are rich with a wide variety of marine life. This is unlike the Beaufort Sea which is dominated by currents of the Arctic Ocean. The warmer waters of the Chukchi Sea, as well as their northerly direction, result in a shorter period of continuous ice cover, averaging seven to eight months rather than the nine to ten months of the Beaufort Sea. Furthermore, the ice which does form is generally only seasonal and, as a result, has a greater frequency of polynyas and leads than are present further to the north or east. This open water allows marine mammal populations to exist in greater numbers than in the Beaufort Sea. In summary, the combination of currents, water temperature, nutrients and ice conditions allows Point Hope residents to harvest marine mammals for longer periods of time and in greater numbers than is possible in areas further to the north.

A final important factor related to Point Hope’s strategic location is the position of the spit in relation to prevailing winds. Considerable marine mammal harvesting occurs in the open leads of pack ice which surround the spit for an average of seven to eight months each year. Because Point Hope is situated on a narrow spit, local hunters have access to suitable leads which open on either the north or south side of
the spit, depending on wind direction. Thus, when the north wind blows, open water forms on the south side of the spit; the opposite is true during a south wind. This phenomenon doubles the hunters' opportunities of finding suitable open water in which to hunt.

The same condition works equally well during the few ice-free months of the year. If strong southerly winds result in rough seas to the south side of the spit, fishermen set their nets in the lee north of the spit; the reverse being true for a north wind. The distance from shore that one can safely hunt differs from the north and south shore and will be discussed later in this section in relation to the seal harvest.

These physical characteristics and the large number of sea mammals which congregate and migrate past the point have enabled Point Hope to be continuously inhabited for at least the last two thousand years (Larsen and Rainey 1948). The "index finger", as the Eskimos describe this point, provides ready access to a large variety of sea mammals, the traditional primary source of food in this village.

**Bowhead Whale**

Beginning in late March or early April, the prevailing north wind opens a large lead south of Point Hope. It is along this lead, which is wide enough to accommodate large animals, that belukha and bowhead whales, as well as other marine resources, become locally available in early spring as they migrate north. As previously discussed, Point Hope's strategic location close to this lead has made the village uniquely situated to
hunt bowhead whales. The establishment of approximately 15 to 18 spring whaling camps along the edge of the landfast ice marks the beginning of Point Hope’s annual ocean based spring hunting pattern.

Because the spring leads are relatively confined, the present bowhead harvest area is smaller than that of any other marine resource. Although the actual harvest area varies from year to year depending on where the open leads form, the whaling camps in the recent past have all been situated south and southeast of the point (see Figure 4). Camps as far south as Cape Thompson were reported, but in recent years they have tended to be located closer to the village. Historically, whaling camps were also located off Cape Lisburne (Burch 1981:25), but Point Hope hunters stated that establishment of an AC&W (Aircraft Control and Warning) site at Cape Lisburne resulted in decreased whaling activity in that area.

The intensive use area delineated in Figure 4 indicates the location of the leads and the corresponding harvest areas over the past few years. The distance of the lead from shore varies from year to year. For example, in 1982 hunters indicated that the south shore lead was five miles from the village, whereas in 1983 the lead was only one mile from shore. The lead is rarely more than six or seven miles offshore but hunters interviewed remembered having to travel to over the ice as much as ten miles from the village to find the necessary open water for spring whaling.
Point Hope Subsistence Use Areas:

**BOWHEAD WHALE**

- **Maximum Use Area**
- **Intensive Use Area**

Scale 1:500,000

5

10 miles

5

10 kilometers

Source: Stephen R. Braund & Associates 1983

**CHUKCHI SEA**
Although Point Hope has open water for a long time during the whaling season, the lead is generally narrow. Sometimes two narrow leads develop, one where the Point Hope hunters are camped and another one further offshore. This presents a problem for the whalers because the whales may travel in the furthest lead and therefore be inaccessible to them. Or, the hunters may strike a whale in the nearby lead and the wounded animal will sound and resurface in the second lead, again out of the hunters' reach. These ice conditions can result in a poor struck and lost ratio for Point Hope. But, if Point Hope whalers wait too long for more open water, the whales will have already passed and the landfast ice will probably be too rotten to land a whale.

Prior to implementation of the International Whaling Commission's (IWC) bowhead quota system beginning with the 1978 whaling season, spring whaling in Pent Hope began in late March, the earliest a suitable lead formed, and lasted until the first part of May. By that time, the majority of bowheads have passed and the landfast ice margin is deteriorating so rapidly that landing a bowhead would be impossible. During this traditional six week spring whaling season, hunters remained on the ice and hunted bowheads, as well as beluga, seal, ugruk, eider ducks and murres when the bowheads were not running. Since the implementation of the quota on bowhead whales, the spring whaling season is often curtailed to less than three weeks. Once Point Hope hunters have exhausted what they consider to be an inadequate opportunity (four strikes per season for 1982 and 1983), many whaling captains cannot justify the high cost of maintaining a whaling crew on the ice. Seal
and ugruk hunting can continue from closer spring camps along the south shore.

Despite the limited nature of both the season and the harvest area, no other marine mammal is harvested with the intensity and concentration of effort as is the bowhead whale. The enormous size, as well as the difficult nature of the harvest, necessitates both cooperation among whaling crews and members of the community in order to return the animal to the landfast ice, haul it up and butcher it before spoiling. Extensive sharing (both inter-village and intra-village) of whale meat and muktuk is associated with the bowhead harvest (Alaska Consultants/Stephen R. Braund & Associates 1983) and Point Hope provides crew space to residents from several other villages (i.e. Kivalina, Kotzebue and Noatak).

Of all the marine resources harvested by Point Hope hunters, the bowhead whale is the most important in the subsistence economy, accounting for 22.3 percent of the subsistence harvest over the past twenty years (Stoker 1984). The harvest of any wildlife resource varies from one year to the next and Point Hope hunters’ harvest of the bowhead is no exception, their success varying from 0 to 14 animals in the past 20 years. The only year any resident could remember Point Hope not harvesting a whale was in 1980 and, according to the fieldwork, this failure was not only very sad but it also resulted in some food hardships in the community. In 1982 and 1983, Point Hope whalers landed one bowhead each year.
In summary, the actual location of the open leads is different each year, but the present bowhead harvest area is always located south of the spit. The imposition of the quota has curtailed the bowhead harvest period which is now concentrated in April when ice conditions are most favorable. In Point Hope, as in other whaling communities, the harvest of no other marine mammal is undertaken with so much community enthusiasm, participation and support. As the last of the bowhead whales migrate past the point and the landfast ice becomes dangerous, Point Hope hunters establish spring camps along the south shore of the spit for seal and ugruk hunting. For a more complete discussion of Point Hope whale hunting see Lowenstein (1981).

**Seal and Ugruk**

Point Hope residents' subsistence use patterns for hair seals and bearded seals (ugruk) are presented in Figure 5. The most salient feature is the clear orientation of these activities south of the point. Point Hope villagers generally indicated a clear preference for hunting on the south shore, saying that it was both safer and more profitable. Winds from the north open leads suitable for hunting, while the prevailing onshore currents prevent hunters from drifting off or being separated from land by open water or leads. According to Lowenstein (1981:17), in good conditions (i.e. an inshore current) it is usually safe for a hunter to go out 10 to 15 miles or more on the south side. Villagers interviewed for this study indicated that while distances of this magnitude were not unusual, it was normally not necessary to travel so far for successful ugruk or seal hunting. As discussed earlier in
Point Hope Subsistence Use Areas:

**SEAL/UGRUK**

- Maximum Use Area
- Intensive Use Area

Scale 1:500,000

Source: Stephen R. Braund & Associates 1983

CHUKCHI SEA

Figure 5
the subsistence economy section, changes in hunting technologies as well as economic conditions affect harvest areas and effort for these and other subsistence resources.

Hair seals are generally available from October through June and occasionally during the remaining summer months. However, because of the availability of preferred or more energy efficient resources (bowhead, ugruk and caribou) during various times of the year, seals are primarily harvested during the winter months from November through March. Both traditionally and presently, the most common hair seal species taken is the ringed seal, and the single most concentrated harvest period remains the month of February. The longer days at that time of year allow more time to harvest this species along open leads in the pack ice.

Although Point Hope hunters generally prefer the south shore (i.e. from the point to Cape Thompson) for seal hunting, this activity also takes place north of the village (Lowenstein 1981 and fieldwork for this study). Because of the dangers of the ice, north shore hunting for ringed seal generally occurs close to shore and is most successful at Sinuk (the mouth of the Kukpuk River) and the numerous small points between the village and Cape Lisburne where open water is found (i.e. Kilikralik Point and Cape Dyer). Ringed seal hunting off the south shore is generally concentrated within five miles from shore on the ice pack between the point and Akoviknak Lagoon. In addition, some hair seal hunting takes place directly off the point as the ice is first forming in October and early November.
Ringed seals are also an important resource at spring whaling camps where, along with belukha and eiders, they supply food for the crews. Spotted seals are more common than ringed seals in the open water months of summer and early fall. They are occasionally taken along the north shore and at Sinuk as they feed on anadromous fish. Ribbon seals are rare and are seldom harvested.

The harvest of bearded seal or ugruk has always been an important subsistence activity in Point Hope, because it is a preferred food and because of its use as covers for the whaling umiaks. If a whaling captain was unlucky or did not have time to harvest enough ugruk to cover his umiak, he must buy the skins before the following whaling season. While some ugruk are taken during spring whaling or in the winter, the major harvest of this species is concentrated during May and June (to as late as mid-July in some years) as the landfast ice breaks up into numerous pans and floes.

Open lead hunting has become the most common form of seal and ugruk hunting since the introduction of the rifle and, in recent years, large outboard motors and aluminum boats have facilitated this practice. With the first signs of open water and lead formation in the landfast ice and adjacent pack ice, hunters begin to search the ice for seals, ugruk and walrus. Because of the need for ugruk skins, as well as the larger size of this species, local hunters concentrate on this species over the smaller hair seals. As the ice continues to deteriorate and break up into smaller pans, residents begin to travel in wooden and aluminum boats amongst the floes looking for seals and ugruk. While this had
been traditionally practiced in large skin-covered umiaks with paddles and later small outboards, these boats are no longer used. Much larger engines now power wooden and aluminum boats which allow hunters to cover a much larger area in equal or less time than in the past. One resident stated that as long as there is ice there will be ugruk, and captains who need more skins will continue to hunt this species until the last remnants of ice are gone, usually in July. In addition, because these wooden and aluminum boats have powerful motors, areas both north and south of the point can be covered with equal safety when sea ice conditions permit boat travel.

Almost all of the marine mammal harvesting which takes place at this time of year is initiated from the spring camps along the south shore. These camps stretch from just in front of the village all the way along the coast to Akoviknak Lagoon. With quick access to town (it takes only one hour to travel to Cape Thompson from the village on a three-wheeler), residents are now going to their camps after work and on weekends rather than for continuous occupation.

Walrus

While walrus have always been a resource used by the Eskimos of Point Hope, their local abundance has fluctuated with the overall population and distribution of this species in the North Bering and Chukchi Seas. During the past decade, walrus have taken on increased importance in Point Hope as the locally available number of animals increased.
The most important time for walrus hunting is during the spring sea mammal hunt based along the south shore of the spit (see Figure 6). Thus, the major walrus hunting effort in Point Hope coincides with the spring ugruk harvest. The same spring camps, stretching from the village to Akoviknak Lagoon, are used for both activities. Because of the easy access to the village which three-wheelers now provide, these camps can provide access and shelter to hunters during the evenings after work and on weekends. Some camps are still occupied in the traditional manner of the entire family moving to camp for several weeks, with only occasional trips to town for supplies and storing the catch.

June and early July is the primary season for both walrus and ugruk hunting at Point Hope. The estimated harvest for village consumption of walrus ranges from 10 to 30 animals during the month of June. The harvest technique, described above, involves boat travel among the ice floes of the broken ice pack and shooting walrus as they are on the ice. When the ice is gone, the walrus too have disappeared.

Although the most significant walrus harvest occurs during June and early July, Point Hope residents also hunt them during the rest of the summer along the north shore, especially along the rocky capes and other points where the animals tend to haul out. Harvesting at this time is often done in conjunction with other subsistence activities such as egging, fishing or traveling the shores in search of caribou. Powerful outboard motors and boats have increased summer access to this area in
Point Hope Subsistence Use Areas:

**WALRUS**

- **Maximum Use Area**
- **Intensive Use Area**

Scale 1:500,000

Source: Stephen R. Braund & Associates 1983

**CHUKCHI SEA**

Figure 6
recent years. The last walrus hunting occurs during September and October as they pass by the point on their southward migration.

**Belukha**

Point Hope hunters actively pursue and harvest belukhas during two distinct seasons: during offshore spring whaling and along the coast later in the summer. The first and larger harvest occurs during the spring bowhead whaling season. Significant numbers of belukha migrate through the same open leads as the bowheads, and local residents use the belukha as an indicator species for the bowhead. When the first belukha are sighted in the leads, villagers know that the bowheads are not far behind. At this time, local hunters harvest belukha from the ice edge with rifles during periods when no bowheads are present.

The number of white whales harvested at Point Hope whaling camps varies from season to season and among the different crews. At least one crew in 1983 harvested four belukhas (fieldwork for this study), and Lowenstein (1981:61) indicated that it was rare that a crew will not take at least one belukha during the whaling season. In addition to providing food for the village, belukha harvested at this time help feed the whaling crews.

The area of intensive use south of the village is representative of belukha harvesting at this time (see Figure 7). It is only during the spring belukha harvest that Point Hope hunters go way offshore for this
Point Hope Subsistence Use Areas:

BELUKHA

- Maximum Use Area
- Intensive Use Area

Scale 1:500,000

Source: Stephen R. Braund & Associates 1983

Figure 7
species. Coincidental with bowhead whaling, this belukha harvest extends from approximately late March to early June.

While not as common as during whaling season, belukha are also harvested throughout the summer open water season. At this time, Point Hope hunters concentrate their effort on the south shore in close proximity to the beach as well as coastal areas on the north side of the point as far north as Cape Dyer. Hunters are particularly successful near Sinuk, a result of belukha feeding on anadromous fish of the Kukpuk River.

In summary, belukha are available as early as the end of March through the end of August. The Point Hope harvest of this resource is concentrated offshore during the whaling season and again along the coast during the open water months, particularly in July. Although the animals migrate past the point in May and June, villagers do not harvest them at that time because of deteriorating ice conditions along the landfast ice margins as well as the greater availability of ugruk and walrus. The total belukha harvest area extends from Cape Dyer on the north to Cape Thompson on the south. Usually Point Hope residents hunt belukha from the shore except during whaling when, depending on ice conditions, whaling camps may be 6 or 7 miles offshore.

Fish

Point Hope residents harvest a variety of fish throughout the year. As soon as the landfast ice breaks free from the shoreline (generally in mid to late June), villagers use set nets and beach seines to catch
Arctic char and three species of salmon: pink, coho and chum. This activity takes place from coastal fish camps located along the shore from Cape Thompson north to Kilikralik Point (see Figure 8). While some Point Hope residents fish outside this area, it is generally done in conjunction with other subsistence activities, such as egging or caribou hunting. The summer fishing season extends from mid to late June when the ice breaks free from shore through the end of August, with July being the most important month. Summer fishing provides the village with a fresh meat supply at a time of year when other marine resources are scarce.

Similar to the spring ugruk and walrus camps along the coast (which often convert to summer fish camps), three-wheelers are currently the most common means of transportation to and from summer fish camps which are often occupied by whole families. The sandy beaches of the spit provide excellent natural passageways during the summer, and one can travel from Cape Thompson all the way to Sinuk inlet north of the village on an uninterrupted roadway.

According to the 1983 field interviews, the first species to appear in the summer is Arctic char which are traveling north. These fish are followed by pink, coho and chum salmon. In August, the char again pass the village and are harvested for several days off of the point and along the north beach as they migrate south to overwintering rivers such as the Wulik River near Kivalina.
Point Hope Subsistence Use Areas:

**FISH**

- Maximum Use Area
- Intensive Use Area

Scale 1:500,000

Source: Stephen R. Braund & Associates 1983

Figure 8
As with sea mammal hunting, the physical setting of the Point Hope spit is also advantageous for summer fishing. During strong northerly winds, fishermen are able to set their nets in the lee of the wind on the south side of the point; the opposite is true during a south wind.

Other fish species which Point Hope residents harvest include whitefish, grayling, tomcod and an occasional flounder. Sometimes flounder appear as an incidental catch in the beach seine and gill net fishery during the summer and, in the fall, villagers harvest grayling and whitefish on the Kukpuk River during the October upriver fishing period. From December through February, villagers fish for tomcod and through the ice near the point. January is the most important month for this fishing.

**Migratory Birds and Eggs**

Waterfowl and other migratory birds also provide a source of food for Point Hope residents (see Figure 9). Eiders and other ducks, murres, brant, geese and snowy owls are all harvested at various times of the year. In addition, Point Hope residents still harvest murre eggs from the cliffs at Cape Thompson and Cape Lisburne.

Eiders are fairly common during the whaling season and are harvested as they fly along the open "cads, providing a fresh meat source for the whaling camps. Later in the spring, Point Hope residents harvest a significant number of eider, geese, brant and other migratory waterfowl, hunting along both shores of the point as well as the numerous lakes and lagoons. Geese are harvested from the middle of May until the middle of
Point Hope Subsistence Use Areas:
MIGRATORY BIRDS

- Maximum Use Area
- Intensive Use Area
- Egg Gathering Area

Scale 1:500,0041
10 miles
10 kilometers

Source: Stephen R. Braund & Associates 1983
June, while brant are harvested at this time as well as during September as they migrate from their summer breeding grounds. Snowy owls are occasionally trapped later in the fall (October) on their southward migration.

Polar Bear

Point Hope hunters also harvest polar bears, primarily during the winter from January to April. Because seals comprise a large part of polar bears' diet, these bears are often taken during winter seal hunting. Polar bear are mainly harvested south of the village, generally in the area of intensive hunting.

VILLAGE LAND USE PATTERNS

The new Point Hope townsite is located east of both the old village and the present airport, away from eroding areas along the north side of the spit which threatened the old village site. It is also on somewhat higher ground which affords more protection from periodic storm surge flooding of the Chukchi Sea.

The configuration of the survey for the present community was that of a square approximately centered on a large keyhole-shaped tract designated for public use (see Figure 10). Expansion of the village is possible only to the east or west since the spit is not wide enough here to accommodate further expansion of the community to the north or south. An additional row of blocks was surveyed at the eastern edge of the new
townsite to accommodate the construction of housing funded through the North Slope Borough's capital improvements program. In addition, lands immediately beyond the western edge of the village have been surveyed 'for more new housing plus planned Borough warehousing and vehicle storage facilities.

The concept of a central area within the Point Hope townsite for the concentration of public facilities and services has continued to be observed. That central tract now contains the new school complex and auxiliary buildings, the health clinic, the fire station, the community washteria/shower facility, the post office and the senior citizens' center, plus the village water treatment and storage facility, the village power plant and a sewage treatment unit. Immediately across the perimeter street which encircles the central tract are a number of other public and semi-public facilities including the public safety building, the city office and two churches plus the village's general store. Several camp operations providing room and board for itinerants are also located close by.

The village fuel storage dump was originally located in the southwest corner of the new townsite. The Public Works Department's warm storage building, the village corporation's offices and several warehouses are also located in this southwest sector of the village.

A road leads west from the village to the airport and the old village site beyond the landing strip. En route it passes the sewage lagoon and the old and new solid waste disposal sites. The new village tank farm
### Table 22

**Existing Land Use**

**Point Hope Townsite a/**

1982

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<tr>
<th>Land Use</th>
<th>Land Area (acres)</th>
<th>Percent of Developed Area</th>
<th>Percent of Surveyed Area</th>
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</tr>
<tr>
<td>Vacant Units</td>
<td>(6.2)</td>
<td>(2.6)</td>
<td>(2.4)</td>
</tr>
<tr>
<td>Under Construction</td>
<td>(3.2)</td>
<td>(1.3)</td>
<td>(1.2)</td>
</tr>
<tr>
<td>Commercial</td>
<td>2.0</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>Utility and Storage</td>
<td>31.6</td>
<td>13.1</td>
<td>12.2</td>
</tr>
<tr>
<td>Public and Semi-Public</td>
<td>8.3</td>
<td>3.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Public</td>
<td>(7.6)</td>
<td>(3.2)</td>
<td>(2.9)</td>
</tr>
<tr>
<td>Semi-Public</td>
<td>(0.7)</td>
<td>(0.3)</td>
<td>(0.3)</td>
</tr>
<tr>
<td>Developed Streets</td>
<td>49.6</td>
<td>20.6</td>
<td>19.1</td>
</tr>
<tr>
<td>Outlying Streets b/</td>
<td>(19.4)</td>
<td>(8.0)</td>
<td>(7.4)</td>
</tr>
<tr>
<td>Airport Tract</td>
<td>107.3</td>
<td>44.6</td>
<td>41.3</td>
</tr>
<tr>
<td><strong>TOTAL DEVELOPED AREA</strong></td>
<td><strong>240.4</strong></td>
<td><strong>100.0</strong></td>
<td><strong>92.7</strong></td>
</tr>
<tr>
<td>Vacant Land</td>
<td>18.5</td>
<td></td>
<td>7.1</td>
</tr>
<tr>
<td>Undeveloped Streets</td>
<td>0.4</td>
<td></td>
<td>0.2</td>
</tr>
<tr>
<td><strong>TOTAL LAND AREA</strong></td>
<td><strong>259.3</strong></td>
<td></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

---

*a/ Excludes the road leading east of the village water collection cells and also the undeveloped but surveyed area proposed for a new solid waste disposal site.

*b/ Includes the airport road and the road to the village water collection cells.

Source: Alaska Consultants, Inc.
is also visible from the airport road. Another road leads east of the village to the city's former water source. Ocean cargo is landed directly onto the beach just south of the village, and some villagers' boats are drawn up on the shore of Marryat Lagoon immediately north of the community.

The traditional village cemetery site, located west of the present townsite near the airstrip, is still being used although it lacks an improved access road.

Developed land in the Point Hope townsite in 1982 amounted to about 133 acres, including the sewage lagoon area and roads to the airport and to the water collection cells (see Table 22). The airport tract itself contains another 107 acres, bringing the total developed land area at Point Hope to 240 acres. Developed residential land accounts for about 42 acres, while utility and storage uses take up another 32 acres, and developed streets in the populated area occupy a further 30 acres. Lands used for public and semi-public purposes in 1982 amounted to 8 acres and another 2 acres were occupied by commercial uses. The townsite also includes 18.5 acres of vacant but surveyed lots.

HOUSING CONDITIONS

With the exception of several camp operations, a four-plex, a duplex and an apartment in a church, all residential development in Point Hope in September 1982 was in single family structures.
The September 1982 survey conducted by Alaska Consultants, Inc. for the North Slope Borough counted a total of 162 housing units in the village (see Table 23). About half (79) of the units had been constructed under Borough housing programs, including 43 being purchased by low income families under the Mutual Help program. Another 25 Borough-constructed housing units were rented to low income families but will be purchased by HUD for the Mutual Help program under a 1983 commitment, while 11 others were Borough employee housing units. (The construction of a further 13 Borough single family housing units was underway in September 1982 but these units were not included in the total housing count). Of the remaining village homes, 23 units had been constructed by the Alaska State Housing Authority and another 60 units had been privately built.

There is a sharp contrast between Borough-constructed housing and other housing in Point Hope in terms of condition of the units. All Borough-built structures were considered to be in acceptable condition, i.e. they are standard structures. On the other hand, all Alaska State Housing Authority units in the village were classed as substandard, a condition established through litigation which required that these units be replaced because they did not meet standards considered by the court to be essential for village life. Of the 60 privately constructed housing units, only 10 were judged to be in acceptable condition.

Substandard housing, some of it vacant, in Point Hope tends to be more centrally located in the townsite than Borough-constructed housing. This resulted from the movement of housing units from the old village site to the new townsite prior to the construction of Borough housing.
TABLE 23
POINT HOPE HOUSING INVENTORY a/
SEPTEMBER 1982

<table>
<thead>
<tr>
<th>Housing Program</th>
<th>Acceptable Occupied</th>
<th>Acceptable Vacant</th>
<th>Substandard Occupied</th>
<th>Substandard Vacant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctic Slope Regional Housing Authority Mutual Help</td>
<td>43</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>North Slope Borough Rentals</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>25</td>
</tr>
<tr>
<td>North Slope Borough Employees b/</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Alaska State Housing Authority</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>Privately Constructed c/</td>
<td>10</td>
<td>29</td>
<td>0</td>
<td>21</td>
<td>60</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>88</strong></td>
<td><strong>48</strong></td>
<td><strong>1</strong></td>
<td><strong>25</strong></td>
<td><strong>162</strong></td>
</tr>
</tbody>
</table>

---

a/ At the time the survey was taken, 12 of these single family rental units were being inspected for final acceptance by the Borough and were occupied shortly thereafter, a change which may have left additional old units unoccupied.

b/ Includes one 4-plex and one School District unit used for itinerant staff.

c/ Includes three units used as bunkhouses and the NARL quarters.

Source: Alaska Consultants, Inc.
A series of empty lots suitable for residential use also remains undeveloped in the central portion of the village. These lots have closer access to public facilities (such as the school and health clinic) and to the village general store than do most of the Borough-built housing units.

As part of the 1983 fieldwork, an effort was made to find out if people in Point Hope felt that the construction of new homes by the North Slope Borough and others had resulted in social dislocation by making it possible for younger (or older) people to move into separate housing. Almost everyone interviewed preferred the new arrangement. The only ones who expressed some dissatisfaction were either persons caring for an elderly or sick relative or they were single men who normally ate at their parents' homes. No one expressed any fear that extended families were being broken up as a result of the new housing and people generally preferred the privacy afforded by separate accommodations. Family ties are maintained through visiting and, even more recently, by use of the telephone.

Several Point Hope residents indicated that they did not like the new village site. The main objection was the gravel surface which is difficult to walk on and a feeling that the old village site, which has a grass surface cover, was much prettier.
Community Facilities and Utilities

Administrative and Miscellaneous Public Buildings

Administrative and miscellaneous public buildings in Point Hope include the city offices, a National Guard armory, a senior citizens center and a Borough heavy equipment storage building.

The city offices occupy a structure which was moved from the old village site and which functioned as a public safety building until 1981 when the new public safety facility was completed. It is operated and maintained by the City of Point Hope as both a city office and a council meeting place and is a single story wood frame structure about 480 square feet in area which is undivided internally except for a partitioned storage area at the rear. It is located across from the central area of town, northeast of the elementary classroom wing of the school. No plans have been made for altering or adding to the building. However, it is not large enough to accommodate city council meetings with more than minimal public attendance.

The Point Hope National Guard armory is owned and operated by the Alaska Department of Military Affairs. It was also moved from the old townsite and now occupies a site across from the village store in the southwest portion of town. The building is a 1,200 square foot metal structure similar in design to armories in Wainwright and Barrow and is divided internally into a large activity room and two offices. According to the Alaska Department of Military Affairs, the Point Hope unit is made up of
30 guardsmen. An even older Alaska Territorial Guard building which was used before the present armory was built is also located in the village. However, it is in disrepair and is not used.

The Point Hope senior citizens center is located at the southwest corner of the school tract in the central area of town. It was built and is owned by the North Slope Borough but responsibility for its operation rests with the City of Point Hope. The building was designed to serve both as a base facility for assistance and as a social center for older people in the village. It has about 900 square feet of usable space including an entryway, an activity room, a kitchen and a storage area. Although it is in generally good condition and was built as recently as 1980, the senior citizens center was not in use during the summer of 1983 because the City of Point Hope does not have enough funds for its operation and the city has been unable to obtain such funds from either the North Slope Borough or the State.

The North Slope Borough maintains a heavy equipment storage building at Point Hope, as it does in other North Slope villages. The Point Hope facility is a single story wood structure (40 by 80 feet) with a gravel floor and is located in the southwest corner of the village. It has five equipment bays. Internally, the structure is unpartitioned except for a small office and parts storage area. The building has no plumbing and is in need of repair.
PUBLIC SAFETY

Police Protection

As elsewhere in the North Slope Borough, police protection services in Point Hope are provided by the North Slope Borough which currently has two officers stationed in the village. The public safety building is located across from the central area of town, southeast of the health center. It is a 1,995 square foot one story wood frame structure which includes an entry, a multi-purpose room, a kitchen, two holding cells, a magistrate's office, a TOY room, secure storage with an evidence locker, a bathroom and a garage. The main office is used as a magistrate's office, when needed.

The building is structurally sound except for heating and plumbing system problems. There is also some concern over having holding cells in a wood frame building.

Borough public safety officers in Point Hope and other North Slope villages spend a great deal of their time in non-criminal activities (see Table 24). Law enforcement problems here are primarily related to alcohol abuse. As a means of helping deal with that issue, the City of Point Hope adopted an ordinance in 1982 which prohibited the importation of liquor into the village as well as its sale. Another law enforcement problem was apparent when only one public safety officer was stationed in the village. When that officer was sick, on leave, traveling on official duty, or otherwise away from the community, there was no police...
TABLE 24
PUBLIC SAFETY DEPARTMENT ACTIVITY
POINT HOPE
1980 - 1982

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide and Negligent Homicide</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Rape and Sex Offenses</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Assault</td>
<td>16</td>
<td>32</td>
<td>19</td>
</tr>
<tr>
<td>Burglary</td>
<td>2</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Larceny</td>
<td>7</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>12</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Vandalism</td>
<td>13</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Narcotics</td>
<td>0</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Driving While Intoxicated</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Liquor Law Violations/Disorderly Conduct</td>
<td>6</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Traffic Accidents</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Animal Problems</td>
<td>18</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Domestic Problems</td>
<td>5</td>
<td>29</td>
<td>24</td>
</tr>
<tr>
<td>Premise Security</td>
<td>0</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Disturbing the Peace/Noise</td>
<td>4</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Other a/</td>
<td>68</td>
<td>126</td>
<td>75</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>157</strong></td>
<td><strong>289</strong></td>
<td><strong>242</strong></td>
</tr>
</tbody>
</table>

a/ This category identifies non-criminal public safety activities. It includes service requests, agency assists, public assists, transport of the sick or injured and other responses to non-criminal situations. The public safety officer may be called upon for a wide variety of activities ranging from chaperoning dances to helping a sick person to the clinic.

Source: North Slope Borough Department of Public Safety.
authority in Point Hope. This problem, common to all of the smaller villages in the Borough, should be remedied now that two public safety officers are again stationed here. In addition to the two officers, Point Hope also has a locally based magistrate, the only North Slope village to have one outside of Barrow. The presence of a magistrate facilitates arraignment procedures.

Fire Protection/Search and Rescue

The North Slope Borough has provided fire protection services on an areawide basis since 1980. Since assuming this power, the Borough has constructed fire stations in each of its villages outside Barrow and has embarked on a program to train firefighting volunteers. Although the Search and Rescue division is part of the Public Safety department for administrative purposes, volunteer firefighting and search and rescue personnel in the villages are one and the same group, with both functions being housed in the new fire station.

The Point Hope fire station was completed in 1983 and is identical to "fire stations built in other small Borough villages at that time. It is located immediately east of the central area of town and is a prefabricated metal structure 72 feet in width and 65 feet in depth (4,680 square feet) set on pilings, with access provided via a metal grating ramp. The central portion of the station is a large apparatus room sized to house two fire trucks, an ambulance and two snowmachines, plus a boat (with motor) belonging to the Borough Search and Rescue division. The building also houses a utility room, a furnace/generator...
room, two large storage rooms (one designed for use as a training area under heavy smoke conditions), a training/meeting area, an office/communications center, a small bunkroom for transient Borough Fire department personnel, a small kitchen, lockers, showers and toilet facilities, plus additional storage space.

Rolling stock housed in the fire station includes an engine company truck with a mounted 2,000 gallon water tank, a 500 gallon per minute pump, fire hose and appropriate nozzles, ladders and cabinets for personnel gear and air-packs; a tanker truck mounted with a 3,000 gallon water tank, a 500 gallon per minute pump, hose and nozzles; and a Chevrolet Suburban modified for ambulance use with a raised roof and stretcher racks, equipped with stretchers, splints, a trauma box and an oxygen unit. Search and Rescue equipment is also housed here.

Firefighting personnel are members of the North Slope Volunteer Fire Department/Search and Rescue force. Training programs have been begun by the North Slope Borough, with initial emphasis being on use and maintenance of the new equipment in a manner which meets basic criteria for prompt and effective fire response.

Four major fires have occurred at Point Hope during the past three to four years. In 1980, a fuel oil explosion in the armory killed two men although it did no major damage to the structure. In 1981, an older residence was destroyed by fire and in 1982, the old clinic and another residence were destroyed. No loss of life from a fire has been recorded in the village since 1980. However, as elsewhere in the arctic, Point
Hope’s harsh climate places a steady, heavy load upon heating equipment, increasing the probability of fire incidence from equipment malfunction or misuse. Furthermore, low temperatures and prevalent strong winds make firefighting extremely difficult once a fire gains headway.

While all firefighting/search and rescue personnel in Point Hope and the other villages outside Barrow are volunteers, the Borough has permanent staff for both functions in Barrow. The Borough Search and Rescue division also maintains two helicopters and a fixed wing aircraft in Barrow for use in search and rescue and medi-vac situations.

HEALTH

Primary health care services in Point Hope are provided by the Mauneluk Association Health Division and the North Slope Borough Health and Social Services Agency through the Community Health Aide program. These services are supplemented by regular visits to the village by doctors, dentists, nurses and other health care providers. When needed, Point Hope residents may use either the Public Health Service hospital in Kotzebue or the Alaska Native Medical Center facility in Anchorage for in-patient or out-patient services.

Operation of the Point Hope clinic differs from all of the other North Slope Borough villages in that it is subject to a memorandum of agreement involving the Point Hope Health Committee, the Mauneluk Association Health Division and the North Slope Borough Health and Social Services Agency. The clinic building is owned by the Point Hope
IRA council; the Public Health Service's health delivery system for Point Hope is the Kotzebue Service Unit; and the Mauneluk Association Health Division is the tribal organization which contracts to provide health care services in the Kotzebue Service Unit. The North Slope Borough Health and Social Services Agency provides Point Hope with all programs and benefits offered to other Borough villages which are not provided in Point Hope by the federal government.

The health clinic is located at the south end of the school tract in the central area of town. It was built in 1978 with assistance from the U.S. Economic Development Administration and is a 28 by 32 foot structure which includes a waiting room, two examination rooms, an office with counter opening to the waiting area, a room for the storage of drugs, medications and supplies plus communications equipment, a mechanical room, toilet and shower rooms plus a janitor's closet. The building is in good condition and is staffed by two primary health aides and two alternate aides. The salary of the second aide, plus supplementary travel funds for patients needing doctor's care and/or hospitalization, are raised locally by bingo games sponsored by the Point Hope Health Committee. Daily patient loads at the clinic reportedly average about 9 persons. The telehealth communication system being installed in other North Slope villages will also be provided for the Point Hope clinic.
EDUCATION

Education services from Early Childhood Education (ECE) through the 12th grade in Point Hope are provided by the North Slope Borough School District. The Tikigak School is located within the school tract on an 8.39 acre site in the center of town. It was constructed during 1979 and 1980 except for four portable classroom units which were moved from the old village site. Only one of the portable units was in use as classrooms during the 1982/83 school year.

The main portion of the school is constructed in three wings (the elementary, secondary and multi-purpose areas), with the vocational education building being separate from the main building. The elementary wing includes five multi-purpose classrooms and an art room which was being used as an ECE classroom during the 1982/83 school year. The secondary wing contains a multi-purpose classroom and rooms for business, home economics and science. In addition, a portion of the main library and the conference room were being used as general secondary classrooms during the 1982/83 school year and the teacher's aide room off the library was being used for special education. The vocational education building contains three shops (wood, metals, small engine) and an emergency generator unit. Finally, one of the portable classroom units was being used for instructional purposes.

Aside from classrooms, other facilities in the main school building include a gymnasium and swimming pool plus associated lockers, dressing rooms and showers. Also within this building are administrative

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offices, a library, a commons area and a kitchen. Storage space is also provided, both within this building and in trailers and portable classrooms units on the school site.

During the 1982/83 school year, the professional staff of the Tikigak School consisted of 16 positions, 3 of which were filled by local residents. The staff included the principal, six elementary teachers (ECE through grade 6), seven secondary teachers (grades 7 through 12), one bilingual teacher and one special education teacher. In addition, there were seven classified teacher aides. Other school staff included three kitchen employees, four custodial personnel, three maintenance persons, a night watchman and a secretary.

Excluding ECE/kindergarten, final enrollment in 1982/83 was 131 students (see Table 25). During the 1982/83 school year, the student body included 8 non-Natives.

Although the Tikigaq School is relatively new, a number of problems exist which necessitate repair or renovation. The North Slope Borough has plans to correct these problems and also to add both classroom and storage space. The proposed additions would affect the two classroom wings and the vocational education building. The elementary addition would include a kindergarten room and an art room, while the secondary addition would include two classrooms, enlargement of the existing business room for future use as a band room, enlargement of the science room and the provision of bathrooms. Modifications to the vocational
TABLE 25

SCHOOL ENROLLMENT TRENDS BY GRADE a/ b/ c/  
PONT HOPE  
1959/60 - 1982/83

<table>
<thead>
<tr>
<th>School Year</th>
<th>Final Enrollment by Grade</th>
<th>Total Excluding ECE/ Kindergarten f/</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1959/60 d/</td>
<td>82</td>
<td>92</td>
</tr>
<tr>
<td>1960/61 d/</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>1962/63 a/</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>1963/64 d/</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>1964/65 d/</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>1965/66 d/</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>1966/67</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>1967/68</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>1968/69</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>1970/71</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>1971/72</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>1972/73</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>1973/74</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>1974/75</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>1975/76</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>1976/77</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>1977/78</td>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>1978/79</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>1979/80</td>
<td>15</td>
<td>9</td>
</tr>
<tr>
<td>1981/82</td>
<td>28</td>
<td>15</td>
</tr>
<tr>
<td>1982/83</td>
<td>12</td>
<td>25</td>
</tr>
</tbody>
</table>

a/ Final enrollment figures.  
b/ Education in Point Hope provided by the Bureau of Indian Affairs through 1969/70, by the State during the following two school years and by the North Slope Borough School District thereafter.  
c/ ADM (Average Daily Membership) for school years 1980/81, 1981/82 and 1982/83 was 139.30, 143.90 and 138.19 respectively.  
d/ No breakdown of enrollment by grade available prior to 1966/67 school year. Totals reported are for grades K-8.  
e/ No data available.  
f/ The 1982/83 initial enrollment for ECE/Kindergarten was 11 students.  

Source: Alaska Department of Education.
education wing would include an addition for storage space and installation of a dust collection system.

As part of the 1983 fieldwork, an attempt was made to find out if local high school graduates were going to college and if people were satisfied with the present school system. According to the school principal, 2 of the 13 1981/82 high school graduates attended college the following year, one at Anchorage Community College and one at Sheldon Jackson. Also according to the principal, one local student currently at the University of Alaska (Fairbanks) would be starting his last year of college in the fall of 1983. The number of 1982/83 graduates who would be attending college was not known at the time of the 1983 fieldwork.

An opinion expressed by many in Point Hope was that the current availability of well-paying Borough construction jobs in the village made college less attractive to local students. Some village elders also felt that a high school education alone was not enough to ensure adequate employment opportunities and that vocational training was also needed. They further indicated that training opportunities had not been provided for more than a handful of people in the village.

RECREATION

Regular, organized recreation activities in Point Hope are centered around use of the school gymnasium multi-purpose center which is available for community recreation purposes during the school year for four nights each week and on Saturdays. In addition, classrooms and
shops are available in the evenings for community school and adult education courses. Finally, a play area adjacent to the school is the only site in the village specifically prepared for and dedicated to outdoor recreation use. A senior citizens center (described previously) is not currently in use.

Annual events observed villagewide at Point Hope include Easter, Fourth of July, Thanksgiving Day, Christmas Week and Nalukataq (if the village's whaling crews have been successful the prior whaling season). The events are marked variously by religious activities (where appropriate) and by feasting, dancing and games. The games and dancing incorporate both traditional Inupiat and modern western activities. The feasting is not only traditional in form (where deep seated sharing customs are evident) but also incorporates both subsistence and store-bought foods.

Point Hope residents also participate in a variety of informal recreation activities such as visiting and picnicking with relatives and friends. Three-wheeled vehicles and snowmachines are used for pleasure as well as other activities. While hunting, fishing, trapping and other subsistence harvest activities combine both label, and pleasure and are tied closely to the culture of Point Hope's Inupiat residents, they are not viewed from the Inupiat perspective as being of a recreational nature.
UTILITIES

Water

The provision of water services in Point Hope is the responsibility of the North Slope Borough Department of Public Utilities. A new water source was developed at Qaqiaq Lake, about 6 miles east of the village, during the summer of 1983. A polyethylene line was used to transfer water from the lake to a 2.7 million storage tank in town. Development of the new source resolved a water shortage problem in Point Hope as the previous gravel collection cells from an infiltration field a short distance east of town were not able to meet community demands. Furthermore, an attempt to increase the production of the collection cells in 1982 resulted in salt contamination of the water. Some Point Hope residents still use ice for drinking water during the winter. The new houses in the village have been equipped with water tanks which can be filled by thawing ice in a heated reservoir specifically designed for that purpose.

Water is filtered and chlorinated prior to storage in the tank. The water treatment plant, the tank and associated washeteria are located on the school tract in the central area of town, just south of the school complex. Treated water is distributed by pipeline through autilidor to the school complex, the washeteria, the health clinic and the generator plant. The utilidor also houses waste water lines. For other village users, water is delivered via a heavy tank truck, while a Bombardier equipped with a tank, pump and hose can also be used in emergencies.
As of September 1982, there were 137 occupied housing units in Point Hope. Other water users included the school complex, the village washeteria (estimated by the Department of Public Utilities to use in excess of 30,000 gallons per month if operated on an unrestricted basis), a couple of construction camps, a store, the health clinic, the new fire station, the public safety building and village corporation and city offices. Meaningful statistics for water use were not available since the village was on rationing prior to the recent completion of the line to the new water source. However, studies of other North Slope villages indicate that a school complex can consume an amount of water equal to that delivered to all non-government consumers when the total daily consumption of the village is around 10 gallons per capita.

Sewage

Sewage collection and disposal services in Point Hope are the responsibility of the North Slope Borough Department of Public Utilities. The village currently has two distinct sewage disposal systems. The school complex, the washeteria, the health clinic and the power plant are linked to a utilidor which houses both water and sewer lines. The sewage gathered here is discharged through an outfall line into a two-celled sewage lagoon located a short distance southwest of town. Elsewhere in the village, sewage is collected in honeybuckets lined with plastic sacks. The sacks are stored in 55-gallon drums and are picked up at least twice a year for disposal at the dump. The drums' contents are usually frozen. This and the non-biodegradable
nature of the plastic sacks precludes the wastes being dumped into the sewage lagoon.

The utilidor sewage service involves a dual graywater/blackwater system which was developed to conserve water. Shower and laundry effluent from the school complex and washeteria is reclaimed and stored in a 25,000 gallon tank at the sewage treatment building. The graywater is then filtered and chlorinated and used as flush water in the school toilets, the washeteria and the power plant. The resulting backwater is held in a 1,500 gallon tank in the sewage treatment building where it is batch discharged through an outfall line into the sewage lagoon. The utilidor housing the lines is an above ground, insulated, wooden structure roofed with aluminum sheeting and which is in need of repair.

Graywater generated by all buildings not connected to the utilidor system is discharged onto the ground under or by the structures. It accumulates as ice during the winter months and poses a sanitation problem. Furthermore, it is a growing problem since the volume of discharge will continue to increase as the water delivery system is upgraded and as more houses with internal plumbing are built.

As of September 1982, there were 137 occupied housing units in Point Hope. Honeybucket wastes were also being collected from several camp facilities, a store, the public safety building, the new fire station and from village corporation and city offices.
Solid Waste

Solid waste disposal services in Point Hope are the responsibility of the North Slope Borough Department of Public Utilities which provides periodic pick-up services and transports the wastes to the village landfill site. Garbage and other trash are also hauled to the dump by individuals.

The North Slope Borough developed a new landfill site in the summer of 1983 to replace an unsurveyed, unfenced and unsightly dump located a short distance southwest of the village. The new landfill site is located further from town, close to the road to the airport. Unlike most North Slope villages, there is no shortage of gravel for covering solid wastes at Point Hope. However, development and maintenance of a landfill here is difficult because even shallow excavations on the spit tend to serve as gathering cells for water.

Electric Power

Electric power generation and distribution services at Point Hope are the responsibility of the North Slope Borough Department of Public Utilities. Like other North Slope Borough villages outside of Barrow, all electric power in Point Hope is diesel generated. At present, the village power plant contains five generator units with a combined rated capacity of 930 KW (see Table 26). The generators are equipped with engine governors to permit their operation in parallel. The present distribution system is a 4,160 volt overhead pole line installation.
TABLE 26
FIRM AND PEAK GENERATING CAPACITIES
POINT HOPE
OCTOBER 1982

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Prime Mover</th>
<th>Generator Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Make</td>
<td>Make</td>
</tr>
<tr>
<td>1</td>
<td>CAT</td>
<td>135</td>
</tr>
<tr>
<td>2</td>
<td>CAT</td>
<td>305</td>
</tr>
<tr>
<td>3</td>
<td>CAT</td>
<td>305</td>
</tr>
<tr>
<td>4</td>
<td>CAT</td>
<td>305</td>
</tr>
<tr>
<td>5</td>
<td>CAT</td>
<td>305</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

a/ Per North Slope Borough Department of Public Utilities Village Operations Manager, October 26, 1982.

Source: North Slope Borough Department of Public Utilities (Barrow and Point Hope).
three-phase power loop encircles the village, with single phase legs extending into the village to service individual loads.

Point Hope has experienced rapid growth in electric power demand during the past few years due both to community growth and to the construction of major facilities. Department of Public Utilities records show the peak power demand for fiscal year 1979/80 at 190 KW that for 1980/81 at 220 KW and that for 1981/82 at 400 KW. Department records also indicate that sales of power in the village totaled 725,596 KWH for the six month period from July 1 through December 31, 1982. As of the latter date, there were 153 meters in service. New housing construction and planned major public facilities should ensure a continued growth in average and peak power demands.

Point Hope's generator units are reportedly in good repair other than normal wear. Construction of the generator building was completed in 1980, making this a relatively new facility. Reconstruction of the distribution system was completed in 1982. Except for a vibration problem, the major problems associated with the village power plant are related to maintenance. A turnover of operators compounds this situation.

Fuel Storage

All fuel used in Point Hope is purchased and distributed by the Tigara Corporation, an arrangement which is unique among North Slope villages. Fuel is delivered once a year by barge and is transferred from a
lighterage barge at the beach to storage tanks by means of pumps and a fixed delivery line. The Tigara tank farm has been located within the village at the south end of town. However, the North Slope Borough has recently constructed a new village tank farm in a more appropriate location a short distance west of the village.

The old Tigara tank farm included three large tanks of 150,000, 250,000 and 350,000 gallon capacity, plus 27 tanks in the 5,000 to 10,000 gallon range. However, the site has no protective berms or fencing and was poorly located from a public safety standpoint. During 1983, the 250,000 and the 350,000 gallon tanks were moved to the new Borough tank farm and a new 500,000 gallon tank was erected prior to the annual barge re-supply operation. Movement of a 150,000 gallon tank to the new site for the storage of gasoline was also planned. Thus, the new Borough tank farm will contain a total of 1,100,000 gallons of diesel fuel storage capacity, plus tankage for gasoline supplies. The site is to be properly bermed and fenced. A fixed line leading from the beach to the new tank farm permits transfer of fuel from the barge to the storage tanks, while a pump station at the tank farm delivers fuel via a fixed line to a dispensing station in the village.

Fuel consumption records for Point Hope are sketchy. Prior to construction of the new 500,000 gallon tank, the village had a total diesel storage capacity of about 807,000 gallons. Estimated village usage in 1981/82 was 384,00 gallons and that for 1982/83 was 432,500 gallons. Current and planned Borough construction projects will ensure further increases in local fuel consumption demands. The new 500,000
gallon tank added in the summer of 1983 will not increase the village's total fuel storage capacity by the same amount as this major facility will permit some of the small tanks in the village to be phased out.

COMMUNICATIONS

Telephone services in Point Hope and other small North Slope villages are provided by the Arctic Slope Telephone Associated Co-op, Inc. (ASTAC), a non-profit cooperative corporation. Seed money for the organization of the cooperative and the preliminary work needed to obtain a certificate of convenience and necessity from the Alaska Public Utilities Commission was provided by the Arctic Slope Regional Corporation. Once the certificate was obtained, loans for plant acquisition and installation were obtained from the U.S. Rural Electrification Administration. The building housing the switchgear was built by the North Slope Borough and is leased to ASTAC which owns the switchgear, telephone cable and other system support equipment.

The provision of local dial telephone service was a major advance over the previous bush telephone system. According to information provided by ASTAC in February 1983, Point Hope had a total of 124 residential and 28 business telephone subscribers.
POIN T L A Y

Introduction

Point Lay is located on the Chukchi Sea coast, protected from the open ocean by Kasegaluk Lagoon. A DEW Line station with its supporting airstrip is at the village's southern perimeter. Point Lay is 188 miles southwest of Barrow, 521 miles northwest of Fairbanks and 26 miles from the western boundary of the National Petroleum Reserve-Alaska. It is the only traditional village in the North Slope Borough which has not incorporated as a city under Alaska law.

Most Point Lay Eskimo residents are descendants of Inupiat people who traditionally used the area south along the Chukchi Sea coast to Cape Beaufort and north to Icy Cape. These people also fished and hunted the local river systems which provided access to the foothills and the western margin of the Brooks Range. The village was established in the late 1920's around a school and a trading post on the barrier spit. Its population expanded gradually through the 1930's but then faded away. The village was not included in the 1960 Census. Reindeer herding, which had augmented the subsistence economy, declined during the 1940's and had disappeared by 1949.

The area's exposure to western civilization was broadened with construction of the DEW Line system. Three DEW Line stations were built within the Point Lay subsistence area but only the Point Lay station is now operating.
The village of Point Lay was re-established in the early 1970's at the original site on the barrier spit. However, most village facilities were moved from the spit to a nearby island site in the Kokolik River delta in 1977. This location proved unsuitable because of erosion, flooding and transportation problems. The village was again moved in 1981 to the present Point Lay townsite adjacent to the DEW Line station. Several buildings and a fuel tank are still located on the original barrier spit village site.

Much of the information on Point Lay contained in the following pages was collected by Alaska Consultants, Inc. for the North Slope Borough and was published in the June 1983 report entitled "Background for Planning: City of Point Lay". That information was supplemented by fieldwork conducted specifically for this project during the summer of 1983 and by observations from ongoing work in this village being conducted for the North Slope Borough. Information on the subsistence economy and subsistence land use was collected in the field in 1983 specifically for this study.

Population

PAST-Population Trends

Point Lay was re-established after the 1970 Census. It was enumerated for the 1980 Census at its interim site in the Kokolik River delta. At that time there were 68 residents. A State-supervised North Slope Borough census taken in January/February 1982 counted 105 persons at
### TABLE 27

**POPULATION TRENDS**

**POINT LAY**

**1939 - 1983**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>75</td>
<td>-35.9</td>
</tr>
<tr>
<td>1960</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1970</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1980</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>1983</td>
<td>126</td>
<td>85.3</td>
</tr>
</tbody>
</table>

---

*a/* The 1939 and 1950 Censuses counted people at the old-Point Lay village site on the barrier spit.

*b/* The 1980 Census was taken at the interim village site in the Kokolik River delta.

*c/* 1983 population based on a July 1983 count by the North Slope Borough.

**Sources:** U.S. Census, North Slope Borough.
Point Lay, while a North Slope Borough village census in July 1983 found 126 local residents (see Table 27). The three year change in population from 1980 to 1983 was 85.3 percent, but the rate of change was decelerating over that period.

ORIGIN OF POPULATION

Point Lay was re-established mainly by families with traditional ties to the area who returned here from a widely scattered assortment of places. This was confirmed by the 1980 North Slope Borough housing survey which asked Point Lay residents to name their prior place of residence. Of the 9 Alaska Native households responding, 3 had come from Barrow, 2 from Wainwright and 4 from out of State. The one non-Native household which responded to that question had come from Alaska but from outside the Borough.

The 1983 fieldwork confirmed local residents' traditional ties to the Point Lay area. Of the 9 people interviewed who indicated where they were born, 5 were born in Point Lay, 2 in Kotzebue (1 of a mother who lived in Point Lay but was in Kotzebue for the birth), and 2 were born along the coast near Point Lay. The people interviewed had returned from Barrow, Kotzebue, Fairbanks, Anchorage, Seattle, Arizona and California.

The dominant theme expressed by the returnees was well phrased by one villager who said, "We never abandoned this place. We were just gone for a while. People came back to hunt and stock up during the years no
one lived here”. The initial returnees in the early 1970’s were motivated by concerns for their lands and the attractiveness of a subsistence lifestyle. These concerns were subsequently bolstered by the Native corporations created under terms of the Alaska Native Claims Settlement Act which, in the case of the Arctic Slope Regional Corporation, had a vested interest in re-establishing its traditional villages. The subsequent incorporation of the North Slope Borough, development of the Borough’s capital improvements program and the accompanying expansion of public services provided villagers with expanded employment opportunities plus new housing and public facilities. These conditions, together with the area’s hunting and fishing opportunities, served to attract additional returnees to Point Lay as well as a few new residents to the area. Nearly everyone in Point Lay who was interviewed as part of the 1983 fieldwork expressed a desire to remain in the village. This near unanimous attitude had also been recorded in the 1980 North Slope Borough housing survey.

As elsewhere in the North Slope Borough, the main reasons most non-Natives moved to Point Lay appear to be related to opportunities for professional and financial rewards. However, there are several non-Native residents of long standing who are well integrated into the community and who participate in local development discussions.

POPULATION COMPOSITION

The outstanding feature of Point Lay’s population composition is that most residents of this community are Eskimos. The North Slope Borough
housing survey in April 1980 found that 77 of the community's 86 residents (89.5 percent) were Alaska Native (see Table 28).

The same housing survey found the median age of all Point Lay residents to be 23.0 years, marginally lower than the 23.7 year median age for all residents of smaller villages in the North Slope Borough (i.e. villages outside Barrow). When non-Natives were excluded, the median age in Point Lay dropped to 20.2 compared with 21.2 for Alaska Natives of the smaller Borough villages as a whole. This was well below the 1980 median age Statewide of 25.8.

The median age of Point Lay males and females in 1980 was 24.0 and 20.0 respectively. For local Alaska Natives, however, the median dropped to 21.0 for males and 19.5 for females, slightly younger than the median ages of Alaska Natives in the small Borough villages in 1980 (22.6 for males and 19.8 for females). The Point Lay median ages, whether weighted by non-Native residents or not, were well below the 1980 Statewide median ages of 26.1 for males and 26.3 for females and those of the nation (28.8 for males and 31.3 for females).

The age breakdown of Point Lay's 1980 population suggests that this will remain a young village during the next decade unless a significant amount of in-migration or out-migration takes place (see Figure 11). Children under the age of five made up 14.0 percent of Point Lay's population in 1980, compared with 12.8 percent in this age group in the smaller villages of the Borough. Furthermore, Point Lay's 5 through 9
### TABLE 28

POPULATION COMPOSITION BY RACE AND AGE *a/

POINT LAY

<table>
<thead>
<tr>
<th>Age</th>
<th>Alaska Native</th>
<th></th>
<th>Non-Native</th>
<th></th>
<th>Total</th>
</tr>
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<td></td>
<td>Male</td>
<td>Female</td>
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<td>Female</td>
</tr>
<tr>
<td>0 - 4</td>
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<td>4</td>
<td>12</td>
<td>0</td>
<td>0</td>
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<tr>
<td>5 - 9</td>
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<td>13</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10 - 14</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15 - 19</td>
<td>2</td>
<td>6</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>20 - 24</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>1</td>
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</tr>
<tr>
<td>25 - 29</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>30 - 34</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>35 - 39</td>
<td>6</td>
<td>3</td>
<td>9</td>
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<td>1</td>
</tr>
<tr>
<td>40 - 44</td>
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<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>50 - 54</td>
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<td>1</td>
<td>0</td>
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</tr>
<tr>
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</tr>
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<td>60 - 64</td>
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<tr>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>70 - 74</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Over 74</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44</td>
<td>33</td>
<td>77</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

**Median Age** 21.0 19.5 20.2 30.0 24.5 29.5 24.0 20.0 23.0

---

*a/ Figures exclude a total of 5 persons (all non-Native males) for whom no age information was provided.

Sources: U.S. Census
Figure 11
age group made up 16.3 percent of the community's 1980 population, well above the 9.0 percent recorded for the other small Borough villages.

In 1980, 28 percent of Point Lay's population was in the 15 through 29 age group, slightly below the 34.1 percent in the same age bracket recorded for the smaller North Slope villages. Aside from migration, the childbearing decisions made by this group will determine the rates of internal population growth at Point Lay during the next few years.

The 1980 housing survey found that males in Point Lay outnumbered females by a 58.1 to a 41.9 percent margin. Even when non-Natives were excluded, males still accounted for 57.1 percent of the village's 1980 population. This male to female imbalance was more extreme at Point Lay than any village on the North Slope in 1980 except for Kaktovik and was particularly evident in the under 5 and the 5 through 9 age groups.

A State-supervised census taken in early 1982 provided no age data for Point Lay's population, nor did the Borough census taken in July 1983. However, the latter did determine that 55.6 percent of the 126 village residents in 1983 were male, compared with the 58.1 percent recorded by the 1980 housing survey.

SOCIAL INTERACTION

The 1980 North Slope Borough housing survey indicated that 9 out of the 86 Point Lay residents (10.5 percent) were non-Natives. If transient construction workers are excluded, it appears that the proportion of
non-Native residents in this village has not changed significantly since 1980.

Questions were asked about relationships between Inupiats and whites in Point Lay as a part of the 1983 fieldwork. Inupiat responses indicated that while people felt that there were too many non-Natives in the village, most were considered transient workers who would be gone when the Borough's capital improvements program ended. The transient workers did not integrate well with village residents. No mention was made of non-Native personnel stationed at the nearby DEW Line station.

Local Alaska Native perceptions of construction company hiring policies varied as to company. Considerable resentment was evident over the local hiring practices of the contractor building the school. The establishment of a Cully Corporation construction organization appears to be, at least in part, a reaction to perceived local Native hire problems. Cully had labor agreements with all contractors except that for the school to supply labor. By aggressively seeking such agreements, Cully can influence local hire policies of prime contractors for Point Lay construction projects and can also provide local workers to the contractors in a more orderly fashion.

Alaska Native responses to fieldwork questions in 1983 generally recognized that some construction work required job skills and experience which local residents did not possess. This recognition also extended to the professional and administrative skills and training of the truly resident non-Natives, most of whom were associated with the
local school. In addition, the new superintendent of the revived Cully construction organization was a white who had previously supervised construction for another North Slope Native village corporation.

The absence of strong Inupiat resentment against the 10 percent non-Native portion of Point Lay's permanent population may also be accounted for in part by the presence of several whites in the village who had melded well into the local society over a number of years and who were permanent, active participants in village life. Also, the local school principal had just completed a five year stint in Point Lay, during which period he appeared to have impressed the Eskimo residents as to his dedication to the village.

MIGRATION

Most Point Lay Inupiat residents, as noted earlier, have traditional ties to the old village on the barrier spit and the coastal areas extending both north and south of that site. Nearly every Inupiat interviewed in 1983 expressed a strong desire to remain in this area. There was general recognition that jobs, homes, a new school, as well as other public facilities and services were now available in Point Lay and that this area also provided good hunting and-fishing opportunities. Little interest was evidenced by people interviewed in 1983 in working at places other than Point Lay. However, there are no quantitative data available relating to the mobility of local workers if there was a need and/or desire to seek temporary employment at other work sites.
Only one of the 11 Inupiats interviewed in 1983 had worked either on the Pipeline or at Prudhoe Bay. That individual had been an assistant welder, thought the job “fun while it lasted” but had accumulated his earnings to finance a return to Point Lay. However, as noted earlier, some of the working age males of families which returned to re-establish Point Lay had previously lived either outside the Borough or Alaska and had skills which could qualify them for jobs other than those in Point Lay.

The field interviews and other contacts made by Alaska Consultants, Inc. personnel with Point Lay leaders and residents have left the impression of a village whose residents are appreciative of the new public facilities, homes and public services but are not overwhelmed by them and who are quite determined to remain in the village even when the anticipated decline in local temporary construction employment occurs. However, there is little discussion as to how this long term objective will be achieved.

RECENT TRENDS AND CHANGES

Point Lay’s population increased 85.3 percent between 1980 and 1983. During that period, the village was moved from an island site in the Kokolik River delta to a new site adjacent to Kasegaluk Lagoon, just north of the DEWLine station. The move was financed by the North Slope Borough which subsequently built new homes and a number of public facilities at the new Point Lay townsite. The Borough also expanded its local employment base to operate and maintain the facilities it was
Building. However, temporary local construction employment on Borough funded projects expanded even more rapidly than did permanent jobs provided directly by the Borough.

During the summer of 1983, the new Point Lay school was being completed. A large health clinic was under construction, as was the village water storage tank and water treatment plant, a summer intake line to a water source, a year-round water line connecting the school to the storage tank, and a sewage treatment facility for the school. The large fire station, with its equipment complement of a fire engine, tanker truck and ambulance, had been completed the prior winter. A village community building funded by a State grant funneled through the Borough was also in the final stages of construction.

Given Point Lay's small labor force, the magnitude of the 1983 construction program necessitated the maintenance of two construction camps in the village to house itinerant construction workers (mainly non-Native), supervisors and other technicians. The only local unemployment identified were several women who had worked previously as painters or as camp bullcooks.

Point Lay emerged as a modern village in the late 1920's when a consolidation of families living along the Kasegaluk Lagoon took place. In 1930, a school building was moved from Icy Cape to Point Lay, and a trading post was established there at about the same time. The village
The site was then on the barrier spit opposite the mouth of the Kokolik River. The 1939 Census recorded 117 residents at Point Lay.

The early Point Lay economy was basically a subsistence one although reindeer herding and trapping for cash augmented the natural resource harvest. The Western Arctic caribou herd was the most significant single natural resource. No bowhead whale and few walrus were taken in the immediate area and extended trips north to the Icy Cape area were necessary if these marine mammals were to be harvested to supplement the village harvest. On the other hand, Kasegaluk Lagoon yielded belukha, seal, waterfowl and fish, while local river systems opened the way to the interior for hunting, trapping and some fishing. This interior resource area included the foothills and western edge of the Brooks Range.

The introduction of the airplane to the Arctic and the gradual development of air service brought about major changes in communication and transportation systems in the far north. This change was accelerated by the construction of DEW Line stations and their supporting airstrips. One such station was constructed on the mainland across the lagoon from Point Lay in 1955 and 1956. This station did not provide permanent jobs for Point Lay residents but its airstrip could be used, with Air Force permission, to service the village.

The importance of fur trapping as a source of cash for Point Lay residents began to fade in the late 1930's as fur prices declined. In addition, reindeer herding, which had augmented the area's subsistence
economy, began to decline during the same period. This decline continued into the 1940's and all local herding had ceased by 1949. The 1950 Census counted 75 residents at Point Lay, a substantial decline from the 117 recorded in 1939. Point Lay was not enumerated as a village in the 1960 Census because it was too small and the village was also omitted by the 1970 Census.

The year 1970 marked a resurgence of interest among former residents of Point Lay, some of whom were living in Wainwright and Barrow in re-establishing their village. Enough families returned to the Point Lay area to justify resumption of classroom teaching at the old school on the barrier spit in February 1971. The resettlement of Point Lay occurred at a time when the snowmachine, the aluminum boat and the outboard motor had made it possible to undertake wide ranging subsistence harvest efforts in relatively short periods of time. This change in technology favored Point Lay's resettlement as there was a very heavy reliance by returning residents upon the subsistence economy.

Discovery and development of the Prudhoe Bay oil fields and associated construction of the Pipeline to Valdez provided new employment opportunities for North Slope residents although the 1983 fieldwork indicated no significant participation in such work by Point Lay residents. More important, discovery of these oil resources led to incorporation of the North Slope Borough in 1972. Borough-funded programs have led to the creation of a number of service and temporary construction jobs in Point Lay for village residents. The economic impact of North Slope Borough expenditures for public services and
construction activities at Point Lay has been particularly strong since the village was moved to its present site in 1981.

Passage and implementation of the Alaska Native Claims Settlement Act (ANCSA) in 1971 has also impacted the village economy. This legislation, with its land and financial settlements, provided additional economic leverage for village residents through the creation of village and regional profit corporations. In Point Lay it was the Arctic Slope Regional Corporation, working with the Cully Corporation, which financed and otherwise supported the move of Point Lay from the old barrier spit to a site in the Kokolik River delta. Very recently, the Cully Corporation activated a construction arm which is currently participating in the construction of several Borough capital improvement projects in Point Lay. Prior to this, both the Point Hope and Wainwright village corporations had been contractors on Point Lay construction projects.

**COMPOSITION OF EMPLOYMENT**

Employment statistics published by the Alaska Department of Labor cover the entire North Slope Borough, including Prudhoe Bay, and therefore do not provide meaningful information for individual villages. To understand local employment conditions in Point Lay, a special count of employment was taken by Alaska Consultants in October 1982.

The October 1982 employment count identified about 70 jobs in Point Lay on an annual average full-time basis (see Table 29), including several
<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mining</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>39.5</td>
<td>56.8</td>
</tr>
<tr>
<td>Manufacturing</td>
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<td>0.0</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
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<td>0.0</td>
</tr>
<tr>
<td>Trade</td>
<td>3.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Services</td>
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<td>4.3</td>
</tr>
<tr>
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<td>(0.0)</td>
</tr>
<tr>
<td>Local</td>
<td>(23.5)</td>
<td>(33.8)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>69.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Alaska Consultants, Inc.
jobs held by persons temporarily based in the village for construction activities. Over half (56.8 percent) of all jobs counted were in contract construction. Another 34.5 percent were in government occupations. Only 8.6 percent of the jobs counted were in the private sector, and half of these were associated with the operation of the construction camp.

The 39.5 full-time job equivalents in contract construction were all related directly to North Slope Borough capital improvement projects then being built in Point Lay. The 3 jobs associated with the operation of the construction camp were also derived from Borough construction activities.

In addition to temporary construction jobs, the North Slope Borough accounted for 23.5 full-time job equivalents in local government services such as the school and utility operations. Thus, 66 of the 69.5 full-time job equivalents in Point Lay in October 1982 were Borough-related. The 3 jobs at the Point Lay community store represented the only private sector jobs not directly related to Borough operations, while a part-time position at the post office was the only non-Borough government sector job.

No Point Lay residents were employed regularly in the Prudhoe Bay area in 1982, indicating a reluctance of local people to work away from the village for extended periods. However, to some extent this situation could also have reflected the high level of temporary construction employment in Point Lay during 1982 which provided residents with
opportunities for combining temporary employment in the village with subsistence harvest activities.

UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT

There are no reliable statistics available which document rates of unemployment in Point Lay or any of the other North Slope Borough villages. Figures published by the Alaska Department of Labor for the North Slope Borough include Prudhoe Bay where everyone is employed and where most jobs in the region are located. As a result, conditions in the region’s traditional villages are obscured.

Despite the lack of firm statistics, it appears that there has been relatively little unemployment in Point Lay since North Slope Borough capital improvements projects to relocate the village and expand housing and public facilities at the new townsite have been underway.

A 1980 Boroughwide housing survey undertaken by Alaska Consultants, Inc. for the North Slope Borough counted 86 Point Lay residents of whom 48 were between the ages 18 and 65, including 24 males. However, a significant proportion of Point Lay females is outside the labor force (i.e. they are not seeking employment). In addition, many local men prefer to work in temporary construction activities rather than in full-time, year-round occupations as the former enable them to participate more fully in subsistence activities. A State-supervised special census in January/February of 1982 counted 105 Point Lay residents, a 58 percent increase over the number counted in 1980.
Although the State census provided no age distribution information, it is assumed that the increase in population was accompanied by a proportionate increase in the size of the local labor force. Nevertheless, Point Lay's maximum available resident workforce in 1982 was still small.

A factor which must be taken into account when assessing the amount of unemployment in Point Lay and other North Slope Borough villages is the amount of time devoted to subsistence activities. Such activities are very important in the lives of Point Lay residents, but fit in well with temporary employment such as is provided by local construction work. Employment associated with the Prudhoe Bay area which features long hours of work plus extended leave periods may also be fairly compatible with subsistence activities but such jobs have not thus far proven attractive to Point Lay residents.

The June 1983 fieldwork, admittedly limited in scope, found only women (painters and bullcooks) unemployed. However, once the major capital improvement projects at Point Lay have been built, the opportunities for temporary or seasonal construction employment will be greatly reduced. At that time, local unemployment levels could be expected to rise unless other economic opportunities are present.

Weather conditions can cause some seasonal variations in temporary construction employment at Point Lay, but the major employment variations are related to the number and type of construction projects underway. For example, uneven scheduling of construction work from year
to year can result in local unemployment, or, at the other extreme, can
necessitate the importing of labor for jobs that otherwise could have
been filled by local residents.

INCOME LEVELS

The 1980 Census found the median household income for the North Slope
Borough to be $31,378. The median household income Statewide in 1980
was $25,421, while the mean household income for all Alaska Natives in
Alaska was $21,865.

A comprehensive housing survey conducted by Alaska Consultants for the
North Slope Borough in 1980 obtained income information for individual
families. In Point Lay, this information was based on a sample of 9 out
of a total of 26 households. The median household income for Point Lay
was found to be $26,667, with all of the households surveyed being
Alaska Native.

While the median household income for Point Lay is slightly higher than
that recorded Statewide by the 1980 Census, the purchasing power of
incomes in remote and isolated areas such as Point Lay is greatly
reduced by high living costs. Except for freight reaching the village
by barge (mainly items of great bulk or weight), most goods move into
Point Lay by air, a situation which adds significantly to landed costs.
As a result, store-bought food prices here are probably double those in
Anchorage and subsistence hunting and fishing activities therefore
remain an economic necessity for most local residents.
Housing costs in Point Lay, especially those for utilities, are also extremely high and serve to further reduce the spending power of household incomes. In 1982, heating oil cost $94.60 for a 55-gallon drum while propane, which is used for cooking, cost $115.54 per 100 pounds (with a return bottle). The average home in Point Lay reportedly uses 3 to 4 drums of heating oil per month during the colder months of the year. The average family thus spends more than $300 per month for much of the year just for heating its home and for cooking. Electric power costs can also accumulate rapidly, despite minimum charges for the first 600 kilowatt hours consumed. Borough-constructed housing is more fuel efficient than other housing, but these units are normally associated with higher electric power consumption rates.

ECONOMIC GROWTH PROSPECTS

Point Lay has a relatively simple economic base. The primary driving force in the community's economy has recently been government spending, particularly by the North Slope Borough. The hunting and consumption of subsistence resources is also a significant element in the village economy from the local residents' perspective.

Borough employment in Point Lay can be divided into two types: service jobs associated with operation and maintenance of Borough facilities such as the school, clinic and utility systems; and temporary jobs directly associated with construction of capital improvement projects. It is important to recognize the difference between these two types of Borough jobs. Jobs associated with the operation and maintenance of
public facilities are relatively permanent, whereas construction jobs are temporary and their number fluctuates from year to year.

Construction activities in Point Lay associated with the Borough's capital improvements program gained momentum with the move of village facilities from the Kokolik River delta site and have remained at a high level with the construction of additional housing and public facilities at the present village site just north of the DEW Line station. Major projects to date have included the electric generation plant and distribution system, a vehicle maintenance and storage facility, renovation of the school buildings moved from the Kokolik River delta site, a number of new housing units, local road improvements, a fire station and a new school. The 1983 additions also included a public health clinic, a central water storage facility and a community hall. Planned Borough projects here during the next several years include a gravel dredging operation, a public safety building, a combined warehouse and shop facility, additional houses, expansion of the electric power generation and distribution system and a larger structure for the maintenance and housing of vehicles. However, several of these projects have been deferred beyond the current six-year capital improvements program period.

Certainly in the longer term the level of construction employment generated by the North Slope Borough capital improvements program in Point Lay can be expected to taper off as community needs are met. Unless other economic activities can pick up the "slack" at that time, some decline in the village's economic activity can be expected since
the number of Borough jobs associated with the operation and maintenance of the new facilities will not be nearly as large as the number needed to construct them. The more operation and maintenance jobs which are held by Inupiat residents, the less impact will be felt from jobs lost in temporary construction activities. As a result, the education and training of local residents to meet job requirements in local service and maintenance activities becomes increasingly important.

No Point Lay residents are employed at the nearby DEW Line station. The station’s staff of about 14 civilians is rotated on a regular basis by an operator under contract to the Air Force. Furthermore, the DEW Line stations are being modified for more automated operations so that the number of personnel required in the future will be reduced.

The Cully Corporation received a cash distribution and rights to select the surface estate of 87,535 acres of land in the general vicinity of Point Lay under terms of the Alaska Native Claims Settlement Act. The future economic value of the lands which the Cully Corporation has selected, aside from their subsistence value, will be determined by the economic uses which can be generated for that surface estate. In turn, this is likely to depend primarily on the possible discovery and development of sub-surface resources. Cully did organize a construction division in 1983 to seek participation in Point Lay construction projects. To the extent that it is successful in this effort, Cully will assure more local participation in project profits and increased emphasis upon local hire.
No Point Lay residents were employed in petroleum-related activities in June 1983. An exploratory well was drilled in 1981 on Arctic Slope Regional Corporation lands about 25 miles northeast of Point Lay, but only one Point Lay resident worked on that project. The well was declared dry and was plugged and abandoned. The closest test well to Point Lay drilled in the National Petroleum Reserve-Alaska, Tunalik #1, was located a few miles inland to the southeast of Icy Cape. It was drilled in 1978 and 1979 and was also plugged and abandoned.

The U.S. Department of the Interior's leasing program for possible petroleum resources on the outer continental shelf includes scheduled lease sales for the northern Chukchi Sea (Barrow Arch) area in 1985 and 1987, an area which includes waters off Point Lay. Generally, oil and gas exploration activities have very limited economic spin-offs for nearby communities. Furthermore, little information is now available for use in assessing the possibilities of such activities occurring near Point Lay, but initial scenarios for possible OCS development in the Chukchi Sea assume it will occur north of Icy Cape.

The development of petroleum resources near Point Lay, if discovered in commercial quantities, would provide Point Lay residents with more economic options than they now have. In addition, if such activities did take place here, they would probably occur after the North Slope Borough's major capital improvements scheduled for the village had been completed and temporary employment in local construction had declined.
The Point Lay area also has significant coal reserves and a few village households burn some coal for heat. However, the exploration and development of this resource is not considered likely in the foreseeable future.

**SUBSISTENCE ECONOMY**

The re-establishment of Point Lay in 1970 coincided with the development of a new type of subsistence lifestyle based on technologically advanced, cash intensive harvest equipment. While the new harvest tools are more energy and time efficient, the cash outlays necessary to purchase, maintain and operate this equipment necessitates relatively high levels of employment. Furthermore, because of the variable nature of both the wildlife resources, which are the foundation of the subsistence economy, and the weather in northwest Alaska, local hunters must adapt their own timetables to take advantage of wildlife migration patterns and suitable weather conditions. In order to comply with the resource and weather variables, the hunters' cash needs are best met by local employment. Point Lay residents still depend on locally available wildlife resources for a substantial portion of their food supply. They have found that the present level of local employment provides sufficient income to meet the cash demands of their subsistence economy, allowing them to harvest the desired quantity of game.

Point Lay residents use advanced harvest tools, particularly the snowmachine, three wheeler, and aluminum boat with outboard motor in their seasonal round of subsistence activities. However, several unique
factors differentiate the subsistence economy of this village from that of other communities of the study area. First, Point Lay's location on the Kasegaluk Lagoon has resulted in local hunters adopting this new equipment only to the degree that it conforms to the particulars of their local environment. Second, Point Lay, the smallest village on the North Slope, does not participate in activities which require a large number of people (i.e. bowhead whaling), further reducing the variety of equipment used by local residents. Finally, because of the small population size, there is a low density of hunters per unit area contributing to the successful subsistence economy.

Point Lay residents' limited range of new equipment is best demonstrated by boat and outboard motor use. Point Lay hunters presently use aluminum boats between 16 and 18 feet in length and virtually all of the outboard motors are 35 horsepower. This homogeneity results from the importance of Kasegaluk Lagoon in the subsistence activities of local hunters. The lagoon is very shallow. More powerful outboard motors tend to draw too much water; smaller motors would limit the effectiveness of local belukha herding techniques (see Point Lay subsistence land use patterns) and would be unsafe for sea mammal hunting outside the lagoon. Outboard motors last approximately the same amount of time as those in other villages in the study area (2 to 5 years), but Point Lay hunters spend more money on propellers because of the shallow lagoon. There are no skin boats in Point Lay. The small population of this village and its physical location eliminates the possibility of an effective bowhead whale hunt, presently the single most important use of skin boats in the study area.
The physical setting of Point Lay is also important in determining the use of three-wheelers in this village. The shallow lagoon results in wide beaches and easy travel along the lagoon margins, especially when water levels are low. Furthermore, Point Lay hunters stated that the ridges of the windswept northern foothills of the Brooks Range were clear of snow all winter and provided good traveling surfaces for these vehicles. Consequently, not all Point Lay hunters own snowmachines, and they instead use three-wheelers for caribou hunting all winter, uncommon in other villages of the study area.

As discussed in the regional overview of the subsistence economy, the use of this technologically advanced harvest equipment requires a substantial amount of cash for its purchase, operation and maintenance. However, Point Lay residents' cash outlays are lower than the regional averages presented in Table 17 for three reasons. First, not all Point Lay residents own both a three-wheeler and a snowmachine, a circumstance which reduces their equipment costs. Second, Point Lay residents are able to use one type of boat for lagoon, river and ocean subsistence activities. Finally, because of its physical setting and small population, Point Lay does not participate in locally based bowhead whaling, a very expensive subsistence activity. Although more money is being spent on subsistence activities than in the past, the availability of local employment has made this dual economy viable.

Currently, employment opportunities in Point Lay are high. There is evidence that the rapid growth of this community (more than could be attributed to natural increase) is largely a result of increased
employment opportunities generated by the North Slope Borough. No one from this village was employed outside the village in June 1983. Most employed Point Lay residents presently work on temporary construction projects which allow them considerable flexibility for their subsistence pursuits. Furthermore, almost all non-construction jobs in this community are also Borough-related. The Borough's provisions for personal leave and subsistence leave for its permanent employees allow substantial time away from the job for subsistence harvest activities (see regional overview of the subsistence economy). The availability of cash through local employment is also demonstrated by the fact that there are no active trappers in this village.

An important aspect in determining the success of a wildlife resource based economy is the availability and relative abundance of the resources. The marine harvest areas used by Point Lay residents are larger per capita than the harvest areas for any other community in the study area. This is largely the result of a less advantageous physical setting. The only marine resource for which Point Lay is ideally suited is belukha whale, and the 28 harvested in July of 1982 demonstrated this availability as well as the importance of this species to the subsistence economy. Since the present village population is probably well below the carrying capacity of the local environment, the relatively small population and the low density of hunters per unit area probably contribute to the success of Point Lay's subsistence economy.
FORMAL POLITICAL ORGANIZATION

There are two primary political or quasi-political organizations in Point Lay. These are the Point Lay IRA (Indian Reorganization Act) tribal government and the Cully Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act. The IRA government is incorporated only in accordance with federal legislation while the Cully Corporation is incorporated as a profit organization under State statutes. Both organizations, and the IRA government in particular, are potent political forces in the village and their importance is magnified by the absence of a municipal government.

Point Lay is not an incorporated municipality under State statutes, nor is there presently any village effort to change the status quo. However, the North Slope Borough has a village coordinator in Point Lay and the Inupiat Community of the Arctic Slope (ICAS) also has a Point Lay resident as its local tribal employment officer.

North Slope Borough

The North Slope Borough has a coordinator appointed by the Borough mayor in each village (except Barrow) whose job is to maintain a liaison between the village and the Borough mayor's office. The effectiveness of the village coordinators varies widely, depending on their position...
in the village and the diligence of particular individuals. Their effectiveness is also determined by the extent to which the Borough mayor’s office and other Borough departments use the coordinators when dealing with village problems and prospects. Village coordinators work out of their homes since no office space is provided for them in any Borough facilities. As there is no city government in Point Lay and the IRA government does not maintain an office, the village coordinator can be a particularly useful Borough link with the village. Point Lay’s present village coordinator is also a member of the village IRA council.

Point Lay does not have one of its residents on the North Slope Borough assembly although a former community resident was recently appointed to that body. However, a member of the Point Lay IRA council is vice chairman of the Borough Planning Commission.

Point Lay IRA Council

The Point Lay IRA government was incorporated under federal law and possesses certain tribal government powers and authorities like those previously described for the Inupiat Community of the Arctic Slope (ICAS). Membership and voting rights are restricted to adult American Indians (including Eskimos and Aleuts) who are registered as village residents. From the perspective of the Point Lay IRA council, the IRA’s "tribal sovereignty" over Point Lay’s subsistence region is immediate and dominant. Further, the residents of Point Lay view their IRA council as the village’s representative political body empowered to deal with the Borough, State and federal governments. For example, it was
IRA council members who expressed village policy in the 1983 field interviews.

Several of the IRA council members shared certain characteristics: they or their parents had been born in the Point Lay area, they were graduates of Mt. Edgecumbe, they had military training and they were active subsistence hunters and fishermen. They also shared similar opinions regarding oil and gas-related development in the Chukchi Sea region. While the IRA council has no formal written policy on this subject, its members expressed firm opposition to further oil and gas-related exploration and development, especially offshore. This opposition had been reinforced by observation of past seismic and exploration drilling activities of the Arctic Slope Regional Corporation and its contractors in the Point Lay area.

IRA council members interviewed as part of the 1983 fieldwork remarked upon the lack of communication with the Arctic Slope Regional Corporation and ICAS but appeared more satisfied with the village's relations with the North Slope Borough. The liaison between the IRA government and the Cully Corporation also appeared satisfactory, with some IRA council members being on the board or officers of the village corporation.

Cully Corporation

Cully Corporation, the for-profit Point Lay organization created under terms of the Alaska Native Claims Settlement Act (ANCSA), had been
inactive for the past several years. However, this changed in 1983 with the activation of a construction arm to seek labor agreements with contractors undertaking construction projects in Point Lay and thus provide Cully Corporation with an opportunity to participate in the local economy as well as providing its Point Lay stockholders with better chances of obtaining local construction jobs.

Another reason for the Cully Corporation remaining as an active village organization is the need to manage or dispose of lands which Cully has or will receive under the Claims Act legislation. The North Slope Borough has a particular interest in acquiring some Cully lands within the present village since it must acquire land on which it constructs capital improvements.

Reference has already been made to Cully Corporation and the Point Lay IRA council having several of the same individuals as board members or officers. However, there is a legal distinction between the two organizations which could be important insofar as certain transactions between these organizations are concerned. A member of the Point Lay IRA need not be a stockholder in the Cully Corporation or vice versa. As a result, the members/stockholders of the two organizations may not be identical.

Unlike other ANCSA village corporations on the North Slope, the Cully Corporation has not sought joint ventures or corporate ownership of firms to secure participation in business activities outside Point Lay.
INFORMAL POLITICAL ORGANIZATION

Aside from the Point Lay IRA government and the Cully Corporation, there do not appear to be other organizations in Point Lay which actively exercise political power. One explanation of this is the village's small size. Most residents are already enrolled in the IRA and the Cully Corporation. Furthermore, as in other small villages, the leadership of such organizations tends to be drawn from the same small group of residents. Finally, subsistence harvest activities demand substantial blocks of time which, if combined with the demands of a job, leave residents little time or energy for organization meetings and related activities.

There is no church in Point Lay, nor is there a full-time minister or priest although local lay ministers are active. In addition, the National Guard does not have an active unit at present in Point Lay although several local men have had military training. Two IRA councilmen expressed the opinion that more local people would like to be in the Guard if there was an active unit in the village.

The volunteer search and rescue organization has in the past literally involved the entire village. As one leader described the activity, "The village is so small that once a search and rescue alert is sounded, all available active men become involved with the support of all others in the village." Search and rescue functions have recently been consolidated by the North Slope Borough with those for volunteer firefighting, the combined organization being based in and supported by
the new fire station and its communications and mobile equipment. It appears at this time that the new volunteer group in Point Lay will retain the support and respect given earlier to search and rescue efforts and that the village will also have a much more effective volunteer fire protection system.

Land Use and Housing

LAND STATUS

Village of Point Lay

The village of Point Lay has been moved twice in the past seven years. Originally located on the barrier spit northwest of the present community, the village was moved in 1977 to an island location at the mouth of the Kokolik River. This site was abandoned in 1981 for the present townsite immediately north of the DEW Line station. Land for the new townsite had already been selected by the Cully Corporation as a part of its entitlement under the Alaska Native Claims Settlement Act and that land has since been interim conveyed to Cully. Some land in the present townsite has, in turn, been quitclaimed by Cully to the North Slope Borough as sites for Borough capital improvement projects.

Section 14(c)(3) of the Claims Act required village corporations to reconvey land to incorporated cities or to the State to be held in trust for unincorporated villages. Although the Claims Act stipulated that the 14(c)(3) acreage entitlement be not less than 1,280 acres, the
Alaska National Interest Lands Conservation Act (ANILCA) has made it possible for an agreement to be made between the village corporation and the city or State to reduce the total acreage to be reconveyed. Since Point Lay has yet to incorporate as a city under Alaska law, reconveyances of land by the village corporation for community development may be held in trust by the State Municipal Lands Trustee. Should the village incorporate, however, the State is required to turn over to the new city all 14(c)(3) lands held in trust. In order to transfer 14(c)(3) lands, the village corporation should receive a "waiver of interest" from the Trustee which can be accomplished either by holding a public meeting in the village with a representative from the Municipal Lands Trustee program or by obtaining the approval of an "Appropriate Village Entity". The "Appropriate Village Entity" is a village organization recognized by the State as being representative of the will of the villagers. It appears that the State has recognized the Point Lay IRA government as an "appropriate village entity" and that, if the IRA Council approves, the Cully Corporation can transfer its interest in a specific piece of land to the North Slope Borough when the latter needs that land for a capital improvement project.

Point Lay Area

Except for DEW Line property, all lands in the immediate vicinity of Point Lay are subject to an interim conveyance issued to the Cully Corporation for the surface estate and to the Arctic Slope Regional Corporation for the subsurface estate (see Figure 12). The status of lands beyond the immediate Point Lay area is varied, including: land
Land Tenure
Point Lay Area
1983

Figure 12
interim conveyed to the Cully Corporation, land interim conveyed where both the surface and subsurface estate will pass to the Arctic Slope Regional Corporation, land tentatively approved for conveyance to the State of Alaska, land selected by the State and lands which the State has selected or which were tentatively approved for conveyance to the State but on which the Cully Corporation has now top-filed. There are also two pending Native allotment applications for land on the barrier spit across from the present village site.

The land for the DEW Line station, which abuts the Point Lay townsite, was withdrawn on December 26, 1957 through the issuance of Public Land Order 1571. This Public Land Order withdrew 2,875 acres, reserving it for the Air Force. On May 14, 1959, Public Land Order 1571 was amended by Public Land Order 1851 which increased the acreage withdrawn to 2,892 acres. The additional 17 acres was on the barrier spit, immediately north of the old village, and was withdrawn for the unloading of DEW Line station fuel and supplies. The total land withdrawn was reduced by 1,450 acres on December 11, 1974 by Public Land Order 5455, leaving approximately 1,442 acres at the Point Lay DEW Line station under Air Force control.

The DEW Line station and the village of Point Lay shine a common water source. The village also uses the station's solid waste disposal site, although there is concern that the present site will soon be filled. In addition, the DEW Line station's airstrip is the only maintained airport in the Point Lay area.
Section 12(a) of the Alaska Native Claims Settlement Act entitles the Cully Corporation to the surface estate of 69,120 acres in the Point Lay area, with the subsurface estate accruing to the Arctic Slope Regional Corporation. To date, 67,385 acres have been interim conveyed to the Cully Corporation. The Cully Corporation was also entitled to 18,415 acres under Section 12(b) of the Claims Act and this acreage has also been interim conveyed.

There are also State selected lands or lands tentatively approved for transfer to the State in the Point Lay area. Prior to passage of the Alaska Native Claims Settlement Act, the State had made some land selections in the Point Lay area. The Claims Act voided some of these State selections although those located outside the Cully Corporation's entitlement area were not affected. In addition, there are some lands in the Point Lay area which have been selected by the Cully Corporation but which have not been interim conveyed. These remaining village selections have been top-filed on land previously selected by the State or on lands which had been tentatively approved for transfer to the State.

Two pending Native allotment applications on the barrier spit immediately north of the old village site appear to be on land withdrawn for use by the Air Force. The legality, location and size of these allotment applications is still being reviewed by the Bureau of Land Management.
Native allotments are essentially homesteads of up to 160 acres of non-mineral land which were granted to Alaska Natives, generally for subsistence purposes. Indian allotment authority in Alaska was cancelled with passage of the Alaska Native Claims Settlement Act. However, applications which were pending at the time of passage of the Claims Act are eligible for consideration. Like restricted Indian lands, Native allotments are not subject to taxation or local and State regulation.

SUBSISTENCE LAND USE PATTERNS

The environmental setting of Point Lay is uniquely different from the other villages of the study area, resulting in different local land use patterns. Point Lay, formed by the delta of the Kokolik River, is a much more subtle physical feature than Cape Lisburne or Icy Cape and is not comparable to the spit formation at Point Hope or Barrow. The most significant effect this has had on land use patterns is the conspicuous absence of local bowhead whaling in the current seasonal round of subsistence harvesting by Point Lay residents.

The Kukpowruk, Kokolik and Utukok rivers, as well as many smaller rivers and streams which flow out of the northern foothills of the Brooks Range, deposit enormous amounts of fluvial material in the Chukchi Sea. These deposits have formed a series of barrier islands and bars along the coast which enclose the large Kasegaluk Lagoon, the most important environmental feature in the Point Lay region. The lagoon, which stretches from north of Icy Cape to south of Point Lay, plays an
important role in the marine resource harvest patterns of Point Lay residents.

The North Alaska littoral current is the dominant physical factor affecting sea ice conditions in the offshore area adjacent to Point Lay. This current runs parallel to the coast from southwest to northeast and brings relatively warmer waters from the southern Chukchi Sea. During the spring marine mammal harvest, Point Lay residents usually start hunting south of the village where the first broken ice appears. Once the sea ice has broken into numerous pans and floes, hunting activity continues south of the village and in the waters directly adjacent to the village site. This allows successful hunters to dress their kill as they drift north toward the village. If the hunters are unsuccessful near the village or do not get the desired quantity at this time, they can travel north to Icy Cape. In the Icy Cape region shoals ground the ice, concentrating both ice floes and marine mammals in this area after the ice has disappeared further south.

The general area which Point Lay residents use for marine resource hunting extends from Cape Beaufort in the south to Icy Cape in the north. Point Lay hunters harvest game outside of this area, but it is usually done while traveling to or from another village. Because subsistence hunting is opportunistic by nature, hunters take advantage of wildlife resources they encounter while traveling. It should be noted that the majority of Point Lay residents have returned to this village only in the past 10 to 12 years. During this period, a relatively large number of local construction jobs have been available

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as a result of the North Slope Borough's ongoing capital improvements program. Because Point Lay's labor force is small and because local employment has been at a high level, the area of maximum use by Point Lay hunters for marine mammals may not yet have reached its potential. Point Lay residents indicated that their most important subsistence resource is caribou. However, marine mammals, fish and migratory birds play an important role in the local subsistence economy. They provide the necessary seal oil, a welcome change in diet, and most importantly are available during the spring and summer months when traveling conditions inland limit access to caribou. The most important marine resources are belukha and fish which are harvested in large numbers.

The following presentation of Point Lay subsistence land use patterns is not comprehensive since only those land use patterns which are marine oriented are discussed. Seven local resource specialists were interviewed in depth, as well as other important members of the community. (A description of the field methodology is provided in the regional overview of subsistence land use patterns).

Belukha

Belukha whale is the most important marine resource presently harvested by the residents of Point Lay. For the past several years, this species has provided a greater quantity of food to the village economy than any other marine resource. The harvest of belukha, and the subsequent dressing and storage, is the only communal subsistence activity currently practiced in this village.
Belukha harvesting is usually concentrated in the first two weeks of July. The whales, traveling in schools as they migrate north, stop and feed in the passes of Kasegaluk Lagoon. Point Lay residents concentrate their hunting effort in Naokok and Kukpowruk passes, south of the village (see Figure 13). When the belukhas are sighted, villagers use as many boats as they have available to drive the animals into the lagoon. Once inside the lagoon, the belukhas are herded into shallow water near the old village site where they are shot with rifles. This belukha drive serves two purposes. First, the animals are closer to their final destination, the village ice cellars. Second, the shallow water allows the hunters to retrieve the whales after they sink. One Point Lay resident noted that during a particularly heavy ice year the belukhas entered the lagoon on their own accord, but this is uncommon.

Advances in technology, especially high powered outboard motors, have improved the efficiency of this hunt. Point Lay residents are now able to control a large number of animals and herd them substantial distances with relatively few boats (usually three or four). Most importantly, the hunters are able to provide the village with a large quantity of meat with very few belukhas being lost once they have been shot.

In 1982, Point Lay hunters harvested 28 belukhas during the July hunt. Local residents stated that more whales could have been harvested if there were more people available to process the meat. The relatively hot July sun requires that all the meat be put in ice cellars or preserved in another manner immediately after harvest. All able bodied members of the community participated in this activity. As noted above,
Point Lay Subsistence Use Areas:

**BELUKHA**

- Maximum Use Area
- Intensive Use Area

Figure 13

Source: Stephen R. Braund & Associates 1983
the animals are herded to the old village site to minimize the distance that the meat must be carried before being stored.

If the belukha harvest has been unsuccessful in the passes south of the village, Point Lay hunters travel to passes north of the village in search of whales (especially Akunik Pass). In some years, Point Lay hunters continue to harvest belukha throughout the month of July and early August, ranging in rare cases as far as Icy Cape in their search for the whales. Hunters occasionally try to harvest belukha south of the village prior to the major community effort in July, traveling south by snowmachine down the coast towards Cape Beaufort where the ice is the first in the region to break up.

While the Point Lay belukha harvest does not compare in cultural significance with the bowhead hunt in other villages, it is an important cultural and community unifier in Point Lay because it involves all members of the village. Because the belukha harvest is so important, residents who are employed take time off to participate in this activity. The meat and muktuk is shared with friends and relatives throughout the region and State, and this sharing ties the village with other North Slope communities.

Fish

Fish are an important supplement to the summer and fall diet of Point Lay residents. Species harvested include chum, pink and king salmon, Arctic char, Pacific herring, whitefish, flounder and grayling. Most of
the marine fishing is done with set gill nets along the barrier islands and mainland coast during the months of July and August. In addition, Point Lay residents fish upriver, especially the Kukpowruk and Utukok rivers, during the fall months of September and October.

The harvest area for marine fishing by Point Lay residents includes that portion of Kasegaluk Lagoon south of Icy Cape, the outer shore of all the barrier islands which enclose this lagoon and a small portion of the Chukchi Sea near the southern end of Kasegaluk Lagoon (see Figure 14). Most of the set netting occurs around Naokok Pass, on both sides of the barrier island upon which the old village is located and along the shores of the mainland near the present village site. The area in the immediate vicinity of Icy Cape was repeatedly identified as an excellent fishing area during August, but Point Lay residents stated that they seldom went this far any more because local fishing had been successful and there were conflicts with their jobs. Some younger residents stated that they now fish for salmon on rod and reel several miles from shore off the southern end of Kasegaluk Lagoon.

August is the best month for marine fishing. The proximity to the village of good fishing locations allows those residents who are employed to check their nets after work, minimizing any conflicts between subsistence activities and employment. Residents stated that there have recently been more fish available than in the past. Because fishing is not labor intensive and because fish are readily available, this resource plays an important role in the subsistence economy.
Point Lay Subsistence Use Areas:

**FISH**

- Maximum Use Area
- Intensive Use Area

Figure 14
Walrus

Although the importance of walrus as a subsistence resource has declined in recent years, Point Lay residents' hunting range for this species is greater than that of any other marine mammal. Traditionally a primary source of dog food, walrus is now only occasionally harvested for human consumption. The amount of walrus available for human use is dependent on the varying success of the spring hunt. Local hunters reported that during years of favorable ice conditions they may harvest as many as 10 to 15 walrus (1983 was such a year), whereas in a year of difficult harvest conditions (i.e. heavy local ice restricting offshore access), no walrus are taken. Point Lay hunters stated that walrus numbers have increased recently but that they had harvested few because of difficult hunting conditions.

Point Lay residents' walrus hunting range extends the entire length of Kasegaluk Lagoon south of Icy Cape and as far offshore as twenty miles (see Figure 15). The walrus are generally associated with ice floes and are found as they ride the ice north during their annual migration. Point Lay hunters have observed that approximately 15 miles offshore there is a north flowing current (North Alaska littoral current) with large concentrations of marine mammals. Harvesting walrus this distance offshore in broken and moving ice can be extremely dangerous and a change in wind direction can trap the hunter among the floes. In addition, if the inshore ice is too heavy, it blocks villagers' access to the walrus. At the present time, the preferred hunting area for walrus is between 10 and 20 miles directly offshore from the village.
Point Lay Subsistence Use Areas:
SEAL/UGRIUK

- Maximum Use Area
- Intensive Use Area

Figure 16
Point Lay residents harvest two species of hair seal, the ringed seal and the spotted or harbor seal. The ringed seal is available almost the entire year, rare only during the ice-free months of July and August. Point Lay residents usually harvest ringed seal during the spring (April, May and June). They rarely harvest seals prior to this time as they are busy hunting caribou and trapping furbearers. The first ringed seal harvest of the year generally occurs in April near Cape Beaufort. Point Lay residents stated that people go down to Cape Beaufort as early as March because open water appears there first. Seal hunting takes place near the village as spring progresses and the animals sun themselves on the ice. Several residents indicated that they also harvest seals at Icy Cape. In addition, ringed seals are occasionally taken from boats as Point Lay hunters travel among the floes looking for ugruk and walrus in June and July.

Spotted seals feed in the lagoon during the summer and are occasionally harvested as they rest on the shore adjacent to the numerous passes of Kasegaluk Lagoon. These seals have desirable pelts and can be hunted in the late summer in open water because they are fat and do not sink when shot (North Slope Borough Contract Staff 1979:116).

Ugruk hunting begins soon after seal hunting in the spring in the same harvest areas. The most concentrated ugruk hunting by Point Lay residents takes place in June, but the season can extend as late as August if the hunters follow the ice north. In June, the ice has already begun to break up and hunters look for ugruk among the floating ice. Usually the hunting takes place 5 or 6 miles offshore but, later
in the month, Point Lay hunters may go out further as they look for walrus and ugruk. As is the case with all marine mammals hunted by Point Lay residents, the season can be extended if the hunters are willing to travel north toward Icy Cape where ice is present for a longer period of time.

All seals except the spotted seal generally disappear once the ice is gone. Villagers stated that ringed seal and ugruk are occasionally seen and harvested in the lagoon in September. In recent years, Point Lay hunters have taken a total of 2 to 10 ugruk per year, while the harvest of ringed seal has averaged three or four per family (1983 fieldwork findings).

Migratory Birds and Eggs

Migratory birds and their eggs are important subsistence resources in Point Lay, providing a desired change in diet at a time of year when fresh meat can be scarce. Eiders, geese, brants, loons and ducks are all harvested, primarily in the spring. What is not eaten immediately is stored in ice cellars for the following winter. The harvest range for birds is as large as any of the other marine resources because bird hunting is often done in conjunction with other marine resource harvesting (see Figure 17). As one resident stated: “I always take my shotgun with me when I am out hunting seals, belukhas, walrus, even fishing.” Waterfowl hunting is often done from the edge of leads during the month of May when Point Lay residents are hunting seal and ugruk. Successful hunting often depends on the wind direction.
Bowhead Whale

Although Point Lay had whaling crews in the past, the village no longer sends out any crews. Historically, whaling occurred primarily at Icy Cape as ice conditions near Point Lay were not usually conducive to bowhead whaling. One long-time resident recalled that Point Lay harvested two bowhead whales in the 1930's, one at Icy Cape and one near the old village site. The subsequent reduction in village population is one reason for the decline of locally based whaling.

At the present time, a few Point Lay men go to Wainwright and Barrow to participate on whaling crews. Villagers also travel to these two communities and to Point Hope to help butcher landed whales. Villagers indicated that Point Lay receives a share whenever Wainwright gets a whale. Wainwright notifies Point Lay by citizens band radio, and Point Lay people travel to Wainwright to help pull the whale onto the ice and butcher it for a share. In 1981, Wainwright whalers harvested a bowhead at Icy Cape and Point Lay villagers helped butcher it. There is some evidence that employment of local people on village construction projects is currently restricting the number of Point Lay people who go to other villages during whaling season. Villagers indicated that more people would be likely to go once construction employment in Point Lay ended.
Polar Bear

Point Lay residents occasionally hunt polar bear during the winter along the coast. Villagers reported that while they have seen few polar bear during the past year, more were available in past years. The distance hunters travel offshore in pursuit of this species rarely exceeds two miles.

Village Land Use Patterns

The location and platting of the present Point Lay townsite was directed by the North Slope Borough after consultation with area residents. The surveyed area currently takes in about 71 acres, of which 39 acres were still vacant in October 1982.

Kasegaluk Lagoon forms the western border of the townsite (see Figure 18). Most of the lagoon beach is relatively steep and the bluff area is also eroded by surface drainage. As a result, it is unlikely that the bluff area will support much construction.

Qasigialik Street is the main village thoroughfare, extending through town on a north-south-axis paralleling Kasegaluk Lagoon. At its southern end, it becomes the access road to the DEW Line station and airstrip, while its northern end terminates at the beach. Tuttunnigvik Street, which runs parallel to Qasigialik Street, establishes the present eastern edge of the village's surveyed area. DEW Line station land abuts the village to the south.
Existing Land Use
Point Lay
October 1982

Legend
- Single-family Residential
- Multi-family Residential
- Public and Semi-public
- Commercial
- Industrial and Storage

Figure 18
The area between Qasigialik Street and Kasegaluk Lagoon is exclusively residential except for two lots occupied by the new clinic and by the satellite receiving dish and switchgear building. Unfortunately, the short cross-streets leading west off Qasigialik Street to serve this residential area are all dead-ended at the beach bluff and little turning area for larger vehicles is available.

In the southern portion of town to the east of Qasigialik Street is a large public use area. All public buildings in Point Lay except for the new clinic and satellite receiving dish and associated switchgear building are located in this area, as are the village store and the construction camp. Surveyed lands north of the public use area are all in residential use except for one lot across from the school which is being developed as a covered play area. In addition, one residential unit here was being used as a bunkhouse in October 1982. Further north is a large, unsubdivided tract available for future residential development.

The power plant and the Department of Public Works warm storage building are located at the southern edge of the public use area, sufficiently distant from school facilities and most housing to minimize any associated traffic-hazards for school children and other pedestrians. All fuel storage tanks in the townsite are also located in the public use area and are bermed for protection against spills, although only the new Cully School tank site is fenced. The village water treatment plant and attached water storage tank have been constructed just east of the power plant.
<table>
<thead>
<tr>
<th>Land Use</th>
<th>Land Area (acres)</th>
<th>Percent of Developed Area</th>
<th>Percent of Surveyed Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>13.2</td>
<td>42.5</td>
<td>18.6</td>
</tr>
<tr>
<td>One and Two Family</td>
<td>(11.0)</td>
<td>(35.4)</td>
<td>(15.6)</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>(0.1)</td>
<td>(0.3)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Bunkhouses</td>
<td>(0.7)</td>
<td>(2.3)</td>
<td>(1.0)</td>
</tr>
<tr>
<td>Vacant Units</td>
<td>(0.6)</td>
<td>(1.9)</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Under Construction</td>
<td>(0.8)</td>
<td>(2.6)</td>
<td>(1.1)</td>
</tr>
<tr>
<td>Commercial</td>
<td>0.7</td>
<td>2.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Utility and Storage</td>
<td>3.3</td>
<td>10.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Public and Semi-Public</td>
<td>3.3</td>
<td>10.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Public</td>
<td>(1.5)</td>
<td>(4.8)</td>
<td>(2.1)</td>
</tr>
<tr>
<td>Semi-Public</td>
<td>(1.8)</td>
<td>(5.8)</td>
<td>(2.6)</td>
</tr>
<tr>
<td>Developed Roads and Corridors</td>
<td>10.6</td>
<td>34.1</td>
<td>15.0</td>
</tr>
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<td>TOTAL DEVELOPED AREA</td>
<td>31.1</td>
<td>100.0</td>
<td>44.0</td>
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<tr>
<td>Vacant Land</td>
<td>39.0</td>
<td></td>
<td>55.2</td>
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<tr>
<td>Undeveloped Roads</td>
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<td>0.8</td>
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<tr>
<td>TOTAL SURVEYED AREA</td>
<td>70.7</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Alaska Consultants, Inc.
The tundra on which Point Lay is situated is poorly drained. Summer thawing penetrates about 18 inches, leaving a soft, saturated surface which will not support vehicle traffic. The thin, peaty mat on the tundra surface is easily disturbed or destroyed. When this occurs, it can lead to further surface degradation and result in structural failure. Use of deep-set piling is essential in the design of most facilities, and thick gravel beds are necessary for roads and other areas which are heavily used. The use of road culverts is also necessary to avoid unintended diking or damming of the natural surface drainage. However, keeping the culverts clear is sometimes a difficult task, particularly in the spring when frozen culverts can result in severe erosion and street washouts.

Of the 31.1 acres of land in use in the Point Lay townsite area in October 1982, 42.5 percent was occupied by residential units, 34.1 percent was taken up by developed roads, 10.6 percent was occupied by public facilities, and utilities and storage facilities accounted for another 10.6 percent (see Table 30). Only 2.2 percent was in commercial use.

HOUSING CONDITIONS

An October 1982 housing inventory conducted by Alaska Consultants, Inc. counted 30 completed housing units at Point Lay, all of them single family homes except for an apartment in the school (see Table 31). Of these 30 units, 12 had been constructed by the North Slope Borough, including 8 rentals and 4 units occupied by Borough employees. Another
<table>
<thead>
<tr>
<th>Housing Program</th>
<th>Condition of Units</th>
<th>Total</th>
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<tr>
<td></td>
<td>Occupied</td>
<td>Acceptable</td>
</tr>
<tr>
<td>North Slope Borough Rentals</td>
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<td>0</td>
</tr>
<tr>
<td>North Slope Borough Employees</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Cully Corporation</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Arctic Slope Regional Corporation</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Bureau of Indian Affairs</td>
<td>3 b/</td>
<td>0</td>
</tr>
<tr>
<td>School Apartment</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>29</td>
<td>0</td>
</tr>
</tbody>
</table>

---

**a/** Excludes the construction camp, a North Slope Borough housing unit used as a bunkhouse, a trailer used as a bunkhouse and a trailer used as a construction office. Also excluded are buildings at the old village site on the barrier spit.

**b/** Excludes 2 units near completion and 2 others on "ots where only pilings were in place in October 1982.

**Source:** Alaska Consultants, Inc.
9 units had originally been provided by the Arctic Slope Regional Corporation, while the Cully Corporation had provided the initial funding for an additional 5 units. Still another 3 units in the village had been financed through the Bureau of Indian Affairs. Finally, there was an apartment unit in the school building although it was being used for classroom purposes in October 1982.

Only one house in Point Lay was vacant in October 1982. This vacancy rate was one of the lowest in all of the North Slope Borough villages. In addition, all of the housing in the village was considered to be in acceptable condition (i.e. standard or better). The lack of substandard housing in Point Lay is believed to be directly related to the two village relocations as the cost of moving structures from one site to another was so high that it made the transferring of substandard units unecononomic.

The difficulty and cost of shipping construction materials to the village, plus problems in obtaining long term financing, severely limit the ability of private individuals to construct standard housing. Any major expansion of Point Lay's housing stock would therefore probably depend on the further use of government programs.

There were 2 houses and 2 trailers at the old Point Lay site on the barrier spit in October 1982. These units were not included in the housing inventory for the present village. One house and one trailer were each occupied by an adult couple.
The Borough's program for providing new housing in Point Lay has not led to local concern regarding stress which the new homes might place upon family ties. Field interviews suggest that village residents consider the new housing to have been useful in uniting the families returning to Point Lay who had become separated at the time that the old village's population moved away. Residents interviewed found the new homes more comfortable and less crowded than former housing. There was concern that some Borough housing occupied by local families had remained as rental units and had not been placed under an occupant purchase plan as first proposed by the Borough. (The North Slope Borough program to sell such houses has been contingent on HUD commitments to purchase the units under the Mutual Help program. However, funds for the HUD program have been severely restricted in the past year or so).

Inupiat family ties have been retained as Point Lay has grown. The townsite remains relatively confined. Where family houses are not adjacent to each other, the new telephone system and the growing number of privately owned vehicles (three-wheelers, snowmachines and trucks) have facilitated the maintenance of daily contacts and the sharing of meals, as well as participation in subsistence harvesting activities.
Community Facilities and Utilities

ADMINISTRATIVE AND MISCELLANEOUS PUBLIC BUILDINGS

Point Lay's community building was completed in September 1983. It was funded by a State appropriation which was passed through the North Slope Borough because there is no municipal government at Point Lay. However, the management and day to day maintenance of the facility will rest with the village. The facility will serve as a community center for dancing, games, feasts and other village events or meetings and will also be available as a conference center when State or federal personnel visit the village to contact individual residents.

The community building is a single story wood frame structure mounted on piling. It is located just south of the fire station. The Borough will not use the building for any of its programs but the design of the facility would permit some village organization to establish a permanent office there.

The North Slope Borough maintains a heavy equipment storage building at Point Lay, as it does in other North Slope villages. The Point Lay facility was built in 1981 and is located at the southern edge of the village. It is a single story wood structure (40 by 80 feet) with a concrete floor and with four equipment bays. Internally, the structure is unpartitioned except for a small office and parts storage area. The building has no plumbing.
Police Protection

Police protection services in Point Lay are provided by the North Slope Borough, as is the case for all North Slope villages. However, there is no public safety building in Point Lay and the public safety officer's home is presently also being used for that purpose, something it was not designed to do. The space available for public use is limited, there are no detention facilities and storage space for supplies, equipment and case evidence is inadequate.

Preliminary plans for the new Point Lay public safety building call for a two-story metal exterior building containing about 4,300 square feet of floor space. The ground floor of the new facility would include three cells, a booking area, a central office with a secure closet for the safekeeping of records and evidence, a kitchen/laundry area, storage space, a mechanical room, sleeping quarters for personnel temporarily assigned to the village, and a garage. The second floor would house a public safety officer's apartment and additional storage space.

Borough public safety officers assigned to North Slope villages spend a great deal of time in non-criminal activities (see Table 32). Law enforcement problems in Point Lay are primarily related to liquor abuse. Only one public safety officer is now stationed in the village. When that officer is sick, on leave, traveling on official duty or otherwise away from the village, there is no police authority in Point Lay unless
### TABLE 32
PUBLIC SAFETY DEPARTMENT ACTIVITY
POINT LAY
1980 - 1982

<table>
<thead>
<tr>
<th>Category</th>
<th>1980</th>
<th>1981</th>
<th>1982</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide and Negligent Homicide</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rape and Sex Offenses</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Assault</td>
<td>0</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Burglary</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Larceny</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Vandalism</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Narcotics</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Driving While Intoxicated</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Liquor Law Violations/Disorderly Conduct</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Traffic Accidents</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Animal Problems</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Domestic Problems</td>
<td>0</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Premise Security</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disturbing the Peace/Noise</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Other a/</td>
<td>11</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>15</td>
<td>42</td>
<td>35</td>
</tr>
</tbody>
</table>

---

a/ This category identifies non-criminal public safety activities. It includes service requests, agency assists, public assists, transport of the sick or injured and other responses to non-criminal situations. The public safety officer may be called for a wide variety of activities ranging from chaperoning dances to helping a sick person to the clinic.

**Source:** North Slope Borough Department of Public Safety.
another officer can be assigned there on temporary duty. The Borough has adopted a policy to maintain two public safety officers in each village. To implement this policy in Point Lay would require the provision of housing by the Borough for the new officer.

Fire Protection/Search and Rescue

The North Slope Borough has provided fire protection services on an areawide basis since 1980. To implement this power, the Borough has constructed identical fire stations in each of its villages outside Barrow and has established a system of volunteer village firefighting forces. While the Borough's Search and Rescue division is part of the Public Safety department for administrative purposes, the volunteer firefighting force and search and rescue personnel have been combined into a single unit in the villages outside Barrow to increase their effectiveness. The new village fire stations are used to house the needs of both activities.

The Point Lay fire station was completed in 1983. It is a prefabricated metal structure 72 feet wide and 65 feet in depth (4,680 square feet) set on piling, with access provided by a metal grating ramp. The central portion of the station is a large apparatus room sized to house a fire engine, a tanker truck, an ambulance and search and rescue equipment. The building also contains a utilities room, a furnace/generator room, two large storage rooms (one designed for use as a training area under heavy smoke conditions), a training/meeting area, an office/communications center, a small bunkroom for transient Borough
Fire department personnel, limited kitchen facilities, and shower and toilet facilities.

Rolling stock housed in the fire station includes an engine company truck mounted with a 2,000 gallon water tank, a 500 gallon per minute pump, fire hose and appropriate nozzles, ladders and cabinets for personnel gear and air-packs; a tanker truck mounted with a 3,000 gallon water tank and a 500 gallon per minute pump plus hoses and nozzles; a Chevrolet Suburban modified for ambulance use; and two snowmachines and a boat with an outboard motor for search and rescue operations.

Training programs have been initiated by the Borough with initial emphasis being placed upon use and maintenance of the new equipment in a manner which meets basic criteria for prompt and effective fire response.

Two major fires have occurred since Point Lay moved to its present site. A 1981 fire destroyed the Arctic Slope Regional Corporation office building and a residence was gutted in the spring of 1983. No injuries or deaths were involved in either fire.

While all firefighting and search and rescue functions in Point Lay and other Borough villages outside of Barrow are on a volunteer basis, the Borough maintains a permanent staff for both functions in Barrow. The Borough’s Search and Rescue division also maintains two helicopters and

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a fixed wing aircraft in Barrow for areawide use in search and rescue and medi-vac efforts.

**Health**

Primary health care services in Point Lay are provided by the North Slope Borough Health and Social Services Agency through the Community Health Aide program. These services are supplemented by regular visits to the village by doctors, dentists, nurses and other health care providers. When needed, Point Lay residents may use Public Health Service hospitals in Barrow, Anchorage or even Kotzebue. The remoteness of Point Lay and the uncertainty of flying weather can dictate the routing of patients, particularly in emergency situations.

The clinic now in use is a very small building (280 square feet) which was relocated from the prior village site on the Kokolik River. The facility is totally inadequate for its assigned use and is poorly equipped. Construction of a new 4,400 square foot health clinic is currently underway with identical facilities being constructed in all other North Slope villages except Barrow and Point Hope. The clinic portion of the new of the new building will include 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/dining/living 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.

The new clinics are being provided with a wide range of equipment, including limited X-ray facilities. The consulting/telehealth room will be provided with slow-scan TV equipment linked through satellite telephone circuits to similar units in the Barrow headquarters of the Health and Social Services Agency, the Barrow Public Health Service hospital and the Alaska Native Medical Center in Anchorage. This equipment will be used for consultations between local community health aides and doctors, consultations within the medical professions, for the continuing education of the aides and for other uses such as the follow up of clients/patients. An ambulance for transporting patients within the village is housed in the fire station, while a three-wheeler and trailer will be stored in the clinic garage.

The Borough Health and Social Services Agency attempts to maintain two health aides in each village. It is hopeful that the new clinics' better working environment will encourage aides to hold their positions for longer periods and that it will encourage greater public appreciation of the aides' position.

Borough records indicate the current average patient daily load for the Point Lay clinic is about 2 patients. Much greater use of the new clinic is anticipated, not only because of the potential for improved service but also because of the broader emphasis which the Borough
Health and Social Services Agency is placing upon health practices and conditions.

**EDUCATION**

The North Slope Borough School District provides education services in Point Lay from Early Childhood Education (ECE) through the 12th grade. The new Cully School complex has about 14,000 square feet of floor space, including storage and mechanical areas. It is designed to accommodate about 50 students, with provision made for the addition of more classrooms and other areas as needed. The complex consists of two buildings linked by an enclosed corridor and with an attached playdeck. A separate structure houses the school's sewage treatment plant. The complex is constructed on deep-set piling. A crawl space below the school's floor serves as a warm air plenum and provides space for piping, cables and other conduits. The exterior finish is mainly of natural cedar.

The larger of the two school buildings houses the teaching areas, a library/media center, administrative offices and the multi-purpose activity center. The activity center includes a gymnasium, a kitchen complex, toilet and shower facilities and storage areas. The smaller building houses vocational shops, the furnace room, an emergency power generator and tanks for water storage.

The elementary school teaching area includes two classrooms for grades 1 through 6 and a room for ECE/Kindergarten activities. The teaching area
for grades 7 through 12 includes a classroom and a multi-service room equipped for science and business classes plus a photo laboratory.
There is a library/media center located centrally to the elementary and upper grade teaching areas. It is adjacent to the administration center which includes an office for the principal and a records storage room. This area also includes a conference/special education room. The several main corridors of the school complex terminate in a central commons area. A small wind driven power generator has been mounted on a tower adjacent to the school. Its output is fed into the school’s electric system and monitoring equipment has been placed in the science classroom.

The smaller school building houses two vocational education shops, one for wood and metal work and the other for small engine repair and welding. There is a boiler room and a room for the standby emergency power generator and a 16,200 gallon tank for water storage. The latter includes 10,000 gallons of water reserved for emergency fire use in the sprinkler system which is installed throughout the complex.

During the 1982/83 school year, the professional staff included a principal and 4 teachers, all of whom were certified. There was also a bilingual teacher and a part-time aide. A part-time position for coordinating a community school/adult vocational education program remained unfilled. The non-teaching staff included a cook and 2 maintenance/janitorial persons. The position of maintenance supervisor for the new school complex was filled in the spring of 1983 to permit...
### Table 33

**SCHOOL ENROLLMENT TRENDS BY GRADE**

**POINT LAY**

1977/78 - 1982/83

<table>
<thead>
<tr>
<th>School Year</th>
<th>Final Enrollment by Grade</th>
<th>Total Excluding ECE/Kindergarten</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1  3  2  1  1  2  1  0  1  1  1  0</td>
<td>14</td>
</tr>
<tr>
<td>1977/78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1978/79</td>
<td>0  4  2  2  1  1  3  0  0  3  0  0</td>
<td>16</td>
</tr>
<tr>
<td>1979/80</td>
<td>4  4  2  1  3  1  2  1  3  2  1  1</td>
<td>25</td>
</tr>
<tr>
<td>1980/81</td>
<td>4  4  0  6  5  1  2  2  6  3  0  1</td>
<td>34</td>
</tr>
<tr>
<td>1981/82</td>
<td>5  2  3  1  3  4  1  0  1  3  2  0</td>
<td>25</td>
</tr>
<tr>
<td>1982/83</td>
<td>3  2  2  3  1  3  3  0  0  1  2  1</td>
<td>21</td>
</tr>
</tbody>
</table>

---

**Note:**
The 1982/83 final enrollment for ECE/Kindergarten was 1 student.

**Source:** Alaska Department of Education.
him to observe the final stages of the school's construction and prepare appropriate plans for the facility's operation and maintenance.

Final enrollment for the 1982/83 school year, excluding ECE and kindergarten, was 21 students, including two non-Natives (see Table 33). The principal had indicated some concern about the regularity of attendance in junior/senior classes.

As part of the 1983 fieldwork, opinions were sought on the subject of the quality of the local school system. Two IRA council members questioned the standards set for local high school students as not being high enough, particularly with reference to skills. (Both council members had attended Mount Edgecumbe in Sitka). Few Point Lay high school graduates apparently go on to college. There was comment that the availability of local construction jobs had discouraged residents from seeking college or other forms of education and training. One council member noted that those Point Lay residents who did seek additional education and training had favored technical/vocational schools or courses, noting "We can spend six months in a technical school and return to the village with a $35/hour job. Or we can go to college for four years and return to a $13/hour job."

RECREATION

Construction of the Point Lay community building, completion of the Cully School and erection of an enclosed play area across the street from the school has provided the village with a set of recreation
facilities not found in other small North Slope villages. The community building will accommodate village meetings, dances, games and feasts. The Cully School multi-purpose center offers a gymnasium, kitchen facilities and toilet and shower facilities designed to meet the needs not only of students but the village as a whole, as well as a larger area for dances, games, feasts and other village-wide recreation activities which cannot be housed in the community building. The new enclosed play-area across from the school, while not heated, accommodates roller skating and offers an alternative, although small, gym-like facility which can probably be used regularly except during cold weather. The outdoor play platform attached to the school can also be used by younger children, weather permitting.

While Borough schools in other North Slope villages have offered adult vocational and special interests classes in the evenings or when not in conflict with regular school activities, the lack of space in the old school and the apparent disinterest of villagers had discouraged establishment of similar education courses in Point Lay. The former school principal who had lived in the village for five years believed that this situation might change once the new Cully School was completed and the level of construction activities in the village had fallen off substantially.

Point Lay does observe some national holidays in addition to traditional Inupiat occasions. The week of Christmas Eve through New Year’s Day is the most extended and well organized event, combining religious observances with dancing, feasting and games.
Point Lay Inupiat people attach great value to visiting with relatives and friends, including those people whose families once lived in the Point Lay area but who now live in Wainwright, Barrow, Point Hope or even more distant places. Subsistence activities such as belukha whale hunting and fall ice fishing involve family or larger groups. However, such activities are not viewed from the Inupiat perspective as being of a recreational nature.

UTILITIES

Water

The North Slope Borough Department of Public Utilities is responsible for the provision of water services at Point Lay. A major step in the development of a potable water system for Point Lay was taken by the Borough with the 1983 construction of a water treatment plant and the attached village water storage tank with a 1,000,000 gallon capacity. During the summer, water is pumped from a lake to the village treatment plant through a polyethylene line laid on the tundra. Once weather precludes further pumping, the reservoir of treated water is drawn upon for delivery in the village. Except for a planned pipeline to provide direct delivery of water to the new Cully School (and possibly to several other nearby public facilities), water will continue to be delivered by using a special heavy duty truck equipped with a 2,000 gallon tank and a pump and hose used to reach holding tanks in public facilities and private homes.
The delivery of water by truck is dependent on the construction and maintenance of adequate roads and upon the ability of the Public Utilities department to keep the truck operating, even in severe winter weather conditions.

In October 1982, Point Lay water customers included the occupants of 30 housing units, the two construction camps, the village store, the old health clinic and the new Cully School. The construction camps prove to be extremely heavy consumers of water, while the new school will probably be the largest consuming unit in Point Lay if experience in other small North Slope villages is an accurate indicator. However, several factors will act to control per capita water use in Point Lay now that the central water facility is in place. First, only a part of the water in the storage tank is available for delivery when water cannot be pumped from the lake, as some reserve must be maintained for firefighting and other emergencies. Secondly, delivered water costs 7¢ per gallon, presenting the average household with a monetary restriction. Finally, the efficiency and dependability of the truck delivery system throughout the year could be another limiting factor.

Sewage

Sewage collection services in Point Lay are the responsibility of the North Slope Borough Department of Public Utilities. However, the present system is not adequate from the viewpoint of public health. With the exception of wastes from the new Cully School, all sewage wastes in the village are collected in honeybuckets lined with plastic.
sacks. The sacks are then stored in 55-gallon drums located near each house or public building and the drums are periodically removed (usually on a monthly basis) to a more isolated site in the village where they accumulate until they can be moved across the frozen tundra by freight sled for disposal at an old, unimproved dump site which has no official sanction. A sewage treatment plant was constructed specifically to process the new Cully School sewage, but there is no approved disposal site for the long term disposition of this treatment plant's effluent.

There is no mobile equipment in the village designed for the pick-up of the waste filled drums. A heavy duty sewage truck equipped with a storage tank to be filled by vacuum action through a hose was sent to the village, but since the buildings are not equipped with sewage holding tanks, the truck could not be used as designed. The tank has been removed, converting it to a flatbed truck for utility uses.

Graywater from sinks and tubs in all buildings except for the new school is discharged directly onto the tundra under or adjacent to individual structures. This practice leads to accumulations of graywater ice in the winter months and adds to surface drainage problems in the summer.

The North Slope Borough plans to build a sewage lagoon in Point Lay although the village council has yet to indicate a preferred site. However, the present sewage collection system for honeybucket wastes has an inherent basic problem in that the contents of the plastic sacks cannot be dumped directly into a sewage lagoon and no efficient, acceptable means for doing so has been developed. The problem is even
more difficult when consideration is given to the many months of the year that the bags freeze once they have been placed in the 55-gallon drums.

- **Solid Waste**

The North Slope Borough Department of Public Utilities is responsible for solid waste disposal services in Point Lay. Garbage is picked up from homes and other facilities on a regular basis unless the service is interrupted by severe weather or equipment failure. It is then taken to the DEW Line station dump site, located just behind the station’s hangar at the airstrip. North Slope Borough Department of Public Works equipment is used, when necessary, to consolidate and compact the waste at the dump site. The site is not fenced and will soon be filled.

A new dump site and access road are needed. The site favored by Point Lay residents is in a depressed area located about 2 miles south of the village’s present water source. A new access road to this site could utilize a portion of the existing water source access road. However, as this road would cross DEW Line station property, an agreement with the Air Force for its construction would first have to be reached. Point Lay does not have a gravel stockpile, so that materials needed to construct the access road and the solid waste disposal site would require a gravel dredging operation.
The North Slope Borough Department of Public Utilities is also responsible for the generation and distribution of electric power in Point Lay. All power in the village is produced by generators driven with diesel engines. Three such generators with a combined total rated capacity of 400 kW are located in a power plant which also has room for additional units (see Table 34). The generators units are equipped so that they can be operated in parallel, while the present distribution system is a 4,160 volt overhead pole line installation. The system supplies power successively to users from "service drops" as the system radiates away from the generation facility. The main "power trunks" are three-phase with single-phase lateral feeders to individual loads.

Point Lay has experienced a rapid growth in electric power demand since the village was moved to the present townsite. Department of Public Utilities records show that peak power demand rose from 135 kW in the 1981/1982 fiscal year to 230 kW in the following fiscal year. The department's records also show that Point Lay power sales totaled 316,499 KWH during the six month period from July 1, 1982 through December 31, 1982. There were 45 meters installed in the village as of January 1983. Further additions to Point Lay's complement of housing and other facilities will necessitate a parallel expansion of the village's power generation and distribution system. A shortage of well trained operators has been a persistent problem common to all the smaller North Slope villages. Another problem arises from the fact that the fuel storage tanks now in place to supply the power plant do not
<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Prime Mover Make</th>
<th>Prime Mover Horsepower</th>
<th>Make</th>
<th>Nameplate Capacity (KM)</th>
<th>Generator Unit Make</th>
<th>Voltage</th>
<th>Hours Operated a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAT</td>
<td>135</td>
<td>CAT</td>
<td>90</td>
<td>CAT</td>
<td>480</td>
<td>736</td>
</tr>
<tr>
<td>2</td>
<td>CAT</td>
<td>320</td>
<td>CAT</td>
<td>155</td>
<td>CAT</td>
<td>480</td>
<td>1,170</td>
</tr>
<tr>
<td>5</td>
<td>CAT</td>
<td>320</td>
<td>CAT</td>
<td>155</td>
<td>CAT</td>
<td>480</td>
<td>1,830</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>400</td>
</tr>
</tbody>
</table>

a/ Per North Slope Borough Department of Public Utilities Village Operations Manager, October 26, 1982.

Source: North Slope Borough Department of Public Utilities.
have sufficient capacity to cover the power plant's current annual consumption of fuel oil.

Fuel Storage

Fuel oil is normally shipped to Point Lay by ocean barge during the short summer season when the Chukchi Sea is ice-free. Lighterage barges are used to transfer the fuel from the large barge to tanks located on the barrier spit or in the present townsite. The deliveries to the village itself are hampered by shallow waters at the entry to and within Kasegaluk Lagoon. Air deliveries of fuel by aircraft are possible in mid-winter only if an ice strip is constructed on the lagoon. The DEW Line station airstrip is too short to accommodate fully loaded large aircraft but it can be used, if necessary, to bring in smaller loads. The cost of delivering fuel by air is much higher than freight charges for barge deliveries.

While delivery of fuel to the storage tanks on the barrier spit can be accomplished more easily than to tanks at the present village on the mainland, the transfer of the fuel from the spit to Point Lay can be accomplished only in winter when the lagoon ice is strong enough to support a tank mounted truck.

Table 35 recaps the scattering of fuel storage tanks in the Point Lay area and also provides estimates of fuel consumption. The most critical tankage shortage is that for the power plant, the 84,000 gallon storage capacity of which is already too small to meet current power plant
TABLE 35

DI ESEL FUEL STORAGE CAPACITY AND USAGE
POINT LAY
1983
(gallons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Slope Borough Department of Public Utilities</td>
<td>84,000</td>
<td>60,000</td>
<td>85,000</td>
</tr>
<tr>
<td>North Slope Borough School District</td>
<td>32,000 a/</td>
<td>25,000</td>
<td>60,000</td>
</tr>
<tr>
<td></td>
<td>167,000 b/</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(60,000) c/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Slope Borough Department of Public Works</td>
<td>(60,000) c/</td>
<td>20,000</td>
<td>30,000 e/</td>
</tr>
<tr>
<td>North Slope Borough Fire Department</td>
<td>7,000</td>
<td></td>
<td>3,500 f/</td>
</tr>
<tr>
<td>Point Lay Community Store</td>
<td>(60,000) d/</td>
<td>50,000</td>
<td>55,000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>290,000</td>
<td>155,000</td>
<td>233,500</td>
</tr>
<tr>
<td>Barrier Spit</td>
<td>(180,000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---
a/ Present school.
b/ New Cully School complex.
c/ Tanks available on barrier spit.
d/ Tank on barrier spit at old village site.
e/ Presumes use of Department of Public Works heavy equipment to haul gravel for CIP construction projects.
f/ Initial one-half year's consumption.

Sources: Cully School
North Slope Borough Department of Public Works
North Slope Borough Department of Public Utilities
MMCW Architects/Engineers
consumption. In addition, there is no large, safe storage facility for gasoline in Point Lay. Finally, the village store must shuttle all the fuel which it sells to private consumers across the lagoon, an inconvenient and expensive operation.

COMMUNICATIONS

Telephone services in Point Lay and other small North Slope villages are provided by the Arctic Slope Telephone Associated Co-op, Inc. (ASTAC), a non-profit cooperative corporation. Seed money for the organization of the cooperative and for the preliminary work needed to obtain a certificate of convenience and necessity from the Alaska Public Utilities Commission was provided by the Arctic Slope Regional Corporation. Once the certificate was obtained, loans for plant acquisition and installation were obtained from the U.S. Rural Electrification Administration. The Point Lay building housing the switchgear was built by the North Slope Borough and is leased to ASTAC which owns the switchgear, telephone cable and other system support equipment. Alascom provides the satellite service linking Point Lay with in-State and out-of-State long distance connections.

The provision of local dial telephone service was a major advance over the previous bush telephone system. ASTAC reported that Point Lay had a total of 36 residential and 16 business telephone subscribers in February 1983.
Wainwright is named after the first lieutenant and navigator of the HMS Blossom, a British vessel which visited the north coast of Alaska in 1826 in search of the Northwest Passage. The community is located on the Chukchi Sea coast about 3 miles northeast of the mouth of the Kuk River. In relation to other villages in the region, Wainwright is around 100 air miles southwest of Barrow and approximately the same distance northeast of Point Lay. Wainwright's closest neighbor is Atqasuk, about 80 miles to the northeast.

Many people in Wainwright today trace their heritage to the area along the coast from Point Lay to Peard Bay and along the drainages of the Utukok and Kuk Rivers. The present town of Wainwright has existed since shortly after the turn of this century, a development which followed construction of a school here. Except for reindeer herding, most people in this community lived a basic subsistence lifestyle through the early 1970's, although cash became increasingly important. Today, subsistence activities remain a major factor in the lives of Wainwright residents. However, the opportunities for wage paying jobs--have greatly increased during the past ten years, mainly a result of the incorporation of the North Slope Borough and the subsequent Borough capital improvements program.
Much of the information on Wainwright contained in the following pages was collected by Alaska Consultants, Inc. for the North Slope Borough and was published in the June 1983 report entitled "Background for Planning: City of Wainwright." That information was supplemented by fieldwork conducted specifically for this project during the summer of 1983 and by observations from ongoing work in this village being conducted for the North Slope Borough. Information on the subsistence economy and subsistence-land use for Wainwright has recently been compiled by Nelson (1982) and the John Muir Institute (1983). Rather than duplicating those efforts, their major findings have instead been summarized for the purposes of this study.

Population

PAST POPULATION TRENDS

According to the U.S. Census, Wainwright's population grew rapidly from the time it was established as a permanent community in 1904 through 1939 (see Table 36). Despite the fact that Wainwright was not generally considered to be a good location for whaling, the presence of a school plus its convenience for harvesting of other subsistence resources, the availability of coal and reindeer herding activities served to attract people here from the surrounding region.

Between 1939 and 1950, however, Wainwright lost a third of its people, mostly because of out-migration. The Navy's exploration program in the then Naval Petroleum Reserve No. 4 between 1944 and 1953 resulted in the
### TABLE 36

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>1929</td>
<td>197</td>
<td>99.0</td>
</tr>
<tr>
<td>1939</td>
<td>341</td>
<td>73.1</td>
</tr>
<tr>
<td>1950</td>
<td>227</td>
<td>-33.4</td>
</tr>
<tr>
<td>1960</td>
<td>253</td>
<td>11.5</td>
</tr>
<tr>
<td>1970</td>
<td>315</td>
<td>24.5</td>
</tr>
<tr>
<td>1980</td>
<td>405</td>
<td>28.6</td>
</tr>
<tr>
<td>1983 a/</td>
<td>483</td>
<td>19.3</td>
</tr>
</tbody>
</table>

---

**Note:** 1983 population based on a July 1983 count by the North Slope Borough.

**Sources:** U.S. Bureau of the Census. North Slope Borough.
establishment of a large camp at Barrow and the hiring of as many as 125 Eskimos from Barrow and those who had moved to Barrow from villages such as Wainwright. In 1939, Wainwright and Barrow were approximately the same size. However, Barrow's population increased by 162 percent between 1939 and 1950 and that community has remained the dominant population center on the North Slope ever since.

Between 1950 and 1960, Wainwright experienced very little growth. Construction of the DEW Line system took place during the 1950's, including the LIZ-3 station location 5 miles east of Wainwright. Since 1960, however, Wainwright has experienced faster rates of population growth, rates which have further accelerated since 1980. In the 1960's, most of this growth is believed to have been the result of natural increase and a decline in rates of outmigration to other communities. Increased employment opportunities following passage of the Alaska Native Claims Settlement Act and formation of the North Slope Borough appear to be the main reason for community growth during the 1970's. A July 1983 population count conducted by the North Slope Borough found 483 local residents, representing a 19.3 percent increase since 1980. This rapid growth can be directly tied to an upswing in Borough capital improvements program construction activities in the village.

POPULATION COMPOSITION

The outstanding feature of Wainwright's population is that this is a predominantly Eskimo community. According to the 1980 Census, 91.9 percent of Wainwright's population was Alaska Native. Nevertheless, the
proportion of non-Natives rose significantly between 1970 and 1980, due mainly to the addition of a local high school program and the provision of other specialized Borough services.

The continuing influence of strong family and other ties among today's Wainwright residents is reflected in the stability of the community's population. According to the 1980 North Slope Borough housing survey, close to 85 percent of the community's Alaska Native heads of household had lived here since before 1960 (see Table 37).

A review of the age and sex characteristics of Wainwright's population was undertaken, based on information collected by Alaska Consultants, Inc. as part of a Boroughwide housing survey conducted in Wainwright in April 1980 (see Figure 19 and Table 38). This survey found that Wainwright's overall population was younger than that of any other village in the region except for Point Hope. The median age of males in Wainwright was found to be 23.0 and that of females was 21.2. When non-Natives were excluded, the median age of the population (22.9 for males and 20.7 for females) was marginally lower but was slightly above Alaska Native medians for all North Slope Borough villages (22.6 for males and 19.8 for females) at that time. Nevertheless, the median ages of male and female Wainwright residents were well below those of the State (26.1 for males and 26.3 for females) and the country as a whole (28.8 for males and 31.3 for females) in 1980.

A closer look at the age breakdown of Wainwright's population in 1980 indicates that there was a high proportion of children in the very young
<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Race</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alaska Native</td>
<td>Non-Native</td>
</tr>
<tr>
<td>1975-1980</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>1970-1974</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>1960-1969</td>
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<td>0</td>
</tr>
<tr>
<td>Before 1960</td>
<td>69</td>
<td>1</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>82</strong></td>
<td><strong>11</strong></td>
</tr>
</tbody>
</table>

a/ For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated head of household.

b/ Includes one unit used as group quarters.

### TABLE 38

**POPULATION COMPOSITION BY RACE AND AGE a/**

<table>
<thead>
<tr>
<th>Age</th>
<th>Native Male</th>
<th>Female</th>
<th>Total</th>
<th>Non-Native Male</th>
<th>Female</th>
<th>Total</th>
<th>Total Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4</td>
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<td>23</td>
<td>51</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>30</td>
<td>24</td>
<td>54</td>
</tr>
<tr>
<td>5 - 9</td>
<td>14</td>
<td>14</td>
<td>28</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>18</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>10 - 14</td>
<td>16</td>
<td>14</td>
<td>30</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>17</td>
<td>16</td>
<td>33</td>
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<td>15 - 19</td>
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<td>23</td>
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<td>45</td>
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<tr>
<td>20 - 24</td>
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<td>50</td>
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<td>1</td>
<td>24</td>
<td>27</td>
<td>51</td>
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<tr>
<td>25 - 29</td>
<td>14</td>
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<td>28</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>15</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>30 - 34</td>
<td>14</td>
<td>6</td>
<td>20</td>
<td>4</td>
<td>7</td>
<td>11</td>
<td>18</td>
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<td>35 - 39</td>
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<td>10</td>
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<td>40 - 44</td>
<td>10</td>
<td>7</td>
<td>17</td>
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<td>2</td>
<td>11</td>
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<td>6</td>
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<td>0</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>6</td>
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<td>60 - 64</td>
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<td>70 - 74</td>
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<td>0</td>
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<td>3</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Over 74</td>
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<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>187</strong></td>
<td><strong>154</strong></td>
<td><strong>341</strong></td>
<td><strong>19</strong></td>
<td><strong>14</strong></td>
<td><strong>33</strong></td>
<td><strong>206</strong></td>
<td><strong>168</strong></td>
<td><strong>374</strong></td>
</tr>
</tbody>
</table>

**Median Age**

- Native: 22.9
- Non-Native: 20.7
- Total: 21.7

**31.5**

**32.0**

**31.8**

**23.3**

**21.2**

**22.2**

---

**a/** Figures exclude a total of 21 persons (10 Alaska Native males, 7 Alaska Native females, 4 non-Native males) for whom no age information was provided. Thus, a total of 395 persons in Wainwright was surveyed by Alaska Consultants, Inc.

COMPOSITION OF POPULATION 1980

NORTH SLOPE BOROUGH

STATE OF ALASKA

WAINWRIGHT

sources: U.S. Census
Figure 19
Children under the age of 5 accounted for 14.4 percent of the community's population in 1980, a higher proportion than any other North Slope village except Anaktuvuk Pass and Point Hope. A July 1982 village census found that this age range accounted for an even higher 16.4 percent of the community's population.

The 1980 housing survey also found a high proportion of Wainwright's population to be in the 15 to 19 (12 percent) and the 20 to 24 (13.6 percent) age ranges. The July 1982 Borough census found that this was still true (11.8 percent in the 15 to 19 age group and 12.6 percent in the 20 to 24 range) although to a slightly lesser degree. The extent to which people in these age groups choose to remain in Wainwright will determine the community's future growth. In turn, these decisions will be influenced by the availability of jobs in the village.

According to the 1980 housing survey, males in Wainwright outnumbered females by a 55.1 to 44.9 percent margin. Although the disparity between the sexes was most noticeable among non-Natives, it was also true of Wainwright's Alaska Native population. While Wainwright's male to female ratio was similar to that of the State (53 percent males to 47 percent females) in 1980, it was unlike that of the nation as a whole where females outnumber males.

Not surprisingly, given the high proportion of Wainwright's population which is in the younger age groups, the community has a large number of persons per household when compared with State and national norms. The 1980 housing survey found the average household size in Wainwright to be
4.2 persons, with Alaska Native households in the community a slightly larger 4.4 persons. This is well above the 2.93 and 2.75 persons per household for the State and the nation as recorded by the 1980 Census.

SOCIAL INTERACTION

According to the North Slope Borough housing survey, 37 out of the 395 people (9.4 percent) then living in Wainwright were non-Native. This was close to 1980 Census figures, which indicated that 9.2 percent of the village's population was non-Native.

Wainwright appears to be the most “Eskimo” of all North Slope villages. The only longer term white residents in the village in the fall of 1983 were the school principal and his family. In addition, unlike Point Hope, Atqasuk or Barrow, there are currently no non-Inupiat persons on the Wainwright city council. Essentially all whites presently living in the village are there for employment-related reasons, with the major employers of non-Natives in permanent positions being the North Slope Borough School District and the North Slope Borough Department of Public Safety. From time to time, the Assembly of God has a resident white minister and his family based in the village and the Olgoonik Corporation’s construction arm also retains outside expertise. Finally, there have been non-Native women living in the village who are married to local Inupiats, but this number also fluctuates.

During 1982 and 1983, construction of the new elementary school, a new airport and road projects resulted in a significant influx of non-Native
workers into the village. This influx appeared to create a considerable amount of resentment among local residents, resentment which was openly expressed at a city council meeting attended by Alaska Consultants, Inc. in 1982. However, since Olgoonik and the prime contractor on the school project have subsequently participated in joint ventures, some of this resentment may have been overcome.

In an effort to explore this issue further, people interviewed as part of the 1983 fieldwork for this study were asked if they felt that there were any jobs in Wainwright held by whites which should be held by Inupiats. Of the 7 persons who expressed an opinion on this subject, only one gave an unqualified “yes” although another three felt that this was true for construction jobs. When asked why they felt that Inupiats had not been hired for such jobs, three of the four persons indicated that the “bosses” believed that Inupiats were less reliable in terms of punctuality.

In summary, there was little overt resentment of non-Natives noted in Wainwright except in the case of transient construction workers. On the other hand, resident non-Natives appear to exert very little political influence in this community.

MIGRATION

Since 1980, there has obviously been some in-migration into Wainwright as the community’s 19.3 percent growth rate between 1980 and 1983 is well in excess of what could be expected from natural increase. As in
the case of Point Hope, much of the increase at Wainwright is believed to be due to the return of former village residents in response to increases in local construction employment opportunities. Data collected by the John Muir Institute (1983) confirmed that there was a good deal of coming and going of Inupiats between Wainwright and other villages for family and friendship reasons as well as employment.

The recency of this in-migration was confirmed by the 1980 North Slope Borough housing survey when one person in each household was asked how long he or she had lived in Wainwright. Slightly more than 77 percent indicated that they had lived in the village at least since before 1960. Only 3 Alaska Natives (and 9 non-Natives) said they had moved to the village since 1975. While some people who said they had always lived in Wainwright may have left periodically, these answers did indicate that no major influx of “outside” Inupiats was taking place at that time.

Since the duration of construction employment associated with the North Slope Borough capital improvements program is expected to be relatively short and since there is presently a lack of alternative employment in the village, Wainwright residents were asked about their mobility as part of the 1983 fieldwork. These questions were framed in terms of past or present employment on the Pipeline--and at Prudhoe-Bay/Deadhorse and what such persons liked most and least about such experiences.

At the time of the 1983 fieldwork, there were reportedly 2 or 3 local Wainwright persons who were employed at Prudhoe Bay although none were interviewed for this study. Local residents reported that only a
handful of persons from Wainwright had worked on the Pipeline. The motives for working there were said to be financial, as they were in other villages. People interviewed indicated that they preferred to work in their own village so that they could be close to their families and able to participate more fully in subsistence activities. As long as there were jobs available in Wainwright, residents generally felt little incentive to seek employment elsewhere. However, given the temporary nature of construction jobs and the fact that most major facilities in the village will have been built within the next two years, local sentiments could very well change as the Borough's capital improvements program winds down.

RECENT TRENDS AND CHANGES

Wainwright's population rose by 19.3 percent between 1980 and 1983. As previously indicated, much of this growth is believed to have been derived from the in-migration of former village residents in response to increased opportunities for temporary construction employment associated with the North Slope Borough's ongoing capital improvements program. The construction arm of the Olgoonik Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act, has participated in a number of these projects, including the new elementary school, the fire station and the new airport runway. The Borough's capital improvements program has also resulted in the addition of a smaller number of permanent jobs associated with the operation and maintenance of new Borough facilities.
Major Borough construction projects underway in Wainwright during the summer of 1983 included the elementary school and additions to the high school, a new health clinic, gravel dredging and construction of a new airport runway. An influx of transient white construction workers associated with these projects has been accommodated in construction camps in town. A dredge camp is located out of town at the dredge site. Aside from Borough projects, an hotel built and owned by Olgoonik was completed in the village during 1983.

Economy

Wainwright's beginnings as a modern community go back to 1904 when the first schoolhouse was constructed here but there were people living in the general area long before that time.

Early economic activity in Wainwright centered around reindeer. Concern by the Bureau of Education over dwindling Native food resources led to the introduction of reindeer herds at all schools and church missions in western and northwest Alaska. By 1918, Wainwright had three herds with a total of 2,300 reindeer. By 1924, there were four herds with about 8,000 head of reindeer and by 1934, locally owned herds included 22,000 animals. However, a combination of overgrazing, changes from individual to corporate ownership of herds, and the introduction of open herding led to a dramatic decline in the number of reindeer. The surviving animals mixed with migratory caribou herds and today there are no domesticated reindeer on the Arctic coast.
Coal was another community economic asset. Most coal was stripped from the north bank of the Kuk River about 6 miles inland, although some was taken from the beach. It provided a relatively inexpensive means of heating homes; but fuel oil was seen as being more efficient and little coal is now used in the village.

At the time of the 1939 Census, Wainwright's population was only slightly less than that of Barrow. However, largely because of the Navy's exploration program in Naval Petroleum Reserve No. 4 between 1944 and 1953, Barrow grew rapidly between 1939 and 1950. By contrast, Wainwright's population declined by a third during that same period. This is believed to be mainly because a number of Wainwright families moved to Barrow and elsewhere in search of wage paying jobs.

Today, the North Slope Borough is the major source of employment and income in Wainwright, as it is in all villages in the Borough. Since its incorporation in 1972, the Borough has assumed responsibility for a wide range of local government services and has embarked on an ambitious capital improvements program. Together, these activities have led to the creation of a number of service and temporary construction jobs for village residents.

Passage and implementation of the Alaska Native Claims Settlement Act (ANCSA) in 1971 has also had an impact on the local economy. This legislation, with its land and financial settlements, has provided additional economic leverage for village residents through the creation of village and regional profit corporations. In Wainwright, the local
village corporation is an active force in the community's non-government business activities.

COMPOSITION OF EMPLOYMENT

Employment statistics published by the Alaska Department of Labor cover the entire North Slope Borough, including Prudhoe Bay, and therefore do not provide meaningful statistics for individual communities. To understand local employment conditions in Wainwright, a special count of employment was taken in August 1982.

The August 1982 employment count identified a total of 138.5 jobs in Wainwright on an annual average full-time basis (see Table 39). This figure included local residents who worked at the nearby LIZ-3 DEW Line station but excluded on-base personnel. The count of employment also included an annual average of 13.5 non-local persons working on construction-related jobs for non-local contractors in Wainwright during 1982, principally associated with the new elementary school.

Over half of the jobs counted in Wainwright in 1982 (51.3 percent) were in government occupations. Except for 1.5 jobs associated with the post office and another 1.5 with the City of Wainwright, all government employment in the community (i.e., 68 jobs) were with the North Slope Borough in 1982. The North Slope Borough School District was the major Borough employer with an annual average of 29.5 full-time employees, followed by the Borough's Public Works department which had an annual
TABLE 39

AVERAGE ANNUAL FULL-TIME EMPLOYMENT a/
WAINEIGHT

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
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<td>0.0</td>
</tr>
<tr>
<td>Mining</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>40.5</td>
<td>29.2</td>
</tr>
<tr>
<td>Manufacturing</td>
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<td>0.0</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
<td>3.0</td>
<td>2.2</td>
</tr>
<tr>
<td>Trade</td>
<td>15.0</td>
<td>10.8</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>4.0</td>
<td>2.9</td>
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<tr>
<td>Services</td>
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</tr>
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<td>Federal</td>
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<td>( 1.1)</td>
</tr>
<tr>
<td>State</td>
<td>( 0.0)</td>
<td>( 0.0)</td>
</tr>
<tr>
<td>Local</td>
<td>(69.5)</td>
<td>(50.2)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>138.5</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a/ Includes two local residents employed at the LI-3 DEW Line station but excludes all personnel stationed on-base.

Source: Alaska Consultants, Inc.
average of 24.5 employees here in 1982, including the dredging program which got underway during that year.

After government, the largest number of employees counted in August 1982 was engaged in construction activities. The major employer in this group was Olgoonik Construction, a subsidiary of the Olgoonik Corporation. This company was engaged in joint ventures on several Borough capital improvement projects during 1982 and was also building an hotel.

Wainwright has a relatively large trade sector for a village of this size, employing an annual average of 15 persons during 1982. The largest single employer was the Wainwright Cooperative Store, followed by the Olgoonik Corporation tank farm. Two other stores, one operated by the village corporation, mostly sold groceries. A fourth store specializes in sporting goods.

An annual average of 5 jobs was identified in the services sector at Wainwright in 1982. These jobs were associated with the Olgoonik Corporation garage, the Presbyterian church and operation of the Blackstock camp.

Four jobs in the finance, insurance and real estate sector were counted at Wainwright in 1982, all of them associated with the Olgoonik Corporation's central office.
The transportation, communications and public utilities sector accounted for 3 jobs here in 1982. Two local persons were employed at the nearby L1Z-3 DEW Line station and the remaining job was divided between two taxi operators.

There were no jobs in the agriculture, forestry and fishing, the mining or the manufacturing sectors in Wainwright in 1982. Furthermore, no Wainwright residents were working outside the village at Prudhoe Bay or other oil or gas-related sites in August 1982.

Like other North Slope Borough villages, the employment situation in Wainwright has changed dramatically during the past few years. According to a survey by the Alaska State Housing Authority in 1970, there were not more than a dozen Eskimo people in town at that time who were steadily employed. A count of employment in Wainwright by Alaska Consultants, Inc. in 1977 identified a total of 57.5 jobs on an average annual basis, with 60 percent of these being in government occupations. The 1982 count represents a 141 percent increase in total employment over the 1977 figure.

UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT

There are no reliable statistics available which document rates of unemployment in Wainwright or any of the other North Slope villages. Figures published by the Alaska Department of Labor for the North Slope Borough include Prudhoe Bay where everyone is employed and where most
jobs in the region are located. As a result, conditions in the region's traditional villages are obscured.

Despite the lack of firm statistics, it appears that there is some unemployment or, at least, some under-employment in Wainwright. An August 1982 census sponsored by the North Slope Borough counted 275 persons in Wainwright between the ages of 18 and 65, including 140 males. When compared with the total of 138.5 full-time job equivalents (which includes some non-local construction personnel) counted here in 1982, the gap between population and employment is especially noticeable. On the other hand, a significant proportion of Wainwright females is outside the labor force (i.e. they are not seeking work) and many local males are engaged in temporary construction activities rather than in full-time, year-round occupations.

A factor that must be taken into account in assessing the amount of unemployment and under-employment in Wainwright and other North Slope villages is the amount of time devoted to subsistence activities. Such activities are very important in the lives of local residents, but fit well with temporary employment such as is provided by construction work.

Given the above conditions, unemployment in Wainwright is probably not nearly as severe as suggested by a comparison of population and employment statistics. A key factor in local employment levels in recent years has been the North Slope Borough which is the source not only of steady jobs associated with the provision of services such as
education and utilities but also of temporary construction employment associated with its ongoing capital improvements program. Once the major capital improvement projects at Wainwright have been built, however, the opportunities for temporary or seasonal construction employment in the village will be greatly reduced. At that time, local unemployment levels could be expected to rise unless other economic opportunities are present.

Weather conditions can cause seasonal variations in local temporary construction employment. However, the main variations are related to the number and type of capital improvement projects being constructed locally. For example, uneven scheduling of construction work from year to year can result in unemployment or it may necessitate the importing of labor for jobs which otherwise could have been filled by local residents.

INCOME LEVELS

The 1980 Census found the median household income for the North Slope Borough to be $31,378. The median household income statewide in 1980 was $25,421, while the mean household income for Alaska Natives was $21,865.

A comprehensive housing survey conducted for the North Slope Borough in 1980 obtained income information for individual communities. In Wainwright, this information was based on a sample of 73 households. It
found the median household income in Wainwright to be $23,958, with that for local Alaska Native households a slightly lower $23,333.

Although household income levels at Wainwright in 1980 were below the Statewide median, there is ample evidence which demonstrates that incomes here have risen dramatically over the last ten to twelve years. In 1970, the Alaska State Housing Authority reported that less than 5 of the 50 Alaska Native families then living in Wainwright had incomes of over $7,000. A 1974 survey of 51 Wainwright households by Dupere and Associates indicated that the median family income in the community had risen to $5,833 in 1973. More recently, a 1977 survey by Alaska Consultants, Inc. found that the median household income in this community was $10,000 in 1976.

Incomes in Wainwright in 1976 were relatively low because there were a temporary shutdown of most Borough capital improvement projects at that time. Nevertheless, the 1979 median household income figure derived from the 1980 North Slope Borough housing survey was more than double the 1976 figure, indicating gains in income beyond what could be explained by inflation. Although there are no statistics to document it, income levels in Wainwright in 1983 were doubtless higher than they were in 1980, mainly because of the currently high level of construction activity in the village.

While household income levels at Wainwright have risen to a point where they do not appear to be much lower than those recorded Statewide by the U.S. Census, the spending power of incomes in remote areas such as
Wainwright is greatly diminished by high living costs. Wainwright is more easily accessible by water than most villages in the region. Nevertheless, a high proportion of freight into Wainwright is brought in by air, a situation which adds significantly to costs. As a result, store-bought food prices here are probably about double those in Anchorage and subsistence hunting and fishing activities remain an economic necessity for most local residents.

Housing costs in Wainwright, especially those for utilities, are also extremely high and serve to further reduce the spending power of household incomes. Heating oil cost $2.45 per gallon here in 1983, or $134.75 for a 55-gallon drum. The average home Wainwright reportedly uses between 4 and 5 drums per month during the winter months. Including delivery costs, the average family thus spends close to $600 per month for much of the year just to heat its home.

ECONOMIC GROWTH PROSPECTS

Like other villages on the North Slope except for Barrow, Wainwright has a relatively simple economic base. The dominant economic force in the community is government spending, especially by the North Slope Borough. Other sources of economic strength include the activities of the Olgoonik Corporation (the local village corporation established under terms of the Alaska Native Claims Settlement Act) and, to a limited extent, the nearby LIZ-3 DEW Line station which employs a couple of local residents.
As in all North Slope villages, the major employer of Wainwright residents is the North Slope Borough. In 1982, direct Borough employment accounted for 49.1 percent of all full-time jobs in the community. This figure is very conservative as Borough-funded private construction activities accounted for a large share of the remaining jobs in the village. When those construction jobs are added, the North Slope Borough provided in excess of 70 percent of all jobs in Wainwright in 1982.

Borough employment in Wainwright and the other North Slope villages can be divided into two types. The first is jobs associated with the maintenance and operation of Borough facilities such as the schools, the health clinic, the public safety building and utilities systems. The second is jobs associated with the construction of capital improvement projects. It is important to recognize the difference between these two types of Borough jobs. Jobs associated with operation and maintenance are relatively permanent, while construction jobs are temporary and their number fluctuates from year to year.

Construction activities associated with the North Slope Borough’s capital improvements program are currently at a high level in Wainwright. Major construction projects here include the new elementary school and modifications to the high school, a health clinic, a new airport runway and a dredging program. New projects scheduled to be added in the near future include a warehouse/maintenance building for use by the North Slope Borough School District and the Public Utilities department, a very large warm storage/maintenance building for Borough
mobile equipment, 14 new housing units, expansion of the water treatment plant, a new power plant and the addition of water tankage facilities. These and other scheduled Borough capital improvement projects should keep local construction employment levels high for the next few years. However, in the longer term the level of construction employment generated by the North Slope Borough can be expected to taper off as community needs are met. Unless other economic activities can pick up the "slack", some decline in community growth can be expected at that time.

The Olgoonik Corporation received a cash distribution and rights to select the surface estate totaling 159,825 acres of land in the general vicinity of Wainwright under terms of the Alaska Native Claims Settlement Act. The corporation has become a major economic force in the village. Its activities currently center around ownership of a village store, the local fuel dealership, a garage and a construction company. Olgoonik Construction has been involved in a number of joint ventures on Borough construction projects in the village and has also been engaged in independent ventures such as construction of the new hotel during 1982 and 1983. In addition, the firm has participated in construction projects at Point Lay and Kuparuk. The Olgoonik Corporation is also involved in the Pingo Corporation, a construction management company made up of several North Slope villages and which operates primarily in the Prudhoe Bay area.

Two Wainwright residents presently work at the LIZ-3 DEW Line station. This facility had a total of only 15 employees in 1982. Thus, the
potential for additional employment opportunities for local residents here is very limited. Furthermore, the lack of a road connecting the DEW Line station with Wainwright makes ready access between the two entities difficult.

According to city officials, no local residents were employed in oil and gas exploration or development activities in the Prudhoe Bay, National Petroleum Reserve-Alaska (NPR-A) or other areas during 1982. However, 2 or 3 persons from the village were reportedly working at Prudhoe Bay at the time of the 1983 fieldwork and more may do so in the future. The U.S. Bureau of Land Management held three oil and gas lease sales in the Reserve between January 1982 and July 1983. Additional offerings will be held in July through 1987, by which time most acreage of possible industry interest will have been made available. The 1983 sale did not include any tracts in the immediate vicinity of Wainwright, but this may not be true of future sales.

Offshore oil and gas exploration activities could also have an impact on Wainwright in the future. The federal government presently has two sales scheduled in the Chukchi Sea area, the first in February 1985 and a second in February 1987.

The extent to which oil and gas exploration and/or development activities impact on Wainwright depends on the location of tracts to be leased, the extent of industry interest and the success of exploration efforts. These are all presently “unknowns” but should such activities take place in the vicinity of Wainwright, the community could be
impacted. Exploration companies might wish to use Wainwright's airport facilities, as has been the case at Kaktovik. However, job opportunities for local residents during the exploration phase are seen as being very limited since much of this work is highly specialized.

While oil and gas-related activities have not been major employers of Wainwright residents in the past, this may change in the future. Once the North Slope Borough capital improvement projects scheduled for Wainwright have been largely built, opportunities for jobs in the community are likely to decline. At that time, local people may decide to take oil and gas-related jobs outside their village in order to support the increasing cash requirements to maintain their homes in Wainwright. Such jobs have the advantage of combining long work hours with generous leave allowances and could provide time for workers to continue to pursue traditional subsistence activities.

SUBSISTENCE ECONOMY

Because of two recent Wainwright studies (John Muir Institute 1983 and Nelson 1981), no additional subsistence field data were collected in this village. These sources demonstrate that the subsistence economy of Wainwright is similar to other villages of the study area. As Nelson (1981:v-vi) states:

"Life in Wainwright today is patterned around a mixed subsistence and cash economy. Of the two, the subsistence base is more predictable and stable over the long run. Jobs come and go, but hunting is always there, so long as the integrity of the environment is not disturbed. In recent years the village has seen a major increase of cash and employment opportunities, yet people have maintained fairly intense subsistence activities. Many
individuals have changed the scheduling of these pursuits, but very few (if any) have given them up.”

Wainwright hunters have adopted the same technologically advanced hunting equipment as the other communities of the study area, and the effects of this equipment on harvest areas, scheduling and hunting pressure are discussed by Nelson. Wainwright bowhead whale hunters are the only whale hunters on the North Slope who usually use aluminum boats for spring whaling. A few skin boats are still used in the early part of the whaling season when more ice is present. Later in the season when the leads are wide and bowheads travel further from shore, Wainwright hunters have had good success searching for and pursuing whales at higher speeds in their power-driven aluminum skiffs. For a complete discussion of bowhead whaling in Wainwright see Nelson (1981: 81-98).

That Wainwright residents have enjoyed the same increase in local employment opportunities as the other villages of the study area is demonstrated by a 141 percent jump in local employment between 1977 and 1982. Approximately half of these jobs are provided directly by the North Slope Borough and the subsistence leave policy described in the regional overview of the subsistence economy is therefore applicable. As is the case in the other villages of the study area, contract construction, almost all of it sponsored by the North Slope Borough, is the other major source of local employment. Typically, construction employment is temporary and allows village residents ample time for subsistence pursuits.
Because of the high levels of local employment, Wainwright hunters, like all other subsistence users of the study area, are presently able to afford the relatively high costs associated with the purchase, maintenance and operation of new equipment. Although harvesting a given amount of meat is more costly than it was in the past, present harvest techniques are more time and energy efficient. Consequently, the mixed economy presently active in Wainwright allows local residents to both work for cash and harvest the desired amount of subsistence foods.

**Political Organization**

**FORMAL POLITICAL ORGANIZATION**

There are two primary political or quasi-political organizations in Wainwright. These are the City of Wainwright and the Olgoonik Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act. Although the latter is not a public body, its board is elected by corporate stockholders and the corporation is in fact a potent political force in the community. In addition, the North Slope Borough has an appointed village coordinator in Wainwright.

**North Slope Borough**

The North Slope Borough has an appointed village coordinator in each North Slope village except Barrow whose job is to maintain a liaison between the village and the Borough mayor's office. The effectiveness
of the coordinators varies widely, depending on their position in the village and the diligence of particular individuals. Village coordinators work out of their homes since no office space is provided for them in any Borough facilities. The coordinator in Wainwright has held his position since it was first established.

**City of Wainwright**

The City of Wainwright was first incorporated as a fourth class city under Alaska law in 1962 and was reclassified as a second class city in 1972. Funds for the city's operation are derived from a 3 percent local sales tax, State shared revenue, land purchases by the North Slope Borough and by occasional State or federal grants.

Wainwright's corporate limits take in a semi-circle extending from Point Collie in an arc to a point south of the Sinaruruk River. The exact acreage which these limits encompass is unknown because the city's boundary description is so vague. Consistent with State law for second class cities, Wainwright has a 7-member city council. However, while second class cities are normally empowered to undertake a wide range of local government functions, Wainwright has few municipal powers since most have been assumed by the North Slope Borough on an areawide basis. Despite this limitation, the city represents the people of Wainwright and is the group which makes local desires for community improvements known to the North Slope Borough.
The City of Wainwright and the Olgoonik Corporation originally reached a 14(c)(3) agreement (i.e. lands to be conveyed to eligible municipalities under the terms of Section 14(c)(3) of the Alaska Native Claims Settlement Act, as amended) as far back as August 1977. Under the original agreement, the Olgoonik Corporation transferred title to most lands outside the Wainwright townsite which were within the municipality's corporate limits. However, the original agreement was over-simplified and the city and the corporation were re-working the details of the agreement during September 1983. This was apparently proceeding with few problems.

The city government maintains a permanent office which is staffed by a full-time city clerk, with the mayor normally working at the office in the afternoons. Council meetings are held in the same building.

When asked if the city had developed any formal position on offshore oil and gas development, the city indicated that it had not yet done so although the subject has been discussed. While the city indicated that it was not necessarily opposed to offshore oil and gas development, it expressed concern over possible impacts on subsistence. A need for detailed studies was also mentioned.

Olgoonik Corporation

The Olgoonik Corporation was created under terms of the Alaska Native Claims Settlement Act and is the major land owner in the Wainwright
area. Its stockholders are persons who enrolled as Wainwright residents and this, its landholdings, its ownership of a store, an hotel, a construction company and the local fuel dealership (aside from its activities outside the village), make it a strong political as well as economic force in the community.

Olgoonik Construction, the construction arm of the Olgoonik Corporation, has been successful in obtaining Borough contracts in the village, often as part of a joint venture, for the past several years. Current projects in which this corporation is involved include the new elementary school and modifications to the high school, plus construction of a new airport runway. The corporation has also been involved in projects outside Wainwright, including the Point Lay fire station and Kuparuk.

The Olgoonik Corporation was asked if it had taken any official position in relation to offshore oil and gas development. According to corporation representatives, it had not but similar concerns to those voiced by the city were expressed.

INFORMAL POLITICAL ORGANIZATION

Aside from the City of Wainwright and the Olgoonik Corporation and its construction arm there are a number of other groups in Wainwright which have some political significance. These include the Presbyterian and Assembly of God churches, the National Guard, the local Alaska Eskimo
Whaling Commission, the Mothers' Club, the Recreation Committee, the Motor Mushers and the search and rescue/firefighting group.

The dominant religious group at Wainwright is the Presbyterian church. The minister is an Inupiat who has lived in Wainwright for many years and who is well respected in the village. Church services are held "twice a week and, according to local residents, attendance has increased in recent years. The Assembly of God has maintained a presence in Wainwright for many years and also holds twice weekly services but it has a much smaller congregation.

The National Guard has long been an important organization in this and several other North Slope villages, with local Guard leaders being accorded a certain amount of respect. According to the Alaska Department of Military Affairs, there is an authorization for 32 guardsmen in Wainwright. As in Point Hope, people interviewed as part of the 1983 fieldwork felt that the Guard had declined in importance in recent years, presumably for the same reasons.

The local Alaska Eskimo Whaling Commission also exercises political influence in Wainwright. All whaling captains in the village belong to this group and one representative from Wainwright also serves on the full Commission. According to local sources, the Wainwright whaling captains at one time filed a formal complaint against seismic testing in the Chukchi Sea. As in other North Slope whaling villages, the importance of whaling in the subsistence economy gives the local Commission a certain amount of influence and status. Although that
influence and status do not necessarily transfer to individuals, being a whaling captain is certainly a political asset.

Search and rescue has long been an important organization in Wainwright and one which attaches a good deal of prestige to its members. Search and rescue functions have recently been assumed by the North Slope Borough and search and rescue and firefighting volunteers are now one and the same group. Despite the changes in organization, search and rescue/firefighting remains a volunteer group and its members continue to be accorded status. (See John Muir Institute 1983: 257-263).

The Mothers' Club was started in 1982 by a local resident after attending a Statewide conference for Alaska Native women. This group holds bingos for a variety of social purposes such as helping with plane fares for persons accompanying relatives to hospital, helping with funeral costs for families who cannot afford them, contributing food and supplies to whaling crews, and helping people with their fuel costs if needed. Although the Mothers' Club is relatively new in Wainwright (the organization had existed in the community in the past but not in recent years), it appears to be a prestigious group.

The Recreation Committee and the Motor Mushers both raise funds through bingo games. The Recreation Committee sponsors games and other events, usually on special occasions such as July 4th, while the Motor Mushers is a social service club organized around snowmobiling. According to the John Muir Institute (1983), the latter group organizes races and
provides food to churches at Thanksgiving and Christmas sharing ceremonies.

Land Use and Housing

LAND STATUS

City of Wainwright

Wainwright's corporate limits cannot be precisely described because of the vague description which accompanied the original petition to the State for incorporation of the city. The application for incorporation was approved in December 1962 and no clarification of the municipal boundaries has since been made. However, the original town site survey is clearly within Wainwright's corporate limits.

The Wainwright townsite was patented to the Townsite Trustee in the U.S. Bureau of Land Management in 1976. At that time, Wainwright residents were able to apply for title to land on which their structures were located. Many chose to hold their land in a restricted status. This is an option available to Alaska Natives when they receive title to land in a Native Townsite. Restricted title retains some of the trust relationship between the federal government and Native citizens. Title conditions limit the Native owner's ability to sell or transfer his property. On the other hand, land held under this type of ownership is not subject to taxation, nor can zoning, housing, building or other regulatory codes be enforced. In 1983, 75 lots totaling 25 acres in
area were held in a restricted status in Wainwright. Many of the older homes in the community are on restricted land.

The remaining lands in the Wainwright townsite have been deeded in an unrestricted status to individuals, churches and government agencies. Negotiations are currently being finalized for transferring ownership of the airport tract within the Wainwright townsite from the State to the North Slope Borough and the Olgoonik Corporation.

Outside the original townsite area, the City of Wainwright is entitled to receive land under Section 14(c)(3) of the Alaska Native Claims Settlement Act where the Olgoonik Corporation is required to turn over up to 1,280 acres of its land to the City of Wainwright for purposes of municipal expansion, rights-of-way for public use and other foreseeable community needs. Title to most of this acreage was originally transferred to the city in February 1977. However, the original agreement was later determined to be over-simplified and a new agreement was being worked out in September 1983.

Wainwright Area

Land tenure outside the immediate Wainwright townsite and 14(c)(3) lands area includes land interim conveyed to the Olgoonik Corporation, land selected but not yet conveyed to the Olgoonik Corporation, land withdrawn for the Air Force and Native allotment applications.
The Olgoonik Corporation's entitlement under terms of the Alaska Native Claims Settlement Act totals 115,200 acres of Section 12(a) and 44,625 acres of Section 12(b) lands. The conveyance of village selected lands is limited to the surface estate. Normally, the regional corporation would receive title to the subsurface estate of lands selected by village corporations in its region. However, the Claims Act retained for the federal government all subsurface rights in the National Petroleum Reserve-Alaska (NPR-A) while providing the Arctic Slope Regional Corporation with selection rights to alternative lands outside the Reserve. An exception to this rule was created by Section 1431(0) of the Alaska National Interest Lands Conservation Act (ANILCA) whereby the Arctic Slope Regional Corporation, at its option, may exchange subsurface lands it has already selected for subsurface rights to lands beneath village corporation land in NPR-A when public lands in NPR-A within 75 miles of lands selected by a village corporation are opened for purposes of commercial development (rather than exploration) of oil or gas. All lands selected by the Olgoonik Corporation are within NPR-A (see Figure 20).

The Olgoonik Corporation has yet to receive patent to its selected lands. However, the Bureau of Land Management has made an interim decision to convey surface title to the corporation for most of these lands.

The Air Force's DEW Line site, LIZ-3, is located inland about 5 miles east of town and has an associated tank farm at the Chukchi Sea coast northeast of the community. All told, this facility occupies close to
Land Tenure
Wainwright Area
1983

Legend

Legend

Olgoonik Corporation — Interim Conveyance
Olgoonik Corporation — Selection
City of Wainwright—14(c)(3) Reconveyance Area
Federal
Wainwright Native Townsite and USS 2401
Native Allotment Applications

Alaska Consultants, Inc.
Anchorage, Alaska
Adapted from cartography by Northwest Cartography, Inc.
Seattle, Washington

Figure 20
1,185 acres of land. The DEW Line site was originally withdrawn on December 26, 1957 through the issuance of Public Land Order (PLO) 1571. This PLO was later amended by PLO 1851 on May 14, 1959 and then partially revoked by PLO 5455 on December 11, 1974, leaving the current acreage of 1,185 acres.

Finally, some Native allotment applications exist within lands selected by the Olgoonik Corporation. None of these applications are in the immediate vicinity of the Wainwright townsite. Native allotments are essentially homesteads of up to 160 acres of non-mineral lands which were granted to Alaska Natives, generally for subsistence purposes. Indian allotment authority in Alaska was cancelled with passage of the Alaska Native Claims Settlement Act. However, applications which were pending at the time the Claims Act legislation was passed are eligible for consideration. This provision for pending Native allotment applications did not originally apply to what is now known as National Petroleum Reserve-Alaska (NPR-A) unless potential allottees could prove use and occupancy of sites prior to the withdrawal of the Reserve in 1923. An attempt to rectify this problem was made by Section 905(1) of ANILCA but a January 1983 ruling by the Regional Solicitor found that Section 905(1) of ANILCA did not adequately address the subject and suggested that a previous court suit (Leavitt vs. Andrus) be reinstated for a final determination on this issue. As in the case of restricted Indian lands, Native allotments are not subject to taxation or to local or State government regulation.
Subsistence Land Use Patterns

This section briefly describes the major fish and wildlife resources derived from the marine environment which are presently harvested by Wainwright residents. Two important locally harvested non-marine resources (caribou and freshwater fish) are not addressed. The following discussion of Wainwright's contemporary marine resource harvest patterns is based on recent work by Nelson (1981).

Wainwright is located on the Chukchi Sea coast about 100 miles southwest of Barrow. Local residents' marine subsistence activities are focused on the coastal waters from Icy Cape in the south to Point Franklin and Peard Bay in the north. The Kuk River lagoon system, a major marine estuary, is also an important marine and wildlife habitat used by local hunters. Unlike Point Hope or Barrow, communities located on major geographic points, Wainwright is situated in the middle of a long bight which affects sea ice conditions as well as marine resource concentrations. The village is located on a small peninsula with the Chukchi Sea to the north and the Kuk estuary extending inland to the south. Presently, over 450 people live in Wainwright and depend on both cash income and the continued harvest of subsistence resources for their economic wellbeing.

Nelson (1981) summarized the seasonal round of Wainwright residents as follows:

"Fall. Fishing in the upper Kuuk and Utqqaq Rivers is a major activity, with many families staying in fish camps for periods of several days to two months or more. Caribou hunting intensifies as the fall migrations pass in September and October. Other fall
Winter. Fishing activities shift from the upper river to the Kuuk Lagoon near Wainwright, where smelt and tomcod are abundant. Men travel widely inland and near the coast, trapping foxes and hunting caribou. Polar bears and seals are hunted during times favored by the right weather and sea ice conditions.

Spring. Whaling is the hallmark of this season and the most important subsistence activity of the year. Hunters in the offshore camps take bowhead whales, belugas, polar bears, seals, and waterfowl. Some people travel widely inland in the spring, searching for caribou, moose, fox, and other furbearers. These trips may take them as far as the Brooks Range.

Summer. Early summer is an important season for hunting seals and waterfowl, and families often move to traditional camping sites along the coast at this time. Camps may be occupied into mid-summer, when the main subsistence activities include sealing, fishing, and caribou hunting. Throughout the ice-free season, boats from Wainwright ply the coastal waters and especially the Kuuk River, mainly to set fishnets and hunt caribou. These activities intensify toward late summer and continue until freeze-up in the fall."

Fish

Traditionally, fish were probably one of the more reliable and stable subsistence resources available to people in this area but after the area's population settled permanently on the coast at Wainwright, inland fishing trips declined and were at a low level by 1960 (Nelson 1981:17). Over the past twenty years, however, fish have become an increasingly important local-food source. Although Wainwright residents fish in most marine and freshwater habitats (open coast, lagoon, estuary and river), the most important local fish harvest takes place in the fall (September through November) in freshwater. Villagers establish seasonal camps in the freshwater portions of the Kuk and other river drainages and fish
for several days to several months, depending on the needs and preferences of the family harvest network.

Ice fishing for smelt and "tomcod" in the vicinity of the village begins once the Kuk Lagoon has frozen but is most common in the winter months of January, February and March. During the summer, villagers use set gill nets to harvest fish along the coast and along the lower reaches of the Kuk Lagoon. Species harvested include Arctic char, chum and pink salmon, as well as Bering cisco and sculpins.

Marine fishing occurs from Peard Bay to Icy Cape and in the Kuk Lagoon (see Figure 21). Fishing, both freshwater and marine, provides an important food source for Wainwright's present residents. Finally, because both women and children are involved in this harvest, social and familial ties are strengthened and young people are introduced to the harvest activity.

Migratory Birds

Most bird species commonly harvested by Wainwright residents are migratory; the major exception being ptarmigan which are locally available throughout the year. Waterfowl hunting begins in May at bowhead whaling camps on the landfast ice. The northward migration of murres, ducks, geese and cranes along the coast continues through June and hunting pressure is heavy (see Figure 22). The spring waterfowl flyways are narrow and the migration is concentrated in a short time span. Both of these factors facilitate local harvest success for
waterfowl. Once the bird populations disperse to summer ranges, however, harvesting decreases. Because the fall migration occurs over a wide area and continues for several months, harvest success at this time is also limited. The only location in the Wainwright harvest area where significant numbers of birds can be harvested in the fall is Icy Cape.

Waterfowl are a highly desired food in Wainwright. Although the volume of meat produced does not compare with other subsistence resources, waterfowl provide fresh meat and a needed change in diet when other resources are in short supply.

**Seal and Ugruk**

There are four species of seal present in the Wainwright area for all or part of the year: ringed, bearded, spotted and ribbon seals. The traditional and "contemporary importance of each of these seal species in Wainwright's subsistence economy is a function of their overall abundance. Ringed seal is the most common species and is generally available in all but the ice-free months. Ugruk, or bearded seal, is available during the same seasons as ringed seal, but not in equally prodigious numbers. These two species are the most commonly harvested seals in Wainwright today. Spotted seals are common in the coastal lagoons during summer and, until 1972 (Marine Mammal Protection Act), were actively pursued for their pelts. Today, most spotted seals are taken in the Kuk Lagoon, with the pelts being used locally for fancy parkas. Ribbon seals are rare spring and summer visitors to this region.
and few are presently harvested. Focal hunting areas are presented in Figure 23.

Concentrations of ringed and bearded seals are largest during June and July, coincidental with the dispersal of shore ice. With the replacement of the dog team by the snowmachine and the availability of other food sources (caribou and bowhead whale), seal hunting has decreased in importance. Today, most seal hunting takes place while the animals sleep on the ice or from boats in open water. Although the importance of seal meat has declined in recent years, seal oil is still a staple food source. Bearded seals are the preferred source of oil and, of all seals, an immature bearded seal is considered the most desirable as a subsistence food source.

**Walrus**

Although walrus occasionally overwinter in the Wainwright area, most are presently only seasonally. Walrus herds first appear in June, drifting north on ice pans. The greatest concentrations, and peak hunting, occur in July and August in association with the southern edge of the retreating pack ice. Hunters travel by boat among the ice floes, sometimes far offshore, in search of walrus. Focal hunting areas are presented in Figure 24. Walrus migrate south during the open water season (late August and September), and Wainwright hunters occasionally harvest them at this time when they haul out and rest on the beaches.
Traditionally, walrus was the main source of dog food in Wainwright. Today, harvest pressure on this species is limited because there are fewer dogs to feed. Walrus provide variety in the human diet, while continuing to be used for dog food. The tusks are saved and used for carving. The importance of this resource to Wainwright residents could change in the future if dog teams are re-established, the availability of other resources changes, or changes in the cash economy occur.

Belukha

Belukha is a desired resource in Wainwright but the harvest success and, consequently, the importance to the subsistence economy, is extremely variable from one year to the next. This species commonly migrates in the same leads as the bowhead whale and is effectively hunted by whaling crews out on the ice. However, harvesting belukha at this time can potentially jeopardize the bowhead whale harvest and therefore is only done if no bowheads are in the area.

During the summer, belukha are common visitors in the numerous lagoon systems on the Chukchi Sea coast. According to Wainwright elders, belukha were once regular visitors in the Kuk Lagoon but, because the animals are sensitive to disturbance and noise, their use of this estuary has diminished. During summer, local hunters are occasionally successful at herding significant numbers of belukhas into shallow water where they are shot and hauled to shore. This method, however, is not as reliable as harvesting belukha earlier in the year from whaling camps. Local harvest areas for belukhas are presented in Figure 25.
Desired for both their meat and muktuk, belukha are enjoyed by Wainwright residents when they are available. As with the bowhead whale, harvests of this animal are usually shared with all members of the community. Because Wainwright residents are reluctant to concentrate on belukha harvesting during the bowhead whaling season, they must rely on the unpredictable summer harvest for the major volume of this resource. Consequently, the importance of this species in the subsistence economy varies from year to year.

**Bowhead Whale**

The bowhead whale is the most important marine resource in Wainwright's subsistence economy. Culturally and socially, the importance of this species is unparalleled. Wainwright bowhead hunting occurs in late April and May as the animals migrate north to summer feeding grounds in the Beaufort Sea. The hunters establish camps along the edge of the landfast ice. During some seasons, these camps are 10 to 15 miles offshore. Wainwright residents do not hunt bowheads in open water during the fall migration south. In 1982 and 1983, Wainwright whalers landed two bowheads each year.

Nelson (1981:82) noted three distinct phases of the bowhead’s migration north. The first run usually takes place in late April or early May. This group, the largest in number, primarily consists of younger whales running with a few older whales. The second run, which occurs shortly after the first, is smaller and is comprised of various aged adults, as well as a few young whales, traveling in groups of two or three. The
final movement of northward migrating whales occurs in late May or early
June and includes many larger whales. Depending on ice and weather
conditions, these migrations can be widely dispersed or compressed into
a shorter time period.

Ice conditions in the offshore area adjacent to Wainwright are not
ideal for bowhead whaling. The leads often break far from shore and
multiple leads are not uncommon. In addition, leads in this area are
often much wider than those adjacent to Point I-lope or Barrow.
Consequently, there have been changes in Wainwright's hunting patterns
in recent years. Among the local adaptations for whaling is the use of
aluminum skiffs with outboard motors. These are effective in the wide
leads common later in the whaling season and allow Wainwright hunters to
pursue and harvest bowheads far offshore. Skin boats, better adapted to
sea ice (quieter and easier to paddle when whales are confined to narrow
leads) are now primarily used during the early part of the season when
more ice is present. Wainwright whalers hunt bowheads near their
village and as far south as Icy Cape and as far north as Point Franklin
(see Figure 26).

Bowhead whale is the favorite food source of most Wainwright residents
other harvest activity requires the entire community's participation and
support, and whaling is integrated with many aspects of Wainwright's
social life.
Wainwright Subsistence Use Areas:
BOWHEAD WHALE

Concentration areas or focal hunting areas

© North Slope Borough
VILLAGE LAND USE PATTERNS

Like many Inupiat communities, Wainwright developed in a linear form along the coast. This form was accentuated by the original townsite survey and by the location of the airport parallel to the coast, immediately beyond the inland boundary of the town. Within town, development was originally centered around the old school. Until recently, that school, plus the adjacent co-op store, an old city hall and the National Guard armory served as the focus of community activity and most of the older buildings in the village are in this general area.

During the past ten years or so, however, the center of development in Wainwright has gradually shifted away from the old school. A new high school and an elementary school have been built in the southwest portion of town. In addition, most major facilities, including the post office, public safety building, community building, city offices, water treatment plant, fire station and the new health clinic are located along Airport Road (the road which leads to the airport), southwest of the old center of the village (see Figure 27).

There is no concentration of commercial uses in Wainwright. In August 1982, there were four stores in the village - the co-op store and a store run by the Olgoonik Corporations both of which sell groceries and a range of general merchandise; a small grocery store; and a store which specializes in the sale of sporting goods. Other commercial uses included an hotel owned by the Olgoonik Corporation which was being built by Olgoonik Construction during 1982 and has since been completed;
the offices of the Olgoonik Corporation (in the same building as the corporation's store); two temporary buildings being used as construction offices; and kitchen facilities operated by two construction camps. (One construction company active in Wainwright in 1982 had personnel in several bunkhouses around town but maintained a single kitchen facility. That structure burned down in 1983).

Utility and storage uses in Wainwright in 1982 included the power plant, located in the vocational education building of the high school and its associated fuel tanks; the water treatment plant along Airport Road and its associated water tanks; fuel tanks associated with the former elementary school in the old center of town; and the village corporation tank farm, shop and warehouse facilities located a short distance outside the northwest boundary of the Wainwright townsite. A Borough equipment storage building on Main Street between the water tanks and the high school was torn down in 1982 to make room for the new elementary school. A new and much larger vehicle maintenance and storage building is to be built immediately beyond the northern boundary of the townsite, near the village corporation tank farm.

The options for village expansion are limited in Wainwright. Expansion to the north is limited by the presence of snowfences and several cemetery tracts prohibit expansion to the northeast. The alignment of the airport runway also limited expansion inland and squeezed development in the southern portion of town. Construction of a new airport runway which is more closely aligned to prevailing winds should alleviate some of this problem.
### TABLE 41

**WAINWRIGHT HOUSING INVENTORY a/**  
**AUGUST 1982**

<table>
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<th>Housing Program</th>
<th>Condition of Units</th>
<th>Total</th>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>96</strong></td>
<td><strong>16</strong></td>
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a/ Excludes five units used as camps/bunkhouses by itinerant construction personnel, a bunkhouse used by the North Slope Borough School District and three small NARL cabins. Also excluded are 14 units of North Slope Borough single family housing under construction.

b/ Includes seven units in the two 4-ploxes.

c/ Includes a unit in the 4-plex and 2 apartments in the old elementary school.

Source: Alaska Consultants, Inc.
Of the remaining units in the village, 25 were built by the Alaska State Housing Authority in 1971, 6 were built with Veterans loans, 3 were built with Bureau of Indian Affairs funds administered through the Inupiat Community of the Arctic Slope (ICAS) and the remaining 52 units were privately constructed.

As in other North Slope villages, there is a sharp contrast in the condition of houses built by the North Slope Borough and other homes in the village. All Borough units were considered to be in acceptable condition in August 1982, i.e. they were standard structures. Units built with Bureau of Indian Affairs assistance are new but tend to be smaller than Borough homes. Housing built by the Alaska State Housing Authority was classed as being in acceptable condition. However, these units have a number of major deficiencies, as do units built with financial assistance from the Veterans Administration. Only 17 of the 52 privately built houses in Wainwright were considered to be standard structures. Many privately built units are old and were built from makeshift materials since those were all that was available locally.

Substandard housing in Wainwright, much of it vacant, tends to be concentrated in the area around the old school. While some Borough units have been built in this area, most of the newer Borough units have been concentrated in the south end of town and have contributed to the further elongation of the village's development pattern. Several units along the coast appear to be threatened by beach erosion. The Borough had made some attempt to stop this through the placement of metal drums. However, the drums appear to be exacerbating the problem.
As part of the 1983 fieldwork, an effort was made to find out if people in Wainwright felt that the construction of new homes by the North Slope Borough and others had resulted in social dislocation by making it possible for younger (or older) people to move into separate housing. As in the case of Point Hope, almost everyone interviewed preferred the new arrangement. The only people who expressed some dissatisfaction were either persons caring for an elderly or sick relative or they were single men who normally ate at their parents' homes. No one expressed any fear that extended families were being broken up as a result of the new housing and people generally preferred the privacy afforded by separate accommodations. Family ties are maintained through visiting and, very recently, by use of the telephone.

Another impact of the new housing is that the village is now much more spread out and travel between different points in the village by snowmachine or truck has become more common. There were also two taxicab operations in Wainwright in the summer of 1982.

**Community Facilities and Utilities**

**Administrative and Miscellaneous Public Buildings**

Administrative and miscellaneous public buildings in Wainwright include a community building, a warehouse built by the Alaska State Housing Authority which is used as city offices, and a National Guard armory.
The community building is owned by the City of Wainwright. It was completed in 1978 and is located on Airport Road between the public safety building and the new fire station. The building is 1,872 square feet in area and was designed to provide city offices and a large multi-purpose area for both formal and informal meetings, including city council sessions. It was also used for a variety of community events such as bingo, Eskimo dancing, modern dances and indoor games. However, a June 13, 1982 fire destroyed the west wall of this structure and the city offices relocated to a former Alaska State Housing Authority warehouse across the street. Repair of the building was scheduled to get underway in September 1983 and to be completed by the end of September 1983. According to the mayor, however, the city offices would not be moved back into the community building.

The former Alaska State Housing Authority warehouse, now used as city offices, was built in June 1975 and is located across Airport Road from the community building and the public safety building. It is a 768 square foot structure which was built by the Alaska State Housing Authority to store materials during the period when that agency was doing rehabilitation work on Alaska State Housing Authority units in the village. Between 1979 and 1982, the structure was used by the North Slope-Borough School District as a classroom for small motor repair. In its present use, the building is open between 9 am and 5 pm for city business and is staffed by a full-time city clerk and part-time by the mayor. The building is also used in the evenings for city council and other meetings. It is a one story wood frame Blackstock (pre-Borough construction program) home which is wired but has no plumbing.
The Wainwright National Guard armory is owned and operated by the Alaska Department of Military Affairs. It is a 1,200 square foot metal structure similar in design to armories in Point Hope and Barrow which is used for National Guard training sessions and for the storage of training gear which includes M-16 rifles, 2 snowmachines, sleds, skis, snowshoes, rucksacks, sleeping bags and other equipment. According to the Alaska Department of Military Affairs, there is authorization for 32 guardsmen in Wainwright.

PUBLIC SAFETY

Police Protection

As elsewhere in the North Slope Borough, police protection services in Wainwright are provided by the North Slope Borough which currently has two officers stationed in the village. The public safety building is located on Airport Road between the post office and the community building. It is an 880 square foot (20 feet by 44 feet), one story wood frame structure which includes an office, a kitchen, a storage/workshop area and two temporary holding cells.

The Wainwright public safety building was the prototype for others in the North Slope Borough villages outside Barrow although it is smaller. It was built in 1978 with funds from the U.S. Law Enforcement Assistance Administration which were channeled through the Criminal Justice Planning Agency in the Office of the Governor, plus some Borough funds. The building is in generally good condition. However, its small size
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<tr>
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This category identifies non-criminal public safety activities. It includes service requests, agency assists, public assists, transport of the sick or injured and other responses to non-criminal situations. The public safety officer may be called upon for a wide variety of activities ranging from chaperoning dances to helping a sick person to the clinic.

Source: North Slope Borough Department of Public Safety.
and the location of holding cells in a wood frame building are of concern to the Borough Public Safety department. The department has developed tentative plans to build a new public safety building in Wainwright and convert the existing facility to public safety officer housing but no final decision on this has yet been made.

Borough public safety officers in Wainwright and other North Slope villages spend a great deal of their time in non-criminal activities (see Table 42). Law enforcement problems here are primarily related to alcohol abuse. As a means of dealing with that issue, the City of Wainwright recently adopted an ordinance which prohibits the importation of liquor into the village, even for personal consumption. Another law enforcement problem was apparent when only one public safety officer was stationed in the village. When that officer was sick, on leave, traveling on official duty, or otherwise away from the community, there was no police authority in Wainwright. This problem common to all of the smaller villages in the Borough, should be remedied now that two public safety officers are again stationed here.

**Fire Protection/Search and Rescue**

The North Slope Borough has provided fire protection services on an areawide basis since 1980. Since assuming this power, the Borough has constructed fire stations in each of its villages outside Barrow and has embarked on a program to train firefighting volunteers. Although the Search and Rescue division is part of the Public Safety department for administrative purposes, volunteer firefighting and search and rescue
personnel in the villages are one and the same group, with both
duties being housed in the new fire station.

The Wainwright fire station was completed in 1983 and is identical to
fire stations built in other small Borough villages at that time. It is
located on Airport Road, between the community building and the new
Olgoonik Corporation hotel, and is a prefabricated metal structure 72
feet in width and 65 feet in depth (4,680 square feet) set on pilings,
with access provided by a metal grating ramp. The central portion of
the station is a large apparatus room sized to house two fire trucks, an
ambulance and two snowmachines, plus a boat (with motor) belonging to
the Borough Search and Rescue division. The building also houses a
utility room, a furnace/generator room, two large storage rooms (one
designed for use as a training area under heavy smoke conditions), a
training/meeting area, an office/communications center, a small bunkroom
for transient Borough Fire department personnel, a small kitchen,
lockers, showers and toilet facilities, plus additional storage space.

Rolling stock housed in the fire station includes an engine company
truck with a mounted 2,000 gallon water tank, a 500 gallon per minute
pump, fire hose and appropriate nozzles, ladders and cabinets for
personnel gear and air-packs; a tanker truck mounted with a 3,000-gallon
water tank, a 500 gallon per minute pump, hose and nozzles; and a
Chevrolet Suburban modified for ambulance use with a raised roof and
stretcher racks, equipped with stretchers, splints, a trauma box and an
oxygen unit. Search and Rescue equipment is also housed here.
Firefighting personnel are members of the North Slope Volunteer Fire Department/Search and Rescue force. Training programs have been begun by the North Slope Borough, with initial emphasis being on use and maintenance of the new equipment in a manner which meets basic criteria for prompt and effective fire response.

There have been no deaths or serious injuries resulting from fires in Wainwright in the past few years. Recent fires include a house and tent being used as a construction camp in 1983, the west wall of the community building in June 1982, destruction of a Borough housing unit in October 1981, destruction of a North Slope Borough 12-plex in July 1979 and destruction of the original water treatment plant in November 1963. A mutual help housing unit was damaged by fire in 1979 but has since been repaired. In Wainwright, as elsewhere in the arctic, the harsh climate places a steady, heavy load upon heating equipment, increasing the probability of fire incidence from equipment malfunction or misuse. Furthermore, low temperatures and prevalent strong winds make firefighting extremely difficult once a fire gains headway.

Search and rescue has a long history in Wainwright. Prior to Borough involvement, the Wainwright search and rescue group was organized with eight officers and with all able bodied men in the village as volunteers. Equipment was stored in a small metal building on Ahloaksageak Street in the old part of town and a boat was stored outside this building. Construction of the new fire station has provided this group with a much needed place to meet and search and rescue and firefighting personnel are now one and the same group.
While all firefighting/search and rescue personnel in Wainwright and the other villages outside Barrow are volunteers, the Borough has permanent staff for both functions in Barrow. The Borough Search and Rescue division also maintains two helicopters and a fixed wing aircraft in Barrow for use in search and rescue and medi-vac situations.

HEALTH

Primary health care services in Wainwright are provided by the North Slope Borough Health and Social Services Agency through the Community Health Aide program. These services are supplemented by regular visits to the village by doctors, dentists, nurses and other health care providers. When needed, Wainwright residents can use either the Barrow Public Health Service hospital or the Alaska Native Medical Center in Anchorage for in-patient or out-patient services.

The present village clinic is located on Kuk Road in the northern part of town. It is a 576 square foot one story wood frame structure which was originally a house. Internally, the building is divided into two examination rooms and a waiting room. The useful life of this structure as a health clinic is over and its replacement is necessary to carry out the comprehensive program which has been assumed by the Borough's Health and Social Services Agency.

Construction of a new 4,400 square foot health clinic located on Airport Road is currently underway and should be completed in late 1983. The clinic portion of the new building will include 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. Itinerant quarters with two double bedrooms, a kitchen/dining/living area and a bathroom are also included, as is a mechanical/electrical room, a janitor’s closet and a garage/storage area. The entry from the garage area is designed to provide direct access from the ambulance to an examination room to meet entry/trauma requirements.

A wide range of equipment is to be provided for the new clinic, including X-ray equipment for use by itinerant professional staff. In addition, the consulting/telehealth room will be equipped with slow-scan TV equipment linked through telephone circuits to units in the Barrow office of the Borough Health and Social Services Agency, the Barrow Public Health Service hospital and the Alaska Native Medical Center in Anchorage. This equipment will be used for consultations between the local community health aides 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. Finally, an ambulance for transporting patients is already housed in the village fire station, while a 3-wheeler and a trailer will be kept in the garage area.

The North Slope Borough Health and Social Services Agency attempts to maintain a staffing level of two health aides in each village. It is hopeful that the new clinic’s better working environment will encourage aides to hold their positions for longer periods and that it will encourage greater public appreciation of the aides’ position.
Records maintained by the Alaska Area Native Health Service indicate an average of 10 patient visits per day to the present health clinic. Greater use of the new clinic is anticipated, not only because of the potential for improved service but because of a broader emphasis which is being placed by the Borough Health and Social Services Agency upon health practices and conditions.

EDUCATION

Education services from Early Childhood Education (ECE) through the 12th grade in Wainwright are provided by the North Slope Borough School District. The Wainwright school is located in the southern portion of town between Main Street and the edge of town. This site houses both the Alak high school and the new Wainwright elementary school. The old elementary school is more centrally located between Ahloaksageak Road and Church Road. Construction of the Alak high school was completed in 1979 and the new Wainwright elementary school was first occupied in August 1983, at the beginning of the 1983/84 school year. The old elementary school was built by the Bureau of Indian Affairs in the early 1960's.

The Alak high school includes six classrooms, including one used for home economics, one used as a typing room but also for other classes, and one used in the 1982/83 school year as a good attitude lounge for students, plus a library. The adjacent vocational education building includes two shops, one for metal and one for woodwork. Other facilities at the high school in the 1982/83 school year included a kitchen, locker rooms and an administration area. A 10,307 square foot
addition to the high school was completed in 1983 in time for occupation in the 1983/84 school year. This addition was designed to include a student store, an arts and crafts room, a swimming pool, a weightlifting room, a gym storage room, public rest rooms for persons using the pool and gymnasium, several small storage/mechanical rooms associated with the pool, plus a substantial addition to the kitchen storage area.

The new Wainwright elementary school is a 9,248 square foot structure designed to house five full size classrooms (1 for ECE, 1 for kindergarten plus 3 for remaining elementary school classes), a library, a special education room, a large work room which would serve as a teachers' lounge, an office and associated storage rooms. A new 2,160 square foot utility building was also completed in 1983 to include an emergency generator, water storage, a water treatment plant, sewage storage and a separate water tank for the school sprinkler system. Except for two teacher apartments, the old elementary school is now used only for the warm storage of school supplies.

During the 1982/83 school year, the Wainwright school had a principal and an assistant principal. The elementary school had four teachers who taught full-time (one for ECE/kindergarten, one for the first and second grades, one for the third and fourth grades and one for the fifth and sixth grades) plus a special education teacher who spent most of his time at the elementary school but who also taught some high school classes. The Alak high school had one teacher for English/physical education, one for English/home economics, one for science, one for Inupiaq and typing who worked half-days, one for vocational education.
and the seventh and eighth grades, plus one who taught elementary school physical education, seventh and eighth grade education and who also spent half a day per week counseling and taught a high school geometry class. Other school staff included five aides at the elementary school, two cooks, a plant manager and four maintenance personnel plus a full-time janitor. The school occasionally also hires local residents for special projects such as skin sewing classes.

Excluding ECE/kindergarten, final enrollment in Wainwright for the 1982/83 school year was 87 students (see Table 43). During that same year, the student body included 9 non-Natives. One local student instead attended school at Mount Edgecumbe.

As part of the 1983 fieldwork, people were asked what they thought of the local education system and if it was meeting the needs of the people. Assuming that the people interviewed were reasonably representative, there appears to be some dissatisfaction with the high school education which students are receiving in the village. Of the 10 people who expressed an opinion on this subject, five said they thought that children were able to get a better education when they went to school at Mount Edgecumbe, one person thought that children would be able to handle college more easily if they had gone outside the village to high school, one mentioned that more children dropped out when they stayed in the village for high school and yet another thought that children were not disciplined enough if they remained in the village. Only two people interviewed said that they preferred their children to
**SCHOOL ENROLLMENT TRENDS BY GRADE a/ b/ c/**

WAINRIGHT

1959/60 - 1982/83

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**Total Excluding ECE Kindergarten**

1959/60 - 1982/83

11 12 14 12 8 6 86 96 105

**Notes:**

a/ Final enrollment figures.

b/ Education in Wainwright provided by the Bureau of Indian Affairs through 1974.

c/ ADM (Average Daily Membership) for school years 1980/81, 1981/82 and 1982/83 was 106.96, 107.50 and 110.5 respectively.

d/ No breakdown of enrollment by grade available prior to 1966/67 school year.

Source: Alaska Department of Education.
obtain their high school education in Wainwright and both cited family rather than quality of education reasons for their opinions.

RECREATION

Prior to construction of the community building and the high school gymnasium formal recreation facilities in Wainwright were limited to a half basketball court at the old elementary school, while facilities for adults centered around a former movie theater, bingo games and activities associated with the churches.

Although it has not been used since a June 1982 fire, the community building is scheduled to be repaired by late September 1983 and will again be available for bingo, traditional Eskimo and modern dances, movies, games and community meetings. The school gymnasium is available to the general public after school hours for children and for adult activities. In addition, a swimming pool constructed as part of additions to the high school in 1983 is normally open to the public after school hours.

Community events receive strong support in Wainwright. These events center around the Fourth of July, Thanksgiving and Christmas/New Year. In addition, numerous feasts are held in connection with whaling activities, with the biggest being Nalukatak held each year at the end of the whaling season, usually in June. Wainwright residents also participate in a variety of informal recreation activities involving picnics and visiting with friends and relatives. The village has long
had an active Eskimo dance group and Eskimo dances and games are held several times each year.

UTILITIES

WATER

Prior to 1973, Wainwright residents obtained their water from a lake almost 2 miles southwest of the village near Point Collie. However, Wainwright was one of two villages in the State (the other was Emmonak) selected by the U.S. Environmental Protection Agency for a demonstration project during the early 1970’s. As part of that project, a plant designed to provide safe water, waste water disposal and human waste disposal, as well as laundry, toilet, bathing and sauna facilities was constructed at Wainwright in 1973. In association with that project, the U.S. Public Health Service built a 1 million gallon water tank to store raw water. The original EPA building was destroyed by fire in November of that same year. Reconstruction of the building was completed in 1975 and the North Slope Borough assumed responsibility for its maintenance and operation in 1979.

Wainwright has continued to use the same water source used by individuals prior to construction of the water treatment plant (name used by the Borough for the EPA building). The lake freezes to the bottom during the winter. As a result, a polyethylene hose is run out to the lake during the summer and water is pumped into two 1 million gallon storage tanks (the original Public Health Service tank and a
second tank built by the North Slope Borough) in town. To date, the village water source has proven to be reliable and capable of providing water in sufficient quantities for community needs. However, Wainwright has been plagued by water storage problems. The Public Health Service tank was built on pilings which have settled unevenly, while the second tank which was built on a gravel pad has also settled differentially.

Water is drawn from the water storage tanks and is filtered and chlorinated prior to being stored in a 5,000 gallon potable water storage tank in the water treatment plant. Service is provided to the old elementary school via an arctic pipe leading from the water treatment plant. However, service is frequently interrupted because of pipe breakages. The Wainwright school (Alak high school and the new elementary school) are connected to the water treatment plant via an above ground utilidor system. (The utilities building completed in 1983 as part of the school project will process all water to be used in the Wainwright school, including that for the swimming pool). All other water users in the village rely on water delivered by a Borough Public Utilities department heavy duty truck with a 2,000 gallon holding capacity. Frequency of delivery varies according to demand and to the availability of Public Utilities department staff.

There have been a number of problems associated with the Wainwright water system. Aside from problems with the existing water tanks, there is a danger of cross-contamination in the water treatment building because of the proximity of waste treatment and water treatment processing operations. Delivery service has been subject to frequent
interruption because of problems in maintaining the water truck, a problem made worse by the current lack of a warm storage building for the vehicle. In addition, the washeteria facilities have been out of service for much of the time, as have the toilet and shower facilities.

Planned upgrading of Wainwright's water system by the North Slope Borough includes increasing the village's water storage capacity and renovation of the water treatment building. Other improvements being considered include a permanent line to the village water source and corrosion protection for the water tanks. In addition, a vehicle maintenance and storage building will be built in the near future to accommodate all Borough equipment in the village, including utility vehicles. This should lead to more efficient operation of the water truck.

As of August 1982, there were 112 occupied housing units in Wainwright. Other water users included the schools, the stores, the village corporation offices, the health clinic, the public safety building, the hotel, the new fire station and several construction camp facilities. Department of Public Utilities records for the period July 1 through December 31, 1982 indicate an average daily use of 3,445 gallons or 7.4 gallons per capita. Actual use rates would normally be significantly higher since the department's figures exclude water picked up at the tank free of charge plus water consumed by the showers, toilets, sauna and washeteria at the water treatment plant. For the July through December 1982 period, however, these facilities were seldom in operation.
and the department's figures are therefore probably reasonably representative of actual consumption.

**Sewage**

Before 1973, sewage disposal in Wainwright was handled on an individual basis. This was modified in 1973 (and later in 1975 when the first building burned to the ground) by the U.S. Environmental Protection Agency which built a water treatment plant in the village to provide safe water, waste water disposal and human waste disposal, as well as laundry, toilet, bathing and sauna facilities. The North Slope Borough assumed responsibility for the operation of this building in 1979.

As in many other villages, there are two systems of sewage disposal at Wainwright. The schools and washeteria are connected to the sewage treatment processing unit in the water treatment plant and the new fire station, the new health clinic and the new hotel are each equipped with holding tanks for the collection of backwater which can be emptied by the Borough sewage truck. However, most other public facilities and housing units in the village continue to rely on honeybuckets.

Within the water treatment plant, sewage treatment consists of flocculation and chlorination and the treated effluents are disposed of through an outfall line leading to the ocean. The old elementary school is connected to the water treatment plant by an arctic pipe which contains both freshwater and backwater lines, but that service is often disrupted because of line breakage. Service lines to the Wainwright
school are housed in an above ground utilidor which also contains freshwater and backwater lines. However, the sewage outfall line from the water treatment plant to the beach is currently broken and sewage is instead transported from the plant to the beach by the Borough sewage truck.

Disposal of sewage waste generated by businesses and residences not connected to the water treatment plant involves storage of the wastes in 55-gallon drums lined with plastic bags. These drums are then periodically picked up and transported to the village dump located about 1.5 miles northeast of the village. Because there is not yet a permanent road to the dump, access to that site is limited to a route along the beach in the summer or across the tundra in the winter. Neither route can be traversed by the Borough sewage truck.

The dumping of graywater under or near buildings during the winter months complicates sanitation problems as it leads to ice accumulations and adds to surface drainage problems after break-up. In addition, the volume of graywater discharged in the village increases as the water delivery system is upgraded and as new buildings with internal plumbing are built.

Wainwright's present system of sewage disposal is not satisfactory. Improvements planned by the North Slope Borough include renovation of the present utilidor and arctic pipe, upgrading of the water treatment plant and repair of the outfall line. Complete separation of water treatment and sewage treatment processes in the water treatment plant is
also planned. Development of a road to the dump and a landfill facility will improve sanitation hazards in the village caused by the storage of large numbers of sewage-filled drums lined with plastic sacks. Finally, construction of a new vehicle maintenance and storage facility will permit housing of the sewage truck in a heated building which should make it easier to keep the vehicle operational.

Solid Waste

Solid waste disposal services in Wainwright are the responsibility of the North Slope Borough Department of Public Utilities. However, because of the lack of a road to the village dump which can be traversed by Borough equipment, solid waste disposal is done on an individual basis. The present dump site is located about 1.5 miles northeast of the village and can be reached along the beach in the summer or across the tundra in the winter.

As with sewage pick-up services, a major obstacle to solid waste disposal at Wainwright is the lack of a road to the dump. The absence of a formal dump site compounds this problem. One result of these problems is the accumulation of garbage (and sewage) in the village, a situation which is not only unsightly but which poses health hazards. The Borough has plans to build a road out to the dump site area and to develop a landfill near that location. Once access to the dump has been provided, pick-up of garbage by Borough Public Utilities vehicles will be possible and a major community annoyance will have been removed.
Electric Power

Electric power generation and distribution services at Wainwright are the responsibility of the North Slope Borough Department of Public Utilities. Like other North Slope Borough villages outside of Barrow, electric power in Wainwright is all diesel-generated. The present power plant is located in the vocational education building adjacent to the Alak high school and houses four generators with a combined total rated capacity of 1,010 KW (see Table 44). Three of the generators have been equipped with engine governors to permit their operation in parallel. However, the largest generator cannot be paralleled with the remaining units. The present distribution system is primarily a 7,200/12,470 volt three phase loop feed system with single feed lateral feeders.

Like other North Slope Borough villages, Wainwright has experienced rapid growth in electric power demand during the past few years, due both to community growth and to the construction of major facilities. Department of Public Utilities records show the peak power demand for fiscal year 1979/80 at 290 KW that for 1980/81 at 350 KW and that for 1981/82 at 410 KW. Department records also indicate that sales of power in the village totaled 588,674 KWH for the six month period from July 1 through December 31, 1982. Total sales in January 1983, excluding the schools, amounted to 157,001 KWH. As of that latter date, there were 141 meters in service. New housing construction and planned major public facilities should ensure a continued growth in average and peak power demands.
TABLE 44

FIRM AND PEAK GENERATING CAPACITIES

WAINRIGHT

OCTOBER 1982

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Prime Mover</th>
<th>Make</th>
<th>Horsepower</th>
<th>Nameplate Capacity (KW)</th>
<th>Generator Unit</th>
<th>Make</th>
<th>Voltage</th>
<th>Hours Operated a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAT</td>
<td>270</td>
<td>160</td>
<td>CAT 480</td>
<td>21,137</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>CAT</td>
<td>235</td>
<td>160</td>
<td>CAT 480</td>
<td>10,473</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>CAT</td>
<td>450</td>
<td>250</td>
<td>CAT 480</td>
<td>9,717</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>CAT</td>
<td>755</td>
<td>440</td>
<td>CAT 480</td>
<td>2,631</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1,010</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a/ Per North Slope Borough Public Utilities Department Village Operations Manager, October 26, 1982.

Source: North Slope Borough Department of Public Utilities.
The Wainwright generators are reported to be in good condition except for normal wear. However, generation capacity is considered to be a problem. Current demands exceed the plant's generation capacity, even when the schools and the water treatment plant generate their own power. The existing distribution system is also considered to be in need of replacement and having the power plant housed in the vocational education building has proven to be unsatisfactory. Maintenance is a continuing problem, one which is compounded by a turnover of operators.

The Borough is currently studying the feasibility of utilizing natural gas from the Prudhoe Bay or Kuparuk areas, building a major power plant facility at one of those locations, and transmitting electric power to Barrow, Nuiqsut, Wainwright and Atqasuk via an overhead transmission line. The impetus for these investigations is the relatively short remaining life of the Barrow gas fields plus the high cost of diesel fuel.

Fuel Storage

Fuel storage at Wainwright is undertaken by the Olgoonik Corporation, the North Slope Borough School District and the North Slope Borough Department of Public Utilities. In addition, the fire station can store the equivalent of one year's supply of fuel and the new health clinic and vehicle maintenance and storage building will have the same capability.
There are four tank farm sites in Wainwright. The largest and the one which serves the village as a whole is operated by the Olgoonik Corporation and is located near the coast immediately north of the Wainwright townsite. A small tank farm used by the North Slope Borough School District is located at the old elementary school site. However, the main Borough tank farm is located west of the vocational education building of the Alak high school and includes tankage for both the Department of Public Utilities and the North Slope Borough School District. Another tank farm operated by the North Slope Borough Department of Public Utilities is located adjacent to the water treatment plant. The combined total storage capacity in these four tank farms plus the fire station (but excluding new tankage at the elementary school) in 1983 amounted to approximately 799,101 gallons.

Fuel is delivered to the village once a year by barge and is piped via intake lines which run from the ocean to three of the tank farm sites. The fourth site (near the water treatment plant) is filled by using a temporary hose.

The Olgoonik Corporation tank farm serves the village, teacher housing units and a portion of the North Slope Borough Department of Public Utilities' needs. The School District has generally adequate tankage for its requirements, especially with the addition of four additional tanks at the new elementary school. However, teacher housing units are served by Olgoonik because the corporation has a delivery truck. By contrast, the Department of Public Utilities' fuel tank facilities are
inadequate to meet its needs and provision of additional tankage for that purpose is included in Borough construction plans.

Fuel consumption records for Wainwright are sketchy. In 1981/82, an estimated 597,000 gallons of diesel fuel was consumed in the community. This figure rose to close to 666,500 gallons in 1982/83. The amount of fuel consumed in the village will increase further as new facilities in the village are built.

COMMUNICATIONS

Telephone services in Wainwright and other small North Slope villages are provided by the Arctic Slope Telephone Associated Co-op, Inc. (ASTAC), a non-profit cooperative corporation. Seed money for the organization of the cooperative and the preliminary work needed to obtain a certificate of convenience and necessity from the Alaska Public Utilities Commission was provided by the Arctic Slope Regional Corporation. Once the certificate was obtained, loans for plant acquisition and installation were obtained from the U.S. Rural Electrification Administration. The building housing the switchgear was built by the North Slope Borough and is leased to ASTAC which owns the switchgear, telephone cable and other system support equipment.

The provision of local dial telephone service was a major advance over the previous bush telephone system. According to information provided by ASTAC in February 1983, Wainwright had a total of 104 residential and 34 business telephone subscribers.
ATQASUK

Introduction

Atqasuk is located inland from the Arctic Ocean on the Meade River and is within the boundaries of National Petroleum Reserve-Alaska (NPR-A). The village is about 60 miles south of Barrow, 58 miles east of Wainwright and 477 miles northwest of Fairbanks. It was incorporated as a second class city under Alaska law on October 25, 1982.

The present site of Atqasuk is not far from Old Atqasuk and Tigaluk which had been used traditionally as base camps for hunting, trapping and fishing. Tigaluk was also the site of a small underground sub-bituminous coal mine which began operations during World War II and continued until the early 1960's.

The re-establishment of Atqasuk at its present site was encouraged and sponsored by both the Atqasuk Corporation and the Arctic Slope Regional Corporation, the village and regional corporations established under terms of the Alaska Native Claims Settlement Act of 1971. Unlike the other two re-established villages on the North Slope (Nuiqsut and Point Lay), however, the village layout and initial development of Atqasuk was handled by the North Slope Borough rather than by the Arctic Slope Regional Corporation.

Much of the information on Atqasuk contained in the following pages was collected by Alaska Consultants, Inc. for the North Slope Borough and
was published in the June 1983 report entitled "Background for Planning: City of Atqasuk". That information was supplemented by fieldwork conducted specifically for this project during the summer of 1983 and by observations from ongoing work in the village being conducted for the North Slope Borough. Information on the subsistence economy and subsistence land use was collected in the field in 1983 specifically for this study.

Population

PAST POPULATION TRENDS

Atqasuk was re-established during the mid-1970's, with the first residents living in tents until the first North Slope Borough housing units were built in 1977. The 1980 Census counted 107 Total residents. According to a Borough-sponsored census in July 1982, the community's population had reached 210, almost double the 1980 figure. Another Borough-sponsored census in July 1983 found that Atqasuk's population had risen still further to 231, representing a 115.9 percent increase since 1980 (see Table 45).

ORIGIN OF POPULATION

The village of Atqasuk was re-established by Barrow residents. This was confirmed by the 1980 North Slope Borough housing survey which asked Atqasuk villagers to name their prior place of residence. Thirteen of the 14 Alaska Native households interviewed answered this question and
### TABLE 45

**POPULATION TRENDS ATQASUK 1939 - 1983**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1939</td>
<td>78 a/</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>49 a/</td>
<td>-37.2</td>
</tr>
<tr>
<td>1960</td>
<td>30 a/</td>
<td>-38.8</td>
</tr>
<tr>
<td>1970</td>
<td>e-</td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td>1983 b/</td>
<td>231</td>
<td>115.9</td>
</tr>
</tbody>
</table>

---

**a/ Old Atqasuk.**

**b/ 1983 population based on a July 1983 count by the North Slope Borough.**

**Sources:**

U.S. Bureau of the Census.
North Slope Borough.
all had come from Barrow. By contrast, of the 5 non-Native households surveyed, 2 had come to Atqasuk from out-of-State and the remaining 3 had come here from Alaska locations outside the North Slope Borough.

The 1983 fieldwork further confirmed the findings of the 1980 housing survey. 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 from Barrow 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 larger 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 be related to the current 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.
According to the 1983 fieldwork, about two-thirds of the people interviewed planned to remain permanently in Atqasuk, with the remainder indicating that if they did move it would be to Barrow. Of all the North Slope villages, Atqasuk maintains the closest ties with Barrow. Over half of the people interviewed still owned houses in the larger city and there is a great deal of travel between the two communities.

**POPULATION COMPOSITION**

The outstanding feature of Atqasuk's population composition is that most residents of this community are Eskimo. According to the 1980 North Slope Borough housing survey, Eskimos made up 88 percent of the village's total population (see Table 46).

The same 1980 Boroughwide housing survey found the median age of the village's population to be 24.8, slightly older than the median of 23.7 for all smaller villages on the North Slope, i.e. excluding Barrow. Atqasuk's higher median age in 1980 in part reflected an unusually high number of residents aged 50 or older. Fully 18.9 percent of Atqasuk's 1980 population was in this age group, compared with 11.6 percent in the smaller Borough villages as a whole (see Figure 28).

A look at Atqasuk's age composition by sex is also revealing. The median age of male Atqasuk residents in 1980 was 30.2, compared with 21.7 for females. This disparity in age between males and females was still in evidence when non-Natives were excluded (28.2 years for males.
TABLE 46

POPULATION COMPOSITION BY RACE AND AGE a/
ATQASUK

<table>
<thead>
<tr>
<th></th>
<th>Alaska Native</th>
<th></th>
<th>Non-Native</th>
<th></th>
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<td></td>
<td>Male Female</td>
<td>Total</td>
<td>Male Female</td>
<td>Total</td>
<td>Male Female</td>
<td>Total</td>
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<tr>
<td>0 - 4</td>
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<td>11</td>
<td>1 0</td>
<td>1</td>
<td>6 6</td>
<td>12</td>
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<td>4 3</td>
<td>7</td>
<td>1 0</td>
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<td>5 3</td>
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<td>10 - 14</td>
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<td>7</td>
<td>0 0</td>
<td>0</td>
<td>1 6</td>
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<td>13</td>
<td>0 1</td>
<td>1</td>
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<td>1 0</td>
<td>1</td>
<td>5 1</td>
<td>6</td>
</tr>
<tr>
<td>30 - 34</td>
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<td>8</td>
<td>4 1</td>
<td>5</td>
<td>8 5</td>
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</tr>
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<td>35 - 39</td>
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<td>5</td>
<td>1 0</td>
<td>1</td>
<td>4 2</td>
<td>6</td>
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<td>3</td>
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<td>1</td>
<td>2 2</td>
<td>4</td>
</tr>
<tr>
<td>50 - 54</td>
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<td>7</td>
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<td>2</td>
<td>6 3</td>
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<td>0</td>
<td>0 1</td>
<td>1</td>
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<tr>
<td>65 - 69</td>
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<td>5</td>
<td>0 0</td>
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<td>2 3</td>
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<td>41 47</td>
<td>88</td>
<td>10 3</td>
<td>13</td>
<td>51 50</td>
<td>101</td>
</tr>
</tbody>
</table>

Median Age 28.2 21.2 23.0 31.0 31.5 31.5 30.2 21.7 24.8

a/ Figures exclude a total of 7 persons (4 Alaska Native males and 3 Alaska Native females) for whom no age information was provided.

COMPOSITION OF POPULATION 1980

Sources: U.S. Census
Figure 28
and 21.2 years for females). Statewide, the median age of Alaska Native males in 1980 (22.6) was well below that found in Atqasuk. Even the overall statewide median age for males in 1980 (26.1) was younger than in Atqasuk, although the statewide median for females (26.3) was above that of the village. The national median ages in 1980 were 28.8 for males and 31.3 for females.

Not surprisingly, given the relative maturity of Atqasuk’s population, the village had a smaller proportion of persons in the very young age ranges in 1980. According to the 1980 North Slope Borough housing survey, 11.9 percent of Atqasuk’s population was under 5 years of age, compared with 13.3 percent for all of the Borough’s smaller villages, i.e. excluding Barrow. All told, 36.6 percent of Atqasuk’s 1980 population was under the age of 20, significantly less than the 47.7 percent in this age range in the smaller villages of the Borough.

Aside from in-migration or out-migration, the childbearing decisions made by the 15 to 29 year age group in Atqasuk will largely determine the community’s rate of growth during the next few years. In 1980, 29.7 percent of Atqasuk’s population was aged between 15 and 29, compared with 34.9 percent for all small North Slope villages and 32.5 percent for the State as a whole.

According to the 1980 housing survey, Alaska Native females in Atqasuk outnumbered Alaska Native males by a 52.6 to a 47.4 percent margin. This was unlike the North Slope Borough as a whole where Alaska Native males outnumbered Alaska Native females in 1980. (Nuiqsut was the only...
other village in the region in 1980 where Alaska Native females were found to outnumber Alaska Native males).

Since 1980, the composition of Atqasuk's population is believed to have undergone a significant change. A July 1983 Borough-sponsored census indicated a 115.9 percent growth in the village's population since 1980, from 107 to 231 residents. Age information was collected as part of a July 1982 Borough census. According to those data, males made up 59.0 percent of all residents in the village. Although the July 1982 figures included some non-resident, temporary construction workers, it still appears that a significant proportion of migrants to Atqasuk after 1980 was made up of males attracted here by employment opportunities. These findings are consistent with those reported by the 1983 fieldwork which noted that earlier migrants to the village were those with family ties to Atqasuk area, while more recent migrants were those who came here because currently high levels of construction employment offered them an opportunity to leave Barrow.

SOCIAL INTERACTION

According to the 1980 North Slope Borough housing survey, 13 of the 108 people living in the village at that time (12 percent) were non-Native. While the number of non-Natives has increased since that time, so has the number of Inupiat residents. If transient white construction workers are excluded, the proportion of non-Natives in the village is not believed to have changed significantly since 1980.
Since at least some Atqasuk residents indicated that changing social conditions in Barrow had precipitated their move from that community, questions were asked about relationships between Inupiat and whites in Atqasuk as part of the 1983 fieldwork. In general, this did not appear to be an issue in the village. The vice-mayor of the city is a non-Native and he, as well as several other locally based "whites", appear to be generally well accepted by the community.

Some negative feelings were expressed about transient white construction workers who were perceived by some Inupiat residents to be taking jobs which could be filled by local people. Such negative feelings were not universal since several Inupiats indicated that imported white workers were necessary to perform skills not possessed by local residents. On the other hand, it was apparent that there was little communication between white construction workers living in camp accommodations and village residents beyond that necessary in the workplace.

MIGRATION

The present community of Atqasuk is less than ten years old. However, although two-thirds of the people interviewed as part of the 1983 fieldwork indicated that they intended to remain permanently in the village, over half of the people interviewed continued to maintain residences in Barrow. While there are no quantitative data available, it is apparent that there is a great deal of coming and going between the two communities. For example, the village mayor at the time of the 1983 fieldwork has since moved, at least temporarily, back to Barrow.
Given the relatively short term duration of North Slope Borough capital improvements program construction employment and the lack of other economic activity to fill the void which will be left when scheduled construction projects are completed, Atqasuk residents were queried about their employment mobility as part of the 1983 fieldwork. These questions were framed in terms of past or present employment on the Pipeline and at Prudhoe Bay/Deadhorse and what such persons liked most and least about such experiences.

No one interviewed in Atqasuk in 1983 was working in oil and gas-related occupations at Prudhoe Bay/Deadhorse or elsewhere. This was consistent with Alaska Consultants’ findings in 1982. However, several residents had previously worked as carpenters building Pipeline camps. These people said that they had stopped working when their jobs were completed except for one man who said he quit his job to be with his family more. The best thing that people associated with these jobs was the money. However, because of the current availability of well paid construction jobs in Atqasuk, village interest in moving elsewhere for employment is presently at a low level. Atqasuk residents also indicated that if they had to leave the village for employment, they would prefer to seek jobs in Barrow rather than at Prudhoe Bay.

RECENT TRENDS AND CHANGES

Atqasuk’s population more than doubled (115.9 percent) between 1980 and 1983. While some of this growth can be attributed to the impetus of the
village's re-establishment, most is directly related to construction of housing and basic community amenities funded through the North Slope Borough capital improvements program. These activities have provided a local source, albeit a temporary one, of well-paying construction jobs. They have also provided a smaller number of permanent jobs related to operation and maintenance of completed facilities.

Major Borough construction projects underway during the summer of 1983 included a gravel dredging program and construction of a new school and a health clinic. Given Atqasuk's small resident labor force, such jobs have attracted new Inupiat residents to the community from Barrow. They have also contributed to the maintenance of a sizable construction camp at Atqasuk which mainly houses non-Native workers. The dredge operation presently maintains a second camp facility in the village.

Economy

Traditionally, the upper Meade River area in which Atqasuk is located supported Inupiat groups whose subsistence activities were based on inland resources. These people had little direct use of the more distant ocean mammals except for those obtained through trading with "coastal Inupiat. Terrestrial activities were c-entered around camps " serving as bases for hunting, fishing and trapping. While caribou hunting was undoubtedly one of the most important activities, fishing and hunting of migratory fowl were also important to the subsistence regime.
Today's Atqasuk is not far from the sites of Old Atqasuk and Tigaluk. A strong motivating force in the resettlement of the village of Atqasuk was the desire of many current residents to live again in the upper Meade River area where subsistence resources had once supported a permanent Inupiat population. Many families had members whose original homes were in the camps which served as bases for hunting caribou and migrating fowl, for river fishing and for the trapping of furbearers. These subsistence resources are still utilized by Atqasuk residents.

A very significant development in terms of Atqasuk's economy was incorporation of the North Slope Borough in 1972. Since that date, the Borough has assumed responsibility for a wide range of government services and has also undertaken an ambitious capital improvements program. This program was used to fund the construction of the new town of Atqasuk. Thus, the Borough not only provided housing and public facilities in Atqasuk but it also simultaneously provided a number of service and temporary construction jobs in the village.

Passage and implementation of the 1971 Alaska Native Claims Settlement Act (ANCSA) was also a significant force in re-establishing the village of Atqasuk and contributing to its economy. This legislation, with its land-and financial settlements, has provided village residents with additional economic leverage through the creation of village and regional profit corporations. The Arctic Slope Regional Corporation encouraged the migration of interested Inupiat families to new Atqasuk, while the Atqasuk Corporation is active in the non-government sector of the local economy.
COMPOSITION OF EMPLOYMENT

Employment statistics published by the Alaska Department of Labor cover the entire North Slope Borough, including Prudhoe Bay, and therefore do not provide meaningful statistics for individual villages. To understand local employment conditions at Atqasuk, a special count of employment here was taken by Alaska Consultants in August 1982.

The August 1982 employment count identified about 71 jobs in Atqasuk on an annual average full-time basis (see Table 47). This total figure included several persons temporarily based in the village for contract construction employment. Direct North Slope Borough employment accounted for 28 jobs or 39 percent of all jobs in the village in 1982. Contract construction employment totaled another 34 jobs (47.5 percent of the total), all of it directly attributable to the construction of Borough capital improvement projects then underway in Atqasuk. Together, direct Borough jobs and temporary Borough-funded construction jobs accounted for 87.2 percent of all employment in the village in 1982.

The trade sector of the local economy consisted of 2 jobs with the Atqasuk Corporation store, while the finance, insurance and real-estate sector was represented by 2 positions in the Atqasuk Corporation's general office. Four jobs were counted in the services sector, all related to operation of the AIC construction camp. The one remaining job was in the transportation, communications and public utilities
### TABLE 47

**AVERAGE ANNUAL FULL-TIME EMPLOYMENT**

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mining</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>33.5</td>
<td>47.5</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
<td>1.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Trade</td>
<td>2.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>2.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Services</td>
<td>4.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Government</td>
<td>28.0</td>
<td>39.7</td>
</tr>
<tr>
<td>Federal</td>
<td>(0.5)</td>
<td>(0.7)</td>
</tr>
<tr>
<td>State</td>
<td>(0.0)</td>
<td>(0.0)</td>
</tr>
<tr>
<td>Local</td>
<td>(27.5)</td>
<td>(39.0)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>70.5</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Alaska Consultants, Inc.
sector and was associated with the operation of a local air taxi business.

Employment opportunities afforded by the petroleum industry in exploration, development and operations activities in the Prudhoe Bay area did not attract any Atqasuk workers in 1982 (or in 1983). However, in the longer term, when the Borough's major capital improvements scheduled for Atqasuk have been completed and opportunities for temporary construction jobs in the community begin to decline, local residents may find employment opportunities in petroleum-related activities more attractive as a means of meeting the cash requirements to maintain their homes and support their families in the village. Such a transition would more easily be made if commercially developable quantities of oil and gas were found closer to Atqasuk than Prudhoe Bay.

UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT

There are no reliable statistics available which document rates of unemployment in Atqasuk or any other North Slope Borough village. The figures published by the Alaska Department of Labor for the North Slope Borough include Prudhoe Bay where everyone is employed and where most jobs in the region are located. As a result, conditions in the region's traditional villages are obscured.

Despite the lack of firm statistics, it appears that there may have been at least some under-employment in Atqasuk in 1982. A July 1982 census sponsored by the North Slope Borough counted 210 residents in Atqasuk.
including several persons who were not permanent residents but who were employed in temporary contract construction activities. The ages of 202 of the 210 persons were also recorded. Of the persons for whom age information was available, 114 were in the 18 to 65 year age range, including 71 men and 43 women. When this figure of 114 is compared to the 71 full-time job equivalents counted in August 1982, the gap between population and jobs seems large. However, a significant proportion of Atqasuk females is outside the labor force (i.e. they are not seeking employment), and many local men are engaged in temporary construction activities rather than in full-time, year-round occupations. As a result, unemployment in the village is not nearly as significant as suggested by a comparison of population and employment statistics.

A factor not easily assessed when evaluating unemployment and under-employment in Atqasuk and other North Slope Borough villages is the amount of time that residents devote to traditional subsistence activities which temporarily remove them from the labor market. The availability of a worker at a given time is conditioned by that individual's perception of the need to spend time on a subsistence-related activity. Temporary construction work, particularly that which is close to home, provides the part-time employment and sufficient cash income to fit well in the cash/subsistence economy which now exists in Atqasuk. Occupations associated with the Prudhoe Bay area which feature long hours of work plus extended leave periods may also be fairly compatible with subsistence activities.
Weather conditions cause some seasonal variations in temporary construction employment in Atqasuk. The main variations in temporary construction employment, however, are related to the number and type of capital improvement projects being constructed locally. For example, uneven scheduling of construction work from year to year can result in local unemployment or it may necessitate the importing of labor for jobs that otherwise could have been filled by village residents.

INCOME LEVELS

The 1980 Census found the median household income for the North Slope Borough to be $31,378. The median household income for Alaska was $25,421, and the mean household income for Alaska Natives statewide was $21,865.

A comprehensive housing survey conducted for the North Slope Borough in 1980 obtained income information for individual communities. In Atqasuk, this information was based on a sample of 20 households. It found the median household income in Atqasuk to be $24,167, with that for local Alaska Native households being a slightly lower $23,333.

The purchasing power of the dollar in remote and isolated communities such as Atqasuk is greatly diminished by high local prices for goods and services. All freight normally moves into the village by air, adding significantly to the landed cost of goods. Because of the great distances involved, as well as the mode of transport, store-bought food prices here are probably double those in Anchorage. As a result,
subsistence hunting and fishing activities remain an economic necessity for most local residents.

Housing costs in Atqasuk, especially those for utilities, are also extremely high and serve to further reduce the spending power of household incomes. Heating oil cost about $3.00 per gallon here in 1983. The average home in Atqasuk reportedly uses between 3 and 4 55-gallon drums of fuel oil per month during the winter months. As a result, the average family thus spends close to $550 or more per month for much of the year just to heat its home.

ECONOMIC GROWTH PROSPECTS

Like the other smaller North Slope villages, Atqasuk has a relatively simple economic base. The primary driving force in the community's economy has recently been government spending, particularly by the North Slope Borough. The Atqasuk Corporation also has an economic impact. However, most of its construction and retail sales income depend on Borough construction contracts or upon the cash of local residents which is generated by Borough service employment or by temporary employment derived from Borough-funded construction activities.

Borough employment in Atqasuk and other North Slope villages can be divided into two types. The first is service jobs associated with the operation and maintenance of Borough facilities such as the school, the clinic, the public safety building and utilities systems. The second is temporary jobs associated directly with the construction of capital
improvement projects. It is important to recognize the difference between these two types of Borough jobs. Jobs associated with the operation and maintenance of facilities are permanent, while construction jobs are temporary in nature and their number fluctuates from year to year.

Construction activities in Atqasuk associated with the Borough capital improvements program have recently been at a high level. The North Slope Borough has constructed all major facilities in this community including housing, the public safety building, the new school, the new fire station and utilities systems. Other projects either underway or scheduled include a new health clinic, a new power plant, water and sewer facilities, a new vehicle maintenance and warm storage building, warehousing facilities, additional new housing and the dredging and stockpiling of gravel for use in constructing a new airstrip and local roads. However, in the longer term the level of construction employment derived from the North Slope Borough capital improvements program can be expected to level off as community needs are met. Unless some other economic activities can pick up the “slack”, some decline in community growth can be expected at that time.

The Atqasuk Corporation received a cash distribution and rights to select the surface estate of 69,120 acres of land in the general vicinity of the village under terms of the Alaska Native Claims Settlement Act. To date, the Corporation’s activities have centered upon construction ventures and operation of the local store. The Corporation has also recently formed a joint venture with Eskimos Inc.
to operate the village fuel dealership. Outside the village, the Atqasuk Corporation is involved with the Pingo Corporation, a construction and service firm owned by all but one of the North Slope village corporations and which operates primarily in the Prudhoe Bay area.

A review of the final environmental impact statement issued by the Bureau of Land Management for oil and gas leasing in the National Petroleum Reserve-Alaska (NPR-A), suggests that oil and gas resources are unlikely to be developed in the immediate area of Atqasuk. Inland development of oil and gas resources, if it takes place at all, appears more likely in the upper reaches of the Utukok River to the southwest of Atqasuk or in the Peard Bay/Point Belcher area close to the Chukchi Sea, northwest of the village. Atqasuk residents might be more willing to live temporarily away from home in oil and gas camps if work sites were closer to the village than those at Prudhoe Bay. (No Atqasuk residents now hold regular jobs in Prudhoe Bay). Once the North Slope Borough capital improvement projects now scheduled for Atqasuk have been constructed, the opportunities for employment in the community will almost certainly decline. At that time, local people may be more inclined to take oil and gas-related jobs outside their village in order to support the increasing cash requirements for maintaining their homes and families in Atqasuk.
For the past few years, Atqasuk residents have been able to rely on local employment opportunities necessary for the success of the intermixed economy now prevalent on the North Slope. Generally, the subsistence economy of Atqasuk is similar to the description provided in the regional overview of the subsistence economy. However, there are several important differences. These differences, a result of the inland orientation of most of Atqasuk's subsistence activities, include: the dominance of caribou in the subsistence diet, the limited use of three-wheelers, the specialized use of boats and outboard motors, and the unique relationship between the subsistence economies of this village and Barrow.

The single largest contributor to Atqasuk's subsistence economy is caribou. Atqasuk's inland location places local hunters in an ideal situation for the harvest of this resource. The snowmachine has greatly enhanced the efficiency of this activity as it allows Atqasuk hunters quick access to caribou hunting areas as well as the speed necessary to be selective in their harvest. Furthermore, hunters can harvest a significant amount of meat and haul it back to the village in far less time than it would take to harvest an equivalent amount by dog team. These advantages of snowmachine caribou hunting pertain to all of the study villages but, because of Atqasuk's disproportionate dependence on caribou, the snowmachine is especially important to Atqasuk hunters. In the coastal villages of the study area, the use of the snowmachine is
balanced by the use of three-wheelers and ocean-going boats, whereas in Atqasuk the snowmobile is the principal means of transportation.

Atqasuk residents' use of three-wheelers is limited because its inland location does not provide the natural roadways common along the beaches and lagoons of coastal areas. Continuous permafrost underlies the entire Atqasuk region, and the resultant tussock tundra makes for difficult traveling conditions. Furthermore, Atqasuk is a small village without developed roads and all the homes are in close proximity to each other and the present village airports, further reducing the usefulness of three-wheelers. Because of these factors, there are relatively few three-wheelers in Atqasuk, and they are commonly used only in and around the village. While the lack of three-wheelers would reduce the average equipment costs of Atqasuk hunters (as presented in Table 17), many households have more than one snowmobile which equalizes any discrepancy.

One of the primary food sources in Atqasuk is fish, and most families have boats and outboard motors to assist them in their subsistence fishing efforts. The initial purchase price of the aluminum boats used in Atqasuk is comparable to the other villages of the study area ($1,800-$3,000); however, these inland boats do not have the short life expectancy of boats used in the ice-ridden ocean waters common to the other villages. In addition, the outboards used in Atqasuk are substantially smaller (ranging from 4.5 to 15 horsepower) than those used on the coast. While these engines have a lower initial purchase price than the engines used on the coast, the shallow nature of the
Meade River and its tributaries often limits the useful life of the engines to 2 or 3 years. As noted in the section on Atqasuk's subsistence land use patterns, by August the rivers are so low that travel to and from fish camp is done overland. Some residents who go to fish camp at this time of year use their snowmachines to haul gear, leaving their boats at camp.

While the limited use of three-wheelers and longer life expectancy of boats reduce Atqasuk residents' cost for this equipment, several other factors increase local subsistence expenditures. First, the extensive use of snowmachines, occasionally even in summer, decreases the life expectancy of these machines. Second, Atqasuk's interior location results in increased shipping costs, especially for fuel, resulting in increased operating costs for Atqasuk residents as well as reducing their initial purchasing power. Finally, many Atqasuk hunters spend additional cash reserves pursuing marine mammals in the coastal areas around Barrow.

Advances in communication and transportation, as well as the close familial ties between Atqasuk and Barrow residents, are important factors in the continued use of sea mammals in Atqasuk's subsistence economy. As stated in the section on subsistence land use patterns for Atqasuk, frequent traveling occurs between the inland village of Atqasuk and the coastal community of Barrow. It is not uncommon for these trips to become spontaneous marine mammal hunting trips. Transporting marine mammals to Atqasuk either by snowmachine or airplane further increases the cost for Atqasuk hunters.
In summary, Atqasuk's subsistence economy, like all other villages of the study area, is enhanced by the current availability of local employment. At the present time, no Atqasuk residents work outside the village in the Prudhoe Bay area. Most work available in the village is in temporary construction activities, the on and off nature of which allows residents time for subsistence pursuits. The inland orientation of Atqasuk hunters limits the usefulness of three-wheelers and powerful outboard motors. However, increased transportation and operating costs, as well as an initial reduction in buying power, results in Atqasuk residents spending a comparable amount of cash on subsistence activities to other villages of the study area.

Political Organization

FORMAL POLITICAL ORGANIZATION

There are two primary political or quasi-political organizations in Atqasuk. These are the recently incorporated City of Atqasuk and the Atqasuk Corporation, the local village corporation established under terms of the Alaska Native Claims Settlement Act. Although the latter is not a public body, its board is elected by corporate stockholders and the corporation is in fact a potent political force in the community. In addition, the North Slope Borough has an appointed village coordinator in Atqasuk.
North Slope Borough

The North Slope Borough has an appointed village coordinator in each North Slope Borough village except Barrow whose job is to maintain a liaison between the village and the Borough mayor's office. The effectiveness of the coordinators varies widely, depending on their position in the village and the diligence of particular individuals. Village coordinators work out of their homes since no office space is provided for them in any Borough facilities.

City of Atqasuk

The City of Atqasuk was formally incorporated as a second class city under Alaska law in October 1982. At the same time that it was incorporated, village residents voted to initiate a 2 percent local sales tax. The city's boundaries take in approximately 42.875 square miles and include nearby hunting and fishing locations, old village sites in the immediate vicinity and lands which might be needed in the future for public purposes.

Consistent with State law for second class cities, Atqasuk has a 7-member city council. However, while second class cities are normally empowered to undertake a wide range of local government functions, Atqasuk has few municipal powers since most have been assumed by the North Slope Borough on an area-wide basis. The major power remaining to the City of Atqasuk is recreation. Despite this limitation, the city government is the so-called "voice" of Atqasuk and is the group which
represents local alesires for community improvements to the North Slope Borough.

In the brief period of its existence, the city has concentrated much of its attention on organizational issues and has also been active in working with the Atqasuk Corporation on a 14(c)(3) agreement, i.e. lands to be conveyed to eligible municipalities under terms of Section 14(c)(3) of the Alaska Native Claims Settlement Act, as amended. Assistance has been forthcoming from both the North Slope Borough and the Alaska Department of Community and Regional Affairs on this subject. The Department of Community and Regional Affairs has also been working with the city on organizational issues.

Thus far, the Atqasuk city government has maintained exceptionally good relations with the Atqasuk Corporation and work on a 14(c)(3) agreement has been progressing smoothly. Aside from a very modest organizational grant from the Department of Community and Regional Affairs, the city has received $80,000 from the North Slope Borough from the sale of land for a generator building, water tanks and a warehouse facility. The city currently has no permanent office, nor does it maintain any full-time staff.

Prior to the city's incorporation, Atqasuk had a traditional council with 7 members. According to the vice mayor, four of the 7 traditional council members were elected to the city council, while two other city council members had been traditional council members in the past. Thus,
the transition from traditional council to State subdivision did not appear to involve any change in control from one group to another.

When asked if the city had developed any formal positions on offshore oil and gas development, the mayor indicated that the city had been too busy with organizational matters to consider such a subject. However, individuals expressed generally negative opinions on both onshore and offshore petroleum development. Comments about onshore development referred to both the Navy's 1944-53 exploration program and more recent exploration programs sponsored by both the Navy and the Department of the Interior.

Atqasuk Corporation

The Atqasuk Corporation was created under terms of the Alaska Native Claims Settlement Act and is the major land owner in the Atqasuk area. Its stockholders are persons who enrolled as Atqasuk residents and this, its landholdings and its ownership of the local store and a construction company, make it a potent political as well as an economic force in the village. More recently, in 1983, the village corporation entered into a joint venture with Eskimos, Inc., a subsidiary of the Arctic Slope Regional Corporation, to provide a fuel distribution service for Atqasuk, a service which had previously been provided on an ad hoc basis by the North Slope Borough's Public Works department.

As previously mentioned, there presently appear to be no significant differences between the village corporation and the city government.
Corporate board members tend to be well respected people in the village who have long standing family ties to the Atqasuk area. However, the operation of corporation subsidiaries, particularly that of the construction company, requires specialized skills. The president of the Atqasuk Company is an Inupiat corporation board member. However, the general manager is a non-Native, as are a number of other company personnel. The Atqasuk Company has participated in several North Slope Borough construction projects on a joint venture basis. Such projects include housing units, the village fire station and the new Atqasuk school.

INFORMAL POLITICAL ORGANIZATION

Aside from the City of Atqasuk and the Atqasuk Corporation and its subsidiaries, there are a number of other groups in Atqasuk which have some political significance. They include the Presbyterian church, the Mothers' Club and the search and rescue/firefighting group.

There is a Presbyterian church at Atqasuk although it was without a resident minister in 1983. Occasionally, a visiting minister conducts services here, with this function being assumed by congregation members at other times. As in most other North Slope villages (excluding Point Hope and Point Lay), Presbyterians are the dominant religious group. No other religion is currently represented in Atqasuk.

An offshoot of the Mothers' Club has been formed in Atqasuk and has reportedly been increasing in importance. According to people
interviewed as part of the 1983 fieldwork, all influential women in the village belong to this group. Although the Mothers' Club was not sponsoring bingos at the time of the 1983 fieldwork, the possibility of its doing so was being discussed at that time.

Search and rescue is a significant group in the village, as it is in other North Slope communities. According to the 1983 fieldwork, all able bodied adult males in Atqasuk were members of this group and its leaders are accorded a certain amount of status and prestige. Search and rescue functions have recently been assumed by the North Slope Borough and search and rescue and firefighting volunteers are now one and the same group. Despite the changes in organization, search and rescue/firefighting remains a volunteer group and its members continue to be accorded status.

Several Atqasuk residents have been associated with the National Guard in the past. There is no National Guard unit in Atqasuk, but this group has traditionally been accorded respect in the North Slope region.

Land Use and Housing

Land Status

City of Atqasuk

Atqasuk's municipal boundaries take in an area of about 42.9 square miles, all of which (with one minor exception at the west end of
Imagruaq Lake has been selected by the Atqasuk Corporation as a part of its land entitlement under terms of the Alaska Native Claims Settlement Act (ANCSA). The Bureau of Land Management has made an interim decision to convey surface title of these selections to the Atqasuk Corporation but the corporation must await final surveys before it can receive patent to them. Some lands within Atqasuk's surveyed area have been quitclaimed by the corporation to the North Slope Borough or to the Arctic Slope Regional Housing Authority. Several blocks or portions of tracts have been dedicated for public use by the Atqasuk Corporation subject to the provisions of Section 14(c)(3) of the Claims Act, as amended. Under this section, the Atqasuk Corporation must convey up to 1,280 acres of land to the City of Atqasuk for community expansion purposes. The corporation and the city have established committees to work cooperatively on the matter.

There are several pending Native allotment applications for certain lands within Atqasuk's municipal boundaries. These allotment applications are located both north and southeast of the city's surveyed area. Native allotments are essentially homesteads of up to 160 acres of non-mineral lands which were granted to Alaska Natives, generally for subsistence purposes. Indian allotment authority for Alaska was cancelled with passage of the Alaska Native Claims Settlement Act. However, applications which were pending at the time the Claims Act legislation was passed are eligible for consideration. This provision for pending Native allotment applications did not originally apply to what is now known as National Petroleum Reserve-Alaska (NPR-A) unless potential allottees could prove use and occupancy of sites prior to the
withdrawal of the Reserve in 1923. An attempt to rectify this problem was made by Section 905(1) of ANILCA but a January 1983 ruling by the Regional Solicitor found that ANILCA did not adequately address the subject and suggested that a previous court suit (Leavitt vs. Andrus) be reinstated for a final determination on this issue.

Field surveys conducted by the Bureau of Land Management in August 1981 provide the current best estimates of the locations of these Native allotment applications. However, until an official survey has been made, their location is subject to possible change.

In Atqasuk, as in other North Slope Borough villages, accurate information regarding the status of title to individual lots is not always available. This can cause problems in land acquisition for public purposes.

Atqasuk Area

The Atqasuk Corporation was established under terms of the Alaska Native Claims Settlement Act. That legislation enabled the corporation to select 69,120 acres of land in the Atqasuk area (see Figure 29). The subsurface estate of lands selected by the Atqasuk Corporation remains with the federal government as subsurface title to lands within the National Petroleum Reserve-Alaska was not selectable by the Arctic Slope Regional Corporation. However, with passage of the Alaska National Interest Lands Conservation Act (ANILCA), the Arctic Slope Regional Corporation, at its option, is entitled to obtain subsurface rights to
Land Tenure
Atqasuk Area
1983

Legend
- Atqasuk Corporation Interim Conveyance
- Atqasuk Corporation - Selection
- Federal
- Native Allotment Applications

Alaska Consultants, Inc.
Anchorage, Alaska
Adapted from cartography by
Northwest Cartography, Inc.
Seattle, Washington

Figure 29
lands selected by the Atqasuk Corporation in NPR-A if public lands in NPR-A are opened for commercial development (rather than exploration) of oil and gas within 75 miles of village-selected lands. The regional corporation would then be required to exchange in-lieu subsurface lands which it had selected earlier under Section 12(a)(1) of the Claims Act.

The ownership of the subsurface estate of the Atqasuk Corporation's lands is important to the corporation in that this owner could establish the time and terms under which the petroleum industry could explore and possibly develop oil and gas reserves in this area.

As already noted, the Atqasuk Corporation has yet to receive patent to the lands it has selected, but the Bureau of Land Management has made an interim decision to convey surface title to the corporation for portions of these selections. The subject of pending claims for Native allotments within lands selected by the Atqasuk Corporation has been previously discussed.

SUBSISTENCE LAND USE PATTERNS

Atqasuk is the only inland village in the study area, consequently the inland species important to the local subsistence economy are considered briefly. During the fieldwork, twelve local hunters and fishermen were interviewed as well as several other members of the community. The land use mapping considers only the marine and coastal species harvested by Atqasuk residents. Because the marine areas which Atqasuk residents use are inclusive of those used by Barrow residents, range and harvest areas
are discussed in relation to Barrow land use patterns. The following discussion considers only the timing of Atqasuk marine resource harvesting and the relative degree of marine orientation. For a discussion of the field methodology, see the North Slope Borough overview of subsistence land use patterns.

Atqasuk's interior riverine location does not preclude the use of marine resources by its residents. Even though the majority of Atqasuk's locally harvested food supply comes from inland resources, residents' close familial ties with Barrow Eskimos, as well as advances in transportation and communication technology, allow these inland villagers to include the use of marine mammals in their subsistence economy. Only a small portion of the marine resources used in this village are acquired on coastal hunting trips initiated from Atqasuk. Commonly, village residents travel to Barrow to go sea mammal hunting with their coastal friends and relatives. Because the vast majority of Atqasuk residents initiate their sea mammal hunting in Barrow, the harvest areas for bowhead, belukha, walrus, seal and ugruk are the same as those used by Barrow residents and are included in Barrow's subsistence land use maps. In addition, Atqasuk residents often receive gifts of sea mammal meat and oil from relatives in Barrow and other coastal villages of the North Slope. Only the species which Atqasuk residents harvest locally (i.e. caribou, fish and migratory birds) are hunted in areas completely different from those of Barrow.

The most important wildlife resource harvested by Atqasuk residents is caribou. Villagers hunt caribou throughout the fall, winter and early
spring, with the fall harvest being the most important. Caribou harvests decline during the late spring and summer, a result of migration patterns and limited hunter access. In recent years, the caribou population on the North Slope has been high, and residents of Barrow and Atqasuk have not generally had to travel far in order to successfully hunt this species.

Both historically and today, a common summer activity of the coastal Eskimos of this region is to travel inland and establish summer fish and caribou camps along the Inaru, Meade, Topogoruk and Chipp river drainages. Many of the people currently living in Atqasuk were either born or spent their childhood summers in this area. However, these local residents have not forgotten their ties to the coast and marine resources. As one resident stated:

"We use the ocean all the time even up here; the fish come from the ocean; the whitefish as well as the salmon migrate up here."

The anadromous nature of the fish species harvested by Atqasuk residents is an important factor when considering the marine orientation of this village.

Fish, while secondary to caribou in quantity harvested, is a preferred food in Atqasuk. Baited hooks, gill nets and jigging are the "common techniques used to harvest ling cod, salmon, whitefish and grayling.

Fishing with set gill nets begins soon after the ice breaks up in the Meade River, but at this time strong currents and large quantities of debris in the main channel limit fishing to tributary streams. Atqasuk residents stated that the most successful fishing months are July and August when water levels in the Meade River have dropped, and the river
has become clearer (free of driftwood). This enables local fishermen to set their nets in close proximity to the village and to check them after work hours. By August, water levels in the Meade River limit boat travel and residents must travel overland to fish camps. Fishing continues in the fall and winter under the ice, both in deep pools of the Meade River and in nearby lakes.

Migratory birds are also an important part of Atqasuk's subsistence economy. This activity is concentrated during the spring months of late April, May and June, with a secondary season occurring in late August and September during the birds' southward migration. Local residents harvest these birds on the numerous nearby lakes and ponds as well as on the Meade River and its tributaries. They also gather eggs in the immediate vicinity of the village for a short time each June.

The constant interaction between Atqasuk and Barrow results in a continual interchange of people and families between the two communities. As noted previously, some Atqasuk residents own homes in both Barrow and Atqasuk, with family members divided between the two locations. With twice daily air service (weather permitting), and snowmachine access eight months of the year, there is a great deal of interchange between the two communities. Local employment opportunities have facilitated this interchange by providing the necessary cash supply for easy travel. Atqasuk families average at least one trip to Barrow a month and, during the appropriate seasons, often go marine mammal hunting. Many Atqasuk residents store their sea mammal hunting
equipment with relatives in Barrow so that any trip to that community can become an unplanned hunting trip.

Although caribou, fish and migratory birds are the major food sources in Atqasuk's subsistence economy, marine mammals continue to provide seal oil and other staples in the local diet. The importance of marine mammals in the village of Atqasuk is demonstrated by the local interest in the bowhead whale harvest. Between 6 and 10 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 crews. By helping in this way, they ensure themselves of a share of Barrow's whale harvest. Residents stated that they always receive a village share from Barrow and Wainwright, and these are divided among all members of the community.

Atqasuk's harvest of belukha, ugruk and walrus is generally initiated from Barrow as the timing of hunting for these species prevents overland travel, thus limiting Atqasuk's access to the coast. Several Atqasuk residents have wooden and aluminum boats in Barrow which they use to hunt these sea mammals during the summer. All resources harvested at
this time are either stored in Barrow and retrieved in the winter by
snowmachine or are air freighted to Atqasuk.

In addition, Atqasuk residents occasionally travel on snowmachine to the
Chukchi Sea 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. Finally,
many residents prefer the broken ice hunting for ugruk and walrus during
the summer months. Seals are occasionally purchased from friends or
relatives in Barrow and sent to Atqasuk by plane.

Village Land Use Patterns

Although Atqasuk's corporate boundaries take in almost 43 square miles,
the city's surveyed area as of August 1982 was a much smaller 46.9
acres, of which only 21 acres had been developed.

The village lies between Imagruaq Lake and the Meade River. At the
village's eastern margin, a bluff descends about 80 feet to the river
itself. The site was selected to take advantage of a stabilized sand
dune flat which provides a better building area than adjacent land where
the tundra soils are less compacted and are more poorly drained.

Atqasuk's development pattern is unlike that of other North Slope
villages (see Figure 30). At the time of the 1983 fieldwork, all
residential development in the village (except for that associated with
construction camps) was concentrated in three tracts at the south end of
Use
Atqasuk
August 1982

Legend
- Single-family Residential
- Multi-family Residential
- Public and Semi-public
- Commercial
- Industrial and Storage

Figure 30

Alaska Consultants, Inc.
Anchorage, Alaska
Adapted from cartography by Northwest Cartography, Inc.
Seattle, Washington
town. Each tract included two clusters of eight lots, with each cluster containing two groups of four lots. Individual lots are small (55 by 75 feet) and are staggered, apparently to provide homes with greater privacy and more sunlight. Between the boundaries of individual lots and the edge of the three tracts is an unsubdivided area which Atqasuk residents must cross to reach their units. Access roads are platted around the perimeters of the three residential tracts but not through them. This area is exclusively in residential use except for a Presbyterian church, a four-plex used as a temporary school, some school-related buildings and a communications dish.

Immediately north of the three tract residential area are two large tracts which were initially surveyed to provide space for public, commercial, utility and storage purposes. The northwest tract has recently been subdivided to provide lots for the new fire station, the health clinic, the store/post office and the public safety building. The southeastern tract remains unsubdivided and presently houses the Borough's vehicle maintenance building, a smaller storage building, several generator units and two small office buildings used by the Borough Public Utilities and Public Works departments. The new Atqasuk school is being constructed on the eastern portion of this tract. Across Tikiluk Street from the new school is the AIC construction camp. The dredge camp is also located on the east side of Tikiluk Street but is further to the south.

North of the two large tracts is a more recently subdivided and, as yet, undeveloped area intended to accommodate future community growth.
### TABLE 48

**EXISTING LAND USE**

**ATQASUK TOWNSITE a/ 1982**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Land Area (acres)</th>
<th>Percent of Developed Area</th>
<th>Percent of Surveyed Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>11.6</td>
<td>55.2</td>
<td>24.7</td>
</tr>
<tr>
<td>One and Two Family Trailers</td>
<td>(10.9)</td>
<td>(51.9)</td>
<td>(23.2)</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>(0.0)</td>
<td>(0.0)</td>
<td>(0.0)</td>
</tr>
<tr>
<td>Vacant Units</td>
<td>(0.6)</td>
<td>(2.8)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>Commercial</td>
<td>0.2</td>
<td>0.9</td>
<td>0.5</td>
</tr>
<tr>
<td>Utility and Storage</td>
<td>2.3</td>
<td>11.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Public and Semi-Public Public</td>
<td>(1.4)</td>
<td>(6.6)</td>
<td>(3.0)</td>
</tr>
<tr>
<td>Public - Under Construction b/</td>
<td>(3.0)</td>
<td>(14.2)</td>
<td>(6.4)</td>
</tr>
<tr>
<td>Semi-Public</td>
<td>(0.2)</td>
<td>(1.0)</td>
<td>(0.4)</td>
</tr>
<tr>
<td>Developed Roads and Corridors</td>
<td>2.3</td>
<td>11.0</td>
<td>4.9</td>
</tr>
<tr>
<td><strong>TOTAL DEVELOPED AREA</strong></td>
<td><strong>21.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>44.8</strong></td>
</tr>
<tr>
<td>Vacant Land</td>
<td>13.8</td>
<td></td>
<td>29.4</td>
</tr>
<tr>
<td>Undeveloped Streets</td>
<td>12.1</td>
<td></td>
<td>25.8</td>
</tr>
<tr>
<td><strong>TOTAL LAND AREA</strong></td>
<td><strong>46.9</strong></td>
<td></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

---

- **a/** Includes Tikiluk Street leading to the Meade River and the recently platted subdivision encompassing Blocks 1, 2 and 3. All areas within Tracts E, G and H are considered to be developed. Tracts D and I are excluded.

- **b/** The new school was under construction in August 1982.

Source: Alaska Consultants, Inc.
Outside the village's subdivided area to the south is the community fuel tank farm. Atqasuk presently has no permanent airstrip. Two small temporary strips, one involving the use of Tikiluk Street and the other located a short distance north of town, are used for much of the year, while an ice strip on Imagruaq Lake which is capable of accommodating Hercules-type aircraft is used when conditions permit during the winter months.

Only 21 acres of land (47 percent of the surveyed area) was classified as developed in August 1982 (see Table 48). The remainder was either vacant land (including the new school ‘site) or platted but undeveloped streets. Of the developed land, 55 percent (11.6 acres) was in residential use, 22 percent (4.6 acres) was in public and semi-public use, 11 percent (2.3 acres) was used for utility or storage purposes, another 11 percent (2.3 acres) was in roads that could be considered at least partially developed, and less than 1 percent (0.2 acres) was in commercial use.

HOUSING CONDITIONS

Except for the AIC construction camp and one apartment in the four-plex (the remainder of this structure was used for the school), all residential units in the village in August 1982 were single family structures. A second construction camp has since been added to meet the needs of the dredging program.

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The August 1982 survey counted a total of 45 housing units (excluding the AIC construction camp) in Atqasuk, all of them built under the North Slope Borough capital improvements program. Eight units were designated as Borough employee housing, including a unit which until recently had been used as a construction bunkhouse and was to be converted back for use as a single family unit (see Table 49). Twenty-three units were being purchased by their occupants under the HUD Mutual Help program and another 14 units were Borough rentals. This latter group included one unit being rented by the Atqasuk Corporation for use as an office and two units in the very final stages of construction. The Borough has subsequently been successful in obtaining a HUD commitment to purchase 9 of its rental units in Atqasuk. All units in the village were considered to be in acceptable [i.e., standard] condition although the apartment in the school four-plex is very small.

As part of the 1983 fieldwork, an effort was made to find out if the North Slope Borough’s housing program has resulted in the splitting up of extended family groups as additional units are made available. In Atqasuk’s case, this effort revolved around differences in household composition before and after the move from Barrow.

Of the 12 households interviewed in 1983, only one had moved as a unit from Barrow. In some other cases, only the adults had moved to Atqasuk (presumably people with family ties to the Atqasuk area) and had left their adult children in Barrow. When asked why this had occurred, several people interviewed indicated that young adults did not want to move to Atqasuk because they felt that there would be little for them to
**TABLE 49**

**ATQASUK HOUSING INVENTORY \(\text{a/}\)**

**AUGUST 1982**

<table>
<thead>
<tr>
<th>Housing Program</th>
<th>Occupied</th>
<th>Acceptable Substandard</th>
<th>Vacant</th>
<th>Acceptable Substandard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctic Slope Regional</td>
<td>23</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Housing Authority Mutual Help</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Slope Borough Rentals</td>
<td>12</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>14 (\text{b/})</td>
</tr>
<tr>
<td>North Slope Borough Employees</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>8 (\text{c/})</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>41</strong></td>
<td><strong>0</strong></td>
<td><strong>4</strong></td>
<td><strong>0</strong></td>
<td><strong>45</strong></td>
</tr>
</tbody>
</table>

---

\(\text{a/}\) Excludes construction camp facilities.

\(\text{b/}\) Includes two units in the final stages of construction in August 1982 and one unit rented by the Atqasuk Corporation as an office.

\(\text{c/}\) Includes one unit in the school four-plex and one unit formerly used as a bunkhouse which is to be renovated for use as a single family residential unit.

Source: Alaska Consultants, Inc.
do in the smaller village. In two other cases, one marriage partner lived in Atqasuk and his or her spouse lived in Barrow resulting in a good deal of commuting.

Over half of the persons interviewed in the 1983 fieldwork had houses in both Atqasuk and Barrow. The Barrow houses are usually occupied either by family members or they are rented out. The latter provides a significant source of income for some village households.

People were also asked about preferences for owning versus renting their units. Not surprisingly, all persons who were interviewed expressed a preference for purchasing units under the HUD Mutual Help program over renting Borough housing.

Community Facilities and Utilities

Administrative and Miscellaneous Public Buildings

There are presently no city or Borough administrative buildings in Atqasuk. City council meetings are now held in the fire station, while the North Slope Borough village coordinator works out of his house. The city plans to construct a building which would serve both as a community center and as administrative offices. However, such plans have yet to be formalized.

The North Slope Borough maintains a heavy equipment storage building at Atqasuk, as it does in other North Slope villages. The Atqasuk facility
is a single story wood structure (40 by 80 feet) with a gravel floor and is located northwest of the new school site. It has five equipment bays. Internally, the structure is unpartitioned except for a small office and parts storage area. The building has no plumbing and is in need of repair.

PUBLIC SAFETY

Police Protection

As elsewhere in the North Slope Borough, police protection services in Atqasuk are provided by the North Slope Borough which currently has two officers stationed in the village. The public safety building is located next to the new fire station in the northern portion of town. It is a 1,200 square foot (28 feet by 44 feet) one story wood frame structure which includes an office, a kitchen, a storage/workshop area and two temporary holding cells. The structure is now on temporary cribbing, a result of having been moved from its original site to make room for the new fire station.

The present public safety building was badly racked when it was moved and the North Slope Borough has plans to replace it with a two-story metal exterior building containing about 4,300 square feet of floor space. As presently designed, the ground floor of the new structure includes three cells, a booking area, a central office with a secure closet for the safekeeping of records and evidence, a storage area, a mechanical room, a garage and sleeping quarters for personnel
TABLE 50
PUBLIC SAFETY DEPARTMENT ACTIVITY
ATQASUK
1980 - 1982

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide and Negligent Homicide</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rape and Sex Offenses</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Assault</td>
<td>2</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Burglary</td>
<td>1</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Larceny</td>
<td>1</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Vandalism</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Narcotics</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Driving While Intoxicated</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Liquor Law Violations/Disorderly Conduct</td>
<td>2</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Traffic Accidents</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Animal Problems</td>
<td>3</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Domestic Problems</td>
<td>2</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>Premise Security</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Disturbing the Peace/Noise</td>
<td>5</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Other a/</td>
<td>108</td>
<td>130</td>
<td>61</td>
</tr>
<tr>
<td>TOTAL</td>
<td>128</td>
<td>242</td>
<td>127</td>
</tr>
</tbody>
</table>

a/ This category identifies non-criminal public safety activities. It includes service requests, agency assists, public assists, transport of the sick or injured and other responses to non-criminal situations. The public safety officer may be called upon for a wide variety of activities ranging from chaperoning dances to helping a sick person to the clinic.

Source: North Slope Borough Department of Public Safety.
temporarily assigned to the village. The second floor houses a public safety officer's apartment and additional storage space.

Borough public safety officers in Atqasuk and other North Slope villages spend a great deal of their time in non-criminal activities (see Table 50). Law enforcement problems here are primarily related to liquor abuse. No ordinance related to liquor sales or possession has yet been enacted since Atqasuk became a second class city in October 1982. Another law enforcement problem was apparent when only one public safety officer was stationed in the village. When that officer was sick, on leave, traveling on official duty, or otherwise away from the community, there was no police authority in Atqasuk. This problem, common to all of the smaller villages in the Borough, should be remedied now that two public safety officers are again stationed here.

Fire Protection/Search and Rescue

The North Slope Borough has provided fire protection services on an areawide basis since 1980. Since assuming this power, the Borough has constructed fire stations in each of its villages outside Barrow and has embarked on a program to train firefighting volunteers. Although the Search and Rescue division is part of the Public Safety department for administrative purposes, volunteer firefighting and search and rescue personnel in the villages are the same group, with both functions being housed in the new fire stations.
The Atqasuk fire station was completed in 1983 and is identical to fire stations built in other small Borough villages at that time. It is located next to the public safety building and is a prefabricated metal structure 72 feet in width and 65 feet in depth (4,680 square feet) set on pilings, with access provided via a metal grating ramp. The central portion of the station is a large apparatus room sized to house two fire trucks, an ambulance and two snowmachines, plus a boat (with motor) belonging to the Borough Search and Rescue division. The building also houses a utility room, a furnace/generator room, two large storage rooms (one designed for use as a training area under heavy smoke conditions), a training/meeting area, an office/communications center, a small bunkroom for transient Borough Fire department personnel, a small kitchen, lockers, showers and toilet facilities, plus additional storage space.

Rolling stock housed in the fire station includes an engine company truck with a mounted 2,000 gallon water tank, a 500 gallon per minute pump, fire hose and appropriate nozzles, ladders and cabinets for personnel gear and air-packs; a tanker truck mounted with a 3,000 gallon “water tank, a 500 gallon per minute pump, hose and nozzles; and a Chevrolet Suburban modified for ambulance use with a raised roof and stretcher racks, equipped with stretchers, splints, a trauma box and an oxygen unit. Search and Rescue equipment is also housed here.

Firefighting personnel are members of the North Slope Volunteer Fire Department/Search and Rescue force. Training programs have been begun by the North Slope Borough, with initial emphasis being on use and
maintenance of the new equipment in a manner which meets basic criteria for prompt and effective fire response.

No serious fires have been reported in Atqasuk since the village's re-establishment. However, Atqasuk's harsh arctic climate places a steady, heavy load upon heating equipment, increasing the probability of fire incidence from equipment malfunction or misuse. Furthermore, low temperatures and prevalent strong winds make firefighting extremely difficult once a fire gains headway.

While all firefighting/search and rescue personnel in Atqasuk and the "other villages outside Barrow are volunteers, the Borough has permanent staff for both functions in Barrow. The Borough Search and Rescue division also maintains two helicopters and a fixed wing aircraft in Barrow for use in search and rescue and medi-vac situations.

HEALTH

Primary health care services in Atqasuk are provided by the North Slope Borough Health and Social Services Agency through the Community Health Aide program. These services are supplemented by regular visits to the village by doctors, dentists, nurses and other health care providers. When needed, Atqasuk residents may use either the Barrow Public Health Service hospital or the Alaska Native Medical Center in Anchorage for in-patient or out-patient services.
The present clinic was built in 1978 with materials salvaged from Borough building projects and is located near the village store in the northwest portion of the village's developed area. It is a small (320 square foot) wood frame structure mounted on skids. Internally, the building is divided into a waiting area, an office/examination room and a toilet area. Although the building is considered to be sound, it has a number of deficiencies and is inadequate to carry out the comprehensive program which has been assumed by the Borough's Health and Social Services Agency.

Construction of a new 4,400 square foot health clinic is currently underway and should be completed in late 1983. The clinic portion of the new building will include 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. Itinerant quarters with two double bedrooms, a kitchen/dining/living area and a bathroom are also included, as is a mechanical/electrical room, a janitor's closet and a garage/storage area. The entry from the garage area is designed to provide direct access from the ambulance to an examination room to meet entry/trauma requirements.

A wide range of equipment is to be provided for the new clinic, including X-ray equipment for use by itinerant professional staff. In addition, the consulting/telehealth room will be equipped with slow-scan TV equipment linked through telephone circuits to units in the Barrow office of the Borough Health and Social Services Agency, the Barrow...
Public Health Service hospital and the Alaska Native Medical Center in Anchorage. This equipment will be used for consultations between the local community health aides 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. Finally, an ambulance for transporting patients is already housed in the village fire station, while a 3-wheeler and a trailer will be kept in the clinic garage area.

* The North Slope Borough Health and Social Services Agency attempts to have two health aides in each village. It is hopeful that the new clinic's better working environment will encourage aides to hold their positions for longer periods and that it will encourage greater public appreciation of the aides' position.

Borough records currently indicate an average of 2 to 3 patient visits per day to the health clinic. Greater use of the new clinic is anticipated, not only because of the potential for improved service but because of a broader emphasis which is being placed by the Borough Health and Social Services Agency upon health practices and conditions.

EDUCATION

Education services from Early Childhood Education (ECE) through the 12th grade in Atqasuk are provided by the North Slope Borough School District. The Meade River school is presently housed in temporary quarters in a four-plex in the northcentral portion of the village's residential district. This five classroom facility was completed in
1977 and is in average condition but it is too small and too crowded to be satisfactory as a school.

A new school is currently under construction immediately north of the village residential district on an approximately 3 acre site located on a consolidated sand dune. The new facility is scheduled for completion in early 1984 and will have about 27,600 square feet of floor space designed to accommodate 95 students. It consists of two major structures connected by an enclosed corridor. The larger structure contains the classroom wing and activity center, while the other contains vocational education shops, a mechanical/boiler area and an area containing water storage and sewage retention tanks. In addition, 40,000 gallons of fuel storage capacity will be provided at the school site and a playdeck will extend out from the classroom area at the south side of the building.

The classroom wing will contain seven classrooms, two of which are designed specifically for teaching science and home economics courses. A resource area central to the classrooms will house the library and has back-up work and storage areas. There is also provision for a photography laboratory, a storage room and a janitorial center.

The activity center will include a full gymnasium, an exercise room, storage space and a kitchen/food storage/laundry complex on the first floor. Mezzanines on either side of the gymnasium will provide additional storage space.
The second building will include a 28 foot by 64 foot vocational education area housing woodwork and metalwork shops, with the remainder of this structure being in storage and utilities use.

During the 1982/83 school year, the professional staff of the Meade River school included a principal, 6 certified teachers and 2 teacher aides (one of whom was part-time). The assignment of classrooms was one for ECE, one for kindergarten and grades one through three, one for grades four through six, one for grades seven and eight, and one for grades nine through twelve. However, according to the principal, teaching and related assignments in such a small school require that the staff be flexible. Non-teaching staff included the principal's secretary, a cook, a cook's assistant and 2 maintenance/janitorial positions.

Excluding ECE/kindergarten, final enrollment in 1982/83 was 37 students (see Table 51). During that same school year, the student body included 6 non-Natives.

As part of the 1983 fieldwork, people were asked what they thought of the local education system and if it was meeting the needs of the people. Assuming that the people-interviewed were reasonably representative, there appears to be a perception on the part of village residents that the school has a drop-out problem. Since the construction company will not hire persons under the age of 18, there is little for drop-outs to do if they remain in the village. Two people mentioned Mt. Edgecumbe as offering students a wider variety of courses.
### Table 51: School Enrollment Trends by Grade 3/6/8

<table>
<thead>
<tr>
<th>Year</th>
<th>Kindergarten</th>
<th>Grade 3</th>
<th>Grade 6</th>
<th>Grade 8</th>
<th>Grade 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977/78</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>1982/83</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>
than the local school is able to do. One person also mentioned that the Borough paid for two Atqasuk residents to go to a welding school so that they could work on the water tank project in the village.

RECREATION

The village presently has no community hall or school activity center for organized recreation activities. However, this should change with completion of the new school complex when regularly scheduled, supervised use of the school's activity center by the community as a whole will be possible.

There is currently no improved outdoor play area in the village. This will also change in the near future as the new school will have a playdeck for elementary school children. Furthermore, it is possible to make surface improvements to an area adjacent to the school for use as a general playground.

Several general interest courses were taught in the school during 1982/83 under community school and vocational education programs administered by the School District. These included Eskimo dancing and skin sewing.

Village-wide activities center around holidays. The Fourth of July is marked by contests and Eskimo games. This past Thanksgiving was marked by a village feast staged in the apparatus room of the fire station then under construction. In addition, the Christmas-New Year week involves
not only religious programs but also a series of games, contests and
dancing which involve the children and adults in a much more extended
fashion than during the rest of the year.

Atqasuk residents also participate in a variety of informal recreation
activities such as picnicking, visiting within the village and travel to
other communities. The snowmachine is essential to winter subsistence
activities, but its use also has an element of pleasure. Hunting,
trapping and fishing combine elements of both subsistence harvest and
pleasure, activities that are tied in significant ways to the culture of
Atqasuk's Inupiat people. However, they are not viewed from the Inupiat
perspective as being of a recreational nature.

UTILITIES

Water

The provision of water services in Atqasuk is the responsibility of the
North Slope Borough Department of Public Utilities. Water is presently
obtained from several different sources, depending on the condition of
access roads and on water quality, and is then pumped into a tank
mounted on a Bombardier vehicle for delivery in the village.--

Atqasuk's existing water system is inadequate as it lacks the controls
essential to ensure the delivery of uncontaminated water to village
consumers. There is presently no central watering point with a
reservoir tank. Chlorination, when undertaken, is handled by treating
each tankful when drawn from the source by the Bombardier. In addition, Bombardier equipment has not always proven to be reliable. A 2,000 gallon water truck delivered to the village in the spring of 1983 has thus far seen limited use because of inadequate access roads to water sources and because streets in the village are so poor.

Upgrading of Atqasuk's water service will take place with the planned construction of a central water plant which will draw water from Imagruaq Lake, filter and chlorinate it and then store it in two reservoir tanks, each with a 1.5 million gallon capacity. The same project also includes construction of a village washeteria and extension of a water line to the school complex now under construction. However, the institution of an adequate water delivery service is dependent on the use of scarce gravel resources for the construction of village roads. This is essential as the few existing "roads" are constructed on a sandy soil material which deteriorates rapidly once it is thawed.

As of August 1982, there were 41 occupied housing units in Atqasuk. Other water users include the AIC and the dredge construction camps, the school, the old health clinic, the store, the new fire station and the public safety building. Department of Public Utilities records show a total of 169,900 gallons of water was sold in Atqasuk from July 1, 1982 through January 31, 1983. This average daily consumption rate is less than 4 gallons per capita based on a population of 210 persons. However, completion of the new school complex and the planned washeteria should double this consumption rate if Atqasuk's experience conforms to that of Nuiqsut and Point Hope.
Sewage

Sewage collection services in Atqasuk are the responsibility of the North Slope Borough Department of Public Utilities. Currently, all sewage wastes in the village are collected in honeybuckets lined with plastic sacks. The sacks are placed in 55-gallon drums located near each house or building and the drums are then hauled to a solid waste disposal site on a sporadic basis.

Two disposal sites north of the village have been used. The preferred site is located about a mile away, was constructed by the Borough and is fenced. The second site is located along Kigakrak Lake, about half a mile from the village. However, because of poor road conditions, the more distant site is virtually unreachable during the summer months and even the closer site is difficult to reach after break-up. Pick-up services within the village are also difficult. Bombardier equipment may be used to move drums away from individual buildings where they can be picked up by a Department of Public Works front-end loader which moves them to the most remote disposal site, access permitting. Individuals are also encouraged to move their own drums to the disposal sites via freight sleds.

A heavy duty sewage truck identical to that in other smaller North Slope villages was recently shipped to Atqasuk. The truck is equipped with a tank and vacuum system for the pick-up of sewage from holding tanks but only the new school and health clinic have such tanks. In other villages, this has led to removal of the sewage tanks so that the
vehicles can instead be used as flatbed trucks. Like the new water truck, however, effective use of this equipment in Atqasuk must await the construction of adequate local streets. In addition, vehicle maintenance is a constant problem although it will be greatly facilitated with the planned construction of a combined warehouse structure which includes heated space for the storage and maintenance of utility vehicles.

In short, the present collection system which uses honeybuckets and drums has inherent basic sanitation problems. Sewage is subject to spillage in the village and the wastes are difficult to move during the summer months when they are not frozen and access to disposal sites is poorest. Although disposal in a sewage lagoon is considered to be preferable, the technical problem of separating frozen wastes from the bags and drums to avoid clogging a lagoon has not been resolved.

The dumping of graywater under or near buildings during the winter months complicates sanitation problems as it leads to ice accumulations and adds to surface drainage problems after break-up. In addition, the volume of graywater discharged in the village increases as the water delivery system is upgraded and as new buildings with internal plumbing are built.

Planned improvements to Atqasuk's sewage system include the development of a sewage collection system serving the new school complex and the planned village washeteria. An insulated, heated gathering line will bring the school sewage to the central water facility where, together
with the washeteria wastes, it will move through an insulated, heated outfall line to a sewage lagoon at Kigakrak Lake. An access road to the lagoon will be built as part of this project.

**Solid Waste**

Solid waste disposal services in Atqasuk are the responsibility of the North Slope Borough Department of Public Utilities. No regular garbage pick-up service is currently provided although the Department of Public Utilities occasionally uses a Bombardier and trash trailer for this purpose. Emphasis is instead placed on a spring and fall clean-up by village residents.

As with sewage pick-up services, a major obstacle to solid waste disposal in Atqasuk is the lack of adequate roads in the village and to the two disposal sites located north of town. The lack of gravel materials for covering the garbage has also been a problem. Maintenance of the disposal sites has occasionally been a problem. Maintenance of the disposal sites has occasionally been undertaken by the Borough Public Works department. However, even the closer site can be reached only with great difficulty during the summer months and, at that time, garbage accumulates rapidly in the village.

**Electric Power**

Electric power generation and distribution services at Atqasuk are the responsibility of the North Slope Borough Department of Public
Utilities. Like all North Slope Borough villages outside of Barrow, electric power in Atqasuk is diesel-generated. The present power plant is made up of three Arctic Pac facilities containing a total of five diesel generator units with a combined total rated capacity of 840 KW (see Table 52). Recent modifications permit operation of the largest units in parallel. The present distribution system is a 4,160 volt overhead pole line installation. The main power trunks are three-phase, with single-phase lateral feeders to individual loads.

Atqasuk has experienced rapid growth in electric power demand during the past few years due both to community growth and to the construction of major facilities. Department of Public Utilities records show the peak power demand for fiscal year 1979/80 at 60 KW that for 1980/81 at 90 KW and that for 1981/82 at 125 KW. Department records also indicate that sales of power in the village totaled 510,000 KWH in the six month period from July 1, 1982 through December 31, 1982. Sales in January 1983 alone amounted to 129,141 KWH. In that same month, the Department reported a total of 65 meters installed.

To date, Atqasuk's power system has been characterized by situations where demand has regularly outstripped the installed generating capacity. The need for an immediate response to such-situations has dictated the emergency use of Arctic Pats rather than developing an overall plan for a plant with units sized to accommodate projected growth and flexible enough so that average and peak demands could be met in an efficient manner. A shortage of trained operators compounds village power problems.
TABLE 52
FIRM AND PEAK GENERATING CAPACITIES
ATQASUK
OCTOBER 1982

<table>
<thead>
<tr>
<th>Unit No.</th>
<th>Prime Mover Make</th>
<th>Horsepower</th>
<th>Nameplate Capacity (KW)</th>
<th>Generator Unit Make</th>
<th>Voltage</th>
<th>Hours Operated a/</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CAT 55</td>
<td>81</td>
<td>55</td>
<td>CAT</td>
<td>480</td>
<td>2 {rebuilt}</td>
</tr>
<tr>
<td>2</td>
<td>CAT 1%</td>
<td>135</td>
<td>90</td>
<td>CAT</td>
<td>480</td>
<td>20,000</td>
</tr>
<tr>
<td>3</td>
<td>CAT 230</td>
<td>230</td>
<td>155</td>
<td>CAT</td>
<td>480</td>
<td>25,000</td>
</tr>
<tr>
<td>4 b/</td>
<td>CAT 305</td>
<td>305</td>
<td>210</td>
<td>CAT</td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>5 c/</td>
<td>CAT 480</td>
<td>480</td>
<td>330</td>
<td>CAT</td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>840</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a/ Per North Slope Borough Department of Public Utilities Village Operations Manager, October 26, 1982.
b/ Arctic Pac moved from Point Lay in 1982. A new generator unit has been installed.
c/ Arctic Pac flown to Atqasuk in spring of 1983.

Source: North Slope Borough Department of Public Utilities.
Another electric power-related problem in Atqasuk is fuel supplies. Fuel deliveries are presently restricted to the winter months when the ice on Imagruaq Lake is thick enough to support a temporary ice strip for Hercules-type aircraft. Tanks for the Public Utilities department are located at the tank farm a short distance south of town except for a 10,000 gallon tank adjacent to the Arctic Pats for use in emergency situations.

Construction of a new generator building at Atqasuk is planned and some of the materials have already been delivered to the village. For the longer term, however, the North Slope Borough is investigating the feasibility of using energy sources other than expensive diesel fuel for power generation. One option currently under study involves the generation of natural gas from the Prudhoe Bay or Kuparuk areas, building a major power plant facility at one of those locations, and transmitting electric power to Barrow, Nuiqsut, Wainwright and Atqasuk via an overhead transmission line. The impetus for these investigations is the relatively short remaining life of the Barrow gas fields plus the high cost of diesel fuel.

Fuel Storage

All fuel for Atqasuk is delivered by air, with deliveries being limited to that period during the winter when the ice on Imagruaq Lake can support an ice strip designed to accommodate Hercules-type aircraft. The village tank farm was constructed by the North Slope Borough on a site immediately south of town and contains eight 30,000 gallon tanks,
one for gasoline and the remainder for diesel fuel. In addition, the School District has two “Here” tanks with a combined capacity of 30,000 gallons which are located close to the present school and the new fire station has an adjacent 7,000 gallon tank for its operations.

The amount of fuel tankage at Atqasuk underwent a significant increase during April and May of 1983 when ten additional tanks, each with a 10,000 gallon capacity, were delivered to the village by the North Slope Borough. These tanks were placed near the Public Works department’s warm storage building, another was located close to the village generation facilities, and the remainder were located near the tank farm. Also, the dredge operation brought in twenty 10,000 gallon tanks, eighteen of which are sited near the tank farm and the remainder are located by the area being dredged in 1983.

The amount of fuel storage in Atqasuk will further increase as new facilities in the village are completed. The new school will have an associated 40,000 gallon tank farm, the new central water plant will have nearby diesel fuel storage tanks, plans for a new power plant provide for a tank farm and the new health clinic will have a tank for its use with a capacity of one year’s supply.

Fuel consumption records for Atqasuk are sketchy. Excluding tanks used for the dredge operation, the village currently has 347,000 gallons of fuel storage capacity. Estimated 1982/82 usage was 172,000 gallons. This rose to around 225,500 gallons in 1982/83, necessitating the
shipment of an additional 10,000 gallons of tankage capacity to the village in the spring of 1983.

Until very recently, responsibility for management of the Atqasuk tank farm including the dispensing and delivery of fuel, was assigned to the Borough’s Public Works department. However, this responsibility is being transferred to a Native-owned joint venture organized by the Atqasuk Corporation and Eskimos Inc. Fuel deliveries in the village are made difficult by the lack of an adequate access road to the tank farm and by the lack of village streets. The timing of fuel deliveries to the village will be less critical when a planned 5,000 foot runway is built.

COMMUNICATIONS

Telephone services in Atqasuk and other small North Slope villages are provided by the Arctic Slope Telephone Associated Co-op, Inc. (ASTAC), a non-profit cooperative corporation. Seed money for the organization of the cooperative and the preliminary work needed to obtain a certificate of convenience and necessity from the Alaska Public Utilities Commission was provided by the Arctic Slope Regional Corporation. Once the certificate was obtained, loans for plant acquisition and installation were obtained from the U.S. Rural Electrification Administration. The building housing the switchgear was built by the North Slope Borough and is leased to ASTAC which owns the switchgear, telephone cable and other system support equipment.
The provision of local dial telephone service was a major advance over the previous bush telephone system. According to information provided by ASTAC in February 1983, Atqasuk had a total of 36 residential and 16 business telephone subscribers.
Barrow is located on the Chukchi Sea coast about 7.5 miles southwest of Point Barrow, the northernmost point of land in the United States. The community lies 330 miles north of the Arctic circle and about 500 miles north of Fairbanks, the closest of the State’s major population centers. Within the North Slope region, Barrow’s closest neighbor is the recently resettled village of Atqasuk about 60 miles to the southwest. Other nearby towns include Wainwright approximately 100 miles to the southwest and Nuiqsut about 150 miles to the southeast. Prudhoe Bay, Alaska’s major producing oilfield, lies 200 miles to the southeast. None of these settlements is connected to each other by formal land routes and passenger access between them is possible only by air or snowmachine.

Barrow’s corporate limits take in a 21 square mile area which includes three distinct areas of settlement - the traditional Eskimo community of Barrow, the former Naval Arctic Research Laboratory (NARL) military reservation and portions of the Distant Early Warning (DEW) Line station. Most people live within the traditional community of Barrow which is generally confined to a relatively small area between the Chukchi Sea to the west, the Barrow airport to the south and Isatkoak Lagoon and the former NARL reservation to the east. Within the Barrow townsite, Isatkoak and Tasigarook Lagoons divide the community into two distinct areas - Barrow proper to the south and Browerville to the north. Beyond Browerville to the northeast and connected to it by

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road is the former NARL camp and, beyond that, the POWMain DEWLine station. For the most part, personnel associated with these two facilities live on base.

Much of the information on Barrow contained in the following pages was collected by Alaska Consultants, Inc. either directly or indirectly for the North Slope Borough and was published in the December 1983 report entitled "Background for Planning: City of Barrow' and in the "Barrow Energy Study" published in April 1983. That information was supplemented by fieldwork conducted specifically for this project during the summer of 1983 and by observations from ongoing work in this community being conducted for the North Slope Borough. Information on the subsistence economy and subsistence land use was collected in the field in 1983 specifically for this study.

Population

PAST POPULATION TRENDS

Although there is a long history of settlement in the Barrow area, this was not the clearly dominant community on the North Slope until the period of oil and gas exploration activities in the then Naval Petroleum Reserve No. 4 (now NPR-A) between 1944 and 1953 and construction of the Naval Arctic Research Laboratory (NARL) and the POWMain DEWLine station in the 1950's. Largely as a result of these activities, Barrow grew rapidly between 1939 and 1950 (162 percent) and continued to show healthy growth (38.2 percent) between 1950 and 1960 (see Table 53).
### TABLE 53

**POPULATION TRENDS**  
**BARROW, ALASKA**  
**1890 - 1982**

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>446</td>
<td>193.4</td>
</tr>
<tr>
<td>1920</td>
<td>322</td>
<td>- 27.8</td>
</tr>
<tr>
<td>1929</td>
<td>330</td>
<td>2.4</td>
</tr>
<tr>
<td>1939</td>
<td>363</td>
<td>10.0</td>
</tr>
<tr>
<td>1950</td>
<td>951</td>
<td>162.0</td>
</tr>
<tr>
<td>1960</td>
<td>1,314</td>
<td>38.2</td>
</tr>
<tr>
<td>1970</td>
<td>2,104</td>
<td>60.1</td>
</tr>
<tr>
<td>1980 a/</td>
<td>2,207</td>
<td>4.9</td>
</tr>
<tr>
<td>1982 b/</td>
<td>2,882</td>
<td>30.6</td>
</tr>
</tbody>
</table>

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a/ 1980 Census excluded population based at the Naval Arctic Research Laboratory.

b/ Special 1982 census taken by the City of Barrow

Sources: U.S. Census

City of Barrow
Barrow has continued to experience significant population growth since 1960. During the 1960 to 1970 decade, the number of people living in this community rose from 1,314 to 2,104, an increase of 60 percent. The range of government services in Barrow underwent a major expansion during this period with the construction of new hospital and school facilities which served to attract some new residents from outlying villages. Another factor was a growth in the rate of net natural increase as a result of declining infant mortality rates and increased life expectancy during a period when birth rates remained relatively high.

Between 1970 and 1980, passage of the Alaska Native Claims Settlement Act in 1971 and incorporation of the North Slope Borough in 1972 led to major social and economic change in Barrow. The Arctic Slope Regional Corporation and the Borough opened up a range of new employment opportunities for local residents and also contributed to an influx of whites into the community. On the other hand, the planned out-migration of Eskimos from Barrow to resettle the traditional villages of Atqasuk and Nuiqsut and, to a lesser extent, Point Lay was the major factor in a decline in the number of Eskimos living in Barrow during the 1970 to 1980 decade. Their place has been taken by whites, most of whom are either-single or are married couples without dependents. As a result, despite a boom in economic activity and greatly increased demands for housing, Barrow's population grew only 4.9 percent between 1970 and 1980, slower than at any time since the 1930's. According to the 1980 Census, Barrow had a civilian population of 2,207. A house to house
count conducted by Alaska Consultants, Inc. in July of the same year recorded a total of 2,389 local residents.

Since the 1980 Census, economic activity in Barrow has continued at a high level. A special 1982 census conducted by the City of Barrow counted 2,882 local residents, representing a 30.6 percent increase since 1980. This increase would have been even greater were it not for the "mothballing" of NARL by the U.S. Navy. The number of personnel based at NARL declined from 156 in 1980 to a reported 64 in 1982 and still further to about 30 in 1983.

**POPULATION COMPOSITION**

The outstanding feature of Barrow's population composition is that most residents of this community are Eskimos. However, the proportion of non-Natives has risen in recent years. In 1970, 90.5 percent of the people in this town were Alaska Native. By contrast, the 1980 Census found that although Eskimos remained the dominant ethnic group, Alaska Natives accounted for a much lower 77.9 percent of the community's population. A housing survey conducted in the summer of the same year and which included temporary construction employees found an even lower proportion (71.2 percent) of Alaska Natives (see Table-54). If the population of the former Naval Arctic Research Laboratory (NARL) and the DEW Line station are included, the proportion of Alaska Natives in Barrow is now probably closer to 70 percent.
### TABLE 54

**POPULATION COMPOSITION BY RACE AND AGE**

#### BARROW

<table>
<thead>
<tr>
<th>Age</th>
<th>Alaska Native</th>
<th></th>
<th>Non-Native</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>0 - 4</td>
<td>92</td>
<td>92</td>
<td>184</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>5 - 9</td>
<td>78</td>
<td>83</td>
<td>161</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>10 - 14</td>
<td>85</td>
<td>101</td>
<td>186</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>15 - 19</td>
<td>122</td>
<td>117</td>
<td>239</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>20 - 24</td>
<td>107</td>
<td>88</td>
<td>195</td>
<td>43</td>
<td>33</td>
</tr>
<tr>
<td>25 - 29</td>
<td>101</td>
<td>87</td>
<td>188</td>
<td>85</td>
<td>55</td>
</tr>
<tr>
<td>30 - 34</td>
<td>63</td>
<td>53</td>
<td>116</td>
<td>65</td>
<td>32</td>
</tr>
<tr>
<td>35 - 39</td>
<td>45</td>
<td>31</td>
<td>76</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>40 - 44</td>
<td>38</td>
<td>33</td>
<td>71</td>
<td>28</td>
<td>10</td>
</tr>
<tr>
<td>45 - 49</td>
<td>38</td>
<td>23</td>
<td>61</td>
<td>28</td>
<td>9</td>
</tr>
<tr>
<td>50 - 54</td>
<td>29</td>
<td>26</td>
<td>55</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>55 - 59</td>
<td>21</td>
<td>21</td>
<td>42</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>60 - 64</td>
<td>17</td>
<td>13</td>
<td>30</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>65 - 69</td>
<td>16</td>
<td>21</td>
<td>37</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>70 - 74</td>
<td>9</td>
<td>5</td>
<td>14</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Over 74</td>
<td>15</td>
<td>7</td>
<td>22</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total</th>
<th>876</th>
<th>801</th>
<th>1,677</th>
<th>363</th>
<th>245</th>
<th>608</th>
<th>1,239</th>
<th>1,046</th>
<th>2,285</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median Age</td>
<td>23.1</td>
<td>20.3</td>
<td>21.8</td>
<td>29.3</td>
<td>26.8</td>
<td>28.4</td>
<td>25.8</td>
<td>22.7</td>
<td>24.5</td>
</tr>
</tbody>
</table>

---

**Note:** Figures 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 was provided. Population at the Naval Arctic Research Laboratory (NARL) and the DEW Line station is also excluded.

The increased proportion of non-Natives in Barrow is due both to an outmigration of Eskimos and to an influx of whites. During the 1970's, three former traditional villages (Atqasuk, Nuiqsut and Point Lay) were re-established, mainly by Eskimos from Barrow. Largely as a result, the Eskimo population of Barrow declined between 1970 and 1980. The U.S. Census had counted 1,905 Alaska Natives in Barrow in 1970, 185 more than the 1,720 recorded in 1980. This decline in Alaska Native population was offset by an influx of whites, primarily in response to increased employment opportunities afforded by the North Slope Borough and the Arctic Slope Regional Corporation.

A comparison of age and sex characteristics of Barrow's population in 1980 indicates that this community possesses some peculiarly Alaskan characteristics to an exaggerated degree. According to the 1980 North Slope Borough housing survey, males in Barrow outnumbered females by a 55 to 45 percent margin although this disparity was less marked among the community's Native (52 to 48 percent) than its non-Native (61 to 39 percent) population. The 1980 Census also found a continued predominance of males (53 percent) over females (47 percent) Statewide, unlike the nation as a whole where females outnumber males (see Figure 31).

Barrow's population is very young. According to the North Slope Borough housing survey, the median age of males in Barrow was 25.8 in 1980 and that of females was 22.7, slightly lower than the 26.3 and 25.8 recorded by the 1980 Census for males and females Statewide. The Alaska Native component of Barrow's population was significantly younger than
NORTHSLOPE BOROUGH

STATE OF ALASKA

BARROW

COMPOSITION OF POPULATION 1980

Sources: U.S. Census
North Slope Borough Housing Survey, Alaska Consultants, Inc., 1960
communitywide norms, with the median age of males being 23.1 and that of females being 20.3. Both Barrow and the State are unlike the nation as a whole where the median age of the population was a much older 30.0 in 1980.

To a large degree, the youth of Barrow's population is related to higher birth rates characteristic of predominantly Alaska Native areas of the State. The average number of persons per household recorded in Barrow in 1980 by both the North Slope Borough housing survey and the Census was 3.4, a dramatic decline from the 5.6 persons per unit recorded here in 1970. However, some of the steepness of this decline is related to changes in the community's racial composition. The 1980 housing survey found that Barrow's Alaska Native households averaged 4.2 persons compared with a much lower 2.6 for non-Natives. Many of Barrow's non-Native households are made up of single people or couples without children, a situation which results in their average household size being lower than overall Statewide (2.93) or national (2.75) figures in 1980. The decline in the size of Alaska Native households in Barrow is believed to be due to a combination of falling birth rates and a lessening of overcrowded housing conditions, the latter mainly resulting from the North Slope Borough's housing construction program.

SOCIAL INTERACTION

It is estimated that about 30 percent of Barrow's present population is non-Native. For the community's adult population, the proportion of non-Natives is even higher since people in this group typically have few
dependents. The proportion of non-Natives in Barrow is much greater than in any of the smaller villages (provided that the Barter Island DEW Line station is not counted as being part of Kaktovik) since this is the administrative center for the North Slope Borough general government, the North Slope Borough School District, the Arctic Slope Regional Corporation and other government and non-government agencies providing services in the North Slope region. Such employers require specialized skills which are either not available locally or are not available in sufficient numbers, a situation which results in the hiring of significant numbers of non-Natives.

Non-Natives in Barrow are not a homogeneous group, although they may sometimes be perceived as such by some Inupiat individuals. There appear to be at least four distinct groups, some with sub-classes. Further refinement of such groups, however, would take more fieldwork than provided for this study. With that qualification, Barrow's non-Inupiat population can be divided into permanent residents, semi-permanent residents, transient residents and temporary residents.

The permanent resident group is made up of persons who have made Barrow their permanent home. Most people in this group are male, with many of them having originally come here to work for Holmes and Narver or ITT, both former Navy contractors at NARL. Many persons in this group have married local Inupiats and basically lead a modified Inupiat lifestyle. Others not linked with the Inupiat culture through marriage are nevertheless active participants in community affairs and mix socially with Inupiat residents. Some members of this group hold responsible
jobs with the North Slope Borough, while others are involved in the business sector. The Barrow city council often includes a member of this group, indicating that these people are thought of as “locals” by Inupiat residents.

Semi-permanent non-Native residents are those who come to Barrow with a plan to remain in the community for several years, to save money, and then move out of the region. This group includes a high proportion of professional people such as teachers, doctors, nurses and administrators. Since about 1980, this group has also included a significant number of blue collar employees such as food service workers, janitorial workers and laborers, plus government workers with less specialized skills. Traditionally, this non-Native group had been almost exclusively made up of whites. However, this is no longer true and Barrow now has a contingent of Filipinos, Mexicans and Koreans.

The semi-permanent non-Native group tends to have few dependents in Barrow and to spend relatively little money in the community. Money earned locally is usually invested outside the region (or the State). As a result, little of that money is circulated in Barrow. Another characteristic of this group is the high proportion of people living in employer-provided housing. While some semi-permanent non-Natives in Barrow mix socially with Inupiats, such contacts are usually limited outside the workplace.

Transient non-Native residents include a large proportion of construction workers. This group comes from outside the region and
usually stays in Barrow for a shorter period of time than do the semi-permanent residents, with the actual length of stay normally related to the duration of a particular project on which an individual is working. Many of these people live in construction camp accommodations where meals as well as sleeping quarters are provided, with the result that this group spends almost no money in Barrow. Rest and recreation (R and R) time is almost always spent outside the region.

In general, this group is primarily white, almost exclusively male and was attracted to Barrow by the opportunity to earn high wages. Transient non-Native residents in Barrow have few contacts with other groups in the community, Alaska Native or non-Native.

The last major group of non-Natives in Barrow can be characterized as temporary residents. These people live outside the region, mainly in Fairbanks, Anchorage or Seattle and periodically travel to Barrow to provide professional services, primarily for the North Slope Borough. Although this group cannot strictly be classed as "residents", they are significant in the local economy since most stay in local hotels and eat in local restaurants. This group is almost exclusively white and is predominantly male. It is the primary reason for the recent proliferation of hotel accommodations and restaurants in Barrow. However, it has few social contacts with Barrow's Inupiat population outside the workplace.

It should be stressed that the above characterization of non-Natives in Barrow is highly generalized and that the various groups are not static, i.e. there is movement from group to group. Nevertheless, it does
convey the overall character of the various non-Native groups in the
community. In terms of how these various groups are perceived by
Inupiats, it can be generally said that there is essentially no
resentment expressed over the presence of permanent non-Native
residents. In addition, little real resentment is expressed against the
highly skilled component of the semi-permanent non-Native population,
i.e. doctors, dentists, teachers and so forth. However, a considerable
amount of resentment can be heard over the presence of persons in the
community who are perceived as taking "Inupiat" jobs, i.e. jobs which
could be filled by local residents. This resentment appears to be most
extreme against the non-white component of the semi-permanent non-Native
group.

Relationships between Inupiats and transient white construction workers
are essentially non-existent outside the workplace, especially when
construction workers live in camp accommodations. In general, this
latter group has no real interest in Barrow except in terms of
employment and associated financial rewards, a situation which is
strongly resented by much of the town's Inupiat population. By
contrast, while the temporary residents group undoubtedly includes some
individuals who are resented by local people, this group is generally
not viewed as being a threat to Inupiat lifestyles since its members
travel to Barrow for specific purposes and leave shortly thereafter.

The population at the POW Main DEW Line station and the former NARL base
have little contact with either whites or Inupiats in Barrow. Both of
these facilities are essentially self-contained. The only real point of
contact between the DEWLine station and village residents is the
station's bar and even that contact is limited since admittance is by
invitation only. Some contact is maintained between the operators of
the NARL base and Barrow since the primary mission of the base is to run
the Barrow gas fields and the base also employs a few local residents.
However, there probably more contacts between the DEWLine station and
NARL than there are between either of those facilities and the village
of Barrow.

MIGRATION

While good data to substantiate trends are limited, it is apparent that
there has been a great deal of migration into and out of Barrow during
the past ten years. This has involved an in-migration of non-Natives
into the community, primarily in response to opportunities for well
paying jobs. It has also involved an out-migration of Inupiats to
smaller villages of the region, primarily to re-establish Nuiqsut and
Atqasuk and, to a lesser extent, Point Lay. Some out-migration of
Inupiats to urban centers such as Fairbanks is also believed to have
taken place.

The significance of these various migrations is suggested by comparisons
of racial composition in Barrow as measured by the 1970 and 1980
Censuses. In 1970, a total of 1,905 Alaska Natives (or 90.5 percent of
of the city's population) was counted as living in Barrow. In 1980,
only 1,720 Alaska Natives (or 77.9 percent of the city's population)
were counted here, 185 fewer than had been recorded in 1970.
Even though there are indications that the 1980 Census figure for Barrow's total population was low, a count by Alaska Consultants, Inc. in the summer of 1980 in conjunction with the North Slope Borough housing survey recorded only 1,702 Alaska Native residents here out of a total population of 2,389. This would tend to indicate that if the 1980 Census count was low, it was primarily non-Natives who were missed.

As part of the 1980 housing survey, people were asked how long they had lived in their present community. These answers were later disaggregated by race. In Barrow, almost three-quarters (74.9 percent) of the Alaska Natives who answered this question had lived in Barrow since before 1960. By contrast, 87 percent of the non-Natives interviewed who gave responses had moved to the community during the prior five years (see Table 55).

Since 1980, the population of North Slope Borough villages has grown at a rate well in excess of that of natural increase. Although there are no supporting data, at least a portion of that growth has probably been achieved as a result of a continuing exodus from Barrow. The permanence of that out-migration from Barrow, however, is likely to be tested in the near future as the Borough's capital improvements program starts to wind down.

The in-migration of non-Natives into Barrow has taken place during the same period as the out-migration of Alaska Natives to the villages (and, possibly, also out of the region). This in-migration accelerated during the late 1970's and has continued through the early 1980's in response
### TABLE 55

**LENGTH OF RESIDENCE OF HEADS OF HOUSEHOLD a/ b/**

**BARRON**

**JUNE 1980**

<table>
<thead>
<tr>
<th>Length of Residence</th>
<th>Race</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alaska Native</td>
<td>Non-Native</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975-1980</td>
<td>55</td>
<td>161</td>
<td>216</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1970&quot;1974</td>
<td>17</td>
<td>27</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960-1969</td>
<td>27</td>
<td>5</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before 1960</td>
<td>295</td>
<td>2</td>
<td>297</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>53</td>
<td>71</td>
<td>124</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>447</strong></td>
<td><strong>256</strong></td>
<td><strong>703</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

a/ For purposes of the housing survey, the adult Alaska Native in combination Alaska Native/non-Native households was always designated as head of household.

b/ Excludes three occupied units without permanent residents and one bunkhouse with 27 occupants.

to new job opportunities provided by the North Slope Borough and, to a lesser extent, by the Arctic Slope Regional Corporation and others. This new migrant group is typically made up of single persons or married couples without children. The earlier non-Native migrants were primarily professional people or people with specialized skills. This has been less true of more recent arrivals, a group which has included a significant number of non-whites.

Since 1980, the proportion of non-Natives in Barrow is believed to have further increased. A census conducted in 1982 by the City of Barrow counted 2,882 village residents. Although no information on race was collected as part of that census effort, given the amount of growth which occurred in the smaller villages between 1980 and 1983, a large proportion of Barrow's growth is believed to have resulted from the continuing in-migration of non-Natives. This rate of in-migration has further accelerated since 1980, primarily because of a corresponding acceleration of the Borough's capital improvements construction program.

As part of the 1983 fieldwork, Barrow residents were asked about their willingness to migrate for employment. Barrow's larger size made it impossible to determine the total number of local residents who worked at Prudhoe Bay and only one person interviewed as part of the 1983 fieldwork currently worked in that area. He had just begun working there and professed to be quite satisfied with his two weeks on, two-weeks off schedule which he felt would enable him to spend more intensive time with his family and still allow time for subsistence hunting and fishing. However, this person appeared to be an exception.
Other Inupiats interviewed thought that there were not more Alaska Natives working at Prudhoe Bay because the value that the Inupiat culture places on family relationships makes it difficult for them to stay away from their families for extended periods. Three other Inupiats interviewed said that they would not work at Prudhoe Bay as a matter of principle since they did not want to be associated with the petroleum industry in any form.

Only one Inupiat interviewed in Barrow in 1983 had ever worked on the Pipeline. She indicated that the only reason for working there was the money and that she would never do it again because of the hardships it had created in her family life.

In summary, Inupiats interviewed generally showed little interest in migrating to petroleum industry sites for employment. As elsewhere, this was in part doubtless due to the current availability of jobs in Barrow and a preference for moving to another Borough village for employment rather than to a “foreign” environment such as is afforded by the Prudhoe Bay area. However, these attitudes could change as construction employment associated with the North Slope Borough capital improvements program winds down.

RECENT TRENDS AND CHANGES

After a sluggish (4.9 percent) rate of population growth between 1970 and 1980 due primarily to a shift in the community’s racial composition, Barrow has undergone a period of major population growth since 1980. A
1982 census conducted by the City of Barrow counted 2,882 residents, representing a 30.6 percent increase over the 1980 Census figure. Given the rate of North Slope Borough capital improvements program construction activity in 1983, some further increases in population doubtless also took place during that year.

As indicated above, the major contributor to recent rapid rates of population growth in Barrow has been the North Slope Borough's capital improvements program. The largest non-Borough construction project in Barrow in the past few years has been burial of the community gas distribution system, a project funded by the Bureau of Indian Affairs and built by a subsidiary of the Arctic Slope Regional Corporation. A significant proportion of Borough-generated construction activity in Barrow has involved subsidiaries of both the regional corporation and Ukpeagvik Inupiat Corporation (UIC), the local village corporation. However, much of the construction work has also been done by outside firms, a situation which has resulted in the establishment of a major construction camp on the south side of the airport runway, as well as a number of other smaller facilities scattered throughout town.

Major Borough construction projects underway during the summer of 1983 in Barrow included the water and sewer utilidor system, dredging of a sewage lagoon, development of roads in the Browerville addition #2, construction of a hangar for the Borough's helicopters and fixed wing aircraft, construction of the new high school, the addition of new single family housing units, expansion and upgrading of the water treatment plant and an addition to the Browerville fire station.
As the Borough seat, a large number of Borough general government and School District administrative personnel are based in Barrow. Their number has increased as the level of services being provided regionally has grown. Furthermore, as the largest traditional community on the North Slope, the Borough generally provides a higher level of service and employs a much greater number of operations and maintenance personnel in Barrow than it does in the smaller villages. Finally, as a result of the rapid pace of the Borough's capital improvements program during the past few years, Barrow has not only seen an increase in the number of construction workers but also a corresponding growth in the number of personnel (and consultants) needed to monitor capital improvements program construction activities.

**Economy**

Prior to World War II, Barrow was about the same size as Wainwright although even then it had more amenities. After the decline of the commercial whaling industry in the Arctic, other activities such as reindeer herding and trapping had become important in the local economy. However, reindeer herding had collapsed by the early 1940's and the national depression of the 1930's had resulted in the "bottom" falling out of the fur market. These unfavorable conditions, together with a high incidence of tuberculosis and other diseases plus high infant mortality rates, were reflected in a virtual stagnation of Barrow's population between 1920 and 1939.
The decision by the U.S. Navy in 1944 to undertake an extensive petroleum exploration program in the then Naval Petroleum Reserve No. 4 (now NPR-A) led to major and lasting change in Barrow and clearly established this as the major village in the region. The exploration program continued through 1953. During that period, a camp was built at what later became the Naval Arctic Research Laboratory (NARL) site, a short distance north of the village of Barrow and a road linking the two settlements was constructed. There were normally 300 to 500 men at the camp during the exploration program period. In addition, a conscious effort was made by Navy subcontractors to hire as many Eskimos as possible, provided that they could meet required health standards. At peak, more than 100 Eskimos were employed in the NPR-A exploration program, with the availability of jobs being a major factor in the 162 percent growth in population recorded for Barrow between 1939 and 1950.

Despite the cessation of the NPR-4 exploration program in 1953, Barrow's population continued to grow during the 1950s. Construction of the DEW Line system across the Alaska arctic got underway during this period. In Barrow, the Air Force took over operation of the old Navy base in 1954, except for the research laboratory portion of the facility, and operated it through a series of civilian contractors. While the number of jobs afforded local residents was less than had been available during the exploration program, the facility nevertheless provided a significant source of local employment.

In 1971, the camp again reverted to Navy control. However, over the years, of the facility by the Navy steadily declined and it was
decommissioned in June 1981 and placed in a caretaker status in September of the same year. (All research at the facility had ceased in September 1980 when the University of Alaska's contract was canceled). Today, the only function of NARL is limited maintenance of the base and operation of the gas fields, a task which currently employs about 30 people.

While the NARL base was a major factor in Barrow becoming the dominant community in the North Slope region, the primary contributors to the city's economy today are the activities of government agencies and firms operating under government contracts. 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.

This community has undergone a fundamental change since 1970. Passage of the Alaska Native Claims Settlement Act in 1971 and incorporation of the North Slope Borough (with Prudhoe Bay as its primary tax base) in 1972 have resulted in the development of a locally based economy, replacing one which had been almost entirely dependent on decisions made by a remote federal bureaucracy. Accompanying this change has been a major growth in employment opportunities (not all of them permanent), resulting not only in new jobs for local people but also in an in-migration of new, primarily white, residents into the Barrow area.
COMPOSITION OF EMPLOYMENT

Employment statistics published by the Alaska Department of Labor cover the entire North Slope Borough, including Prudhoe Bay, and therefore do not provide meaningful data for individual communities. A survey of employment in Barrow was therefore conducted by Alaska Consultants, Inc. in August 1982.

Each employer in Barrow was contacted and asked to indicate the type of business in which that establishment was engaged and the annual average number of persons employed. Employment was then assigned to the appropriate standard industrial categories used by the Alaska Department of Labor (and throughout the United States).

When converted to average annual full-time employment, a total of 1,345 jobs was counted in Barrow in 1982, an increase of almost 36 percent over the 992 jobs counted here by Alaska Consultants, Inc. in 1978 (see Table 56). Almost half of the community's jobs in 1982 were in government occupations, most of them with the North Slope Borough. The next largest sector was contract construction which accounted for almost 20 percent of the city's jobs in 1982, mostly derived from North Slope Borough construction projects. The only other employment sector to account for more than 10 percent of total employment in Barrow in 1982 was transportation, communications and public utilities (13.2 percent), followed by services (5.9 percent), trade (5.2 percent), finance, insurance and real estate (4.5 percent) and mining (2.4 percent). The agriculture, forestry and fishing sector was not represented locally.
# TABLE 56

**ANNUAL AVERAGE FULL-TIME EMPLOYMENT**

**BARROW**

1982

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>Number</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mining</td>
<td>32</td>
<td>2.4</td>
</tr>
<tr>
<td>Contract Construction</td>
<td>260</td>
<td>19.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Transportation, Communications and Public Utilities</td>
<td>177</td>
<td>13.2</td>
</tr>
<tr>
<td>Trade</td>
<td>70</td>
<td>5.2</td>
</tr>
<tr>
<td>Finance, Insurance and Real Estate</td>
<td>60</td>
<td>4.5</td>
</tr>
<tr>
<td>Services</td>
<td>79</td>
<td>5.9</td>
</tr>
<tr>
<td>Government</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal</td>
<td>(58)</td>
<td>(4.3)</td>
</tr>
<tr>
<td>State</td>
<td>(13)</td>
<td>(1.0)</td>
</tr>
<tr>
<td>Local</td>
<td>(596)</td>
<td>(44.3)</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,345</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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\* Excludes local persons working in the Prudhoe Bay area.

Source: Alaska Consultants, Inc.
A total of 667 full-time job equivalents was identified in the government sector, of which 596 were in local government. Of these, the general Borough government accounted for 419 jobs and the North Slope Borough School District for 170. The only other local government jobs in Barrow in 1982 were 7 with the City of Barrow. All told, 44.3 percent of the full-time job equivalents counted in Barrow in 1982 were in local government. No other community of any scale in the State has such a high proportion of its total employment in this government sub-sector.

Only 13 State jobs were identified in Barrow in 1982, exactly the same number as were counted here in 1978. Another 58 jobs were derived from the federal government. By far the largest federal employer in Barrow is the U.S. Public Health Service which operates the Barrow hospital and serves most of the North Slope region. Other federal agencies represented locally include the Federal Aviation Administration, the National Weather Service and the Post Office. The total number of federal employees in Barrow in 1982 was lower than in 1978, due both to a scaling down in staffing levels of some agencies and to the closure of the Public Health Service's Office of Environmental Health locally, as well as the departure of all military personnel from NARL.

After government, most jobs identified in Barrow in 1982 were in the contract construction sector. A total of 260 full-time job equivalents was counted in this sector, representing twenty different contract construction firms and several other miscellaneous construction employers. Major construction activities underway in Barrow in 1982
included completion of the buried gas distribution system, continued work on the Barrow high school, work on the water and sewer utilidor system and public housing, plus a number of smaller Borough and other projects.

In all, 177 jobs were identified in the transportation, communications and public utilities sector in Barrow in 1982. This was significantly lower than the 233 jobs counted in this sector here in 1978. However, the apparent decline is derived directly from the "mothballing" of NARL and other employment in this sector actually increased during the 1978-1982 period, especially in air transportation activities.

The services sector accounted for a total of 79 jobs on an annual average full-time basis in Barrow in 1982. This was less than the 97 jobs counted here in 1978 because of the cessation of the University of Alaska's research management function at NARL. In fact, other service employers in Barrow have experienced significant growth during the 1978-1982 period, especially in the provision of hotel/construction camp services.

Barrow has a relatively small trade sector when compared with other Alaska communities of a similar size, probably a reflection of a very high amount of mail order buying and deferred purchases. Nevertheless, the 70 jobs counted in this sector in Barrow in 1982 represented a 27 percent increase over the number counted in 1978. Exactly half of Barrow's 1982 jobs in trade were associated with the operation of three
stores which primarily sell groceries. Another 23 jobs were derived from the operation of restaurants and food stores.

Barrow has an unusually large finance, insurance and real estate sector for a community of its size. 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. Total employment in this sector in 1982 is lower than it was in 1978, mainly because these corporations have subsequently formed subsidiaries which are covered under other industrial categories.

The only other employment sector which was represented locally in 1982 was mining. Both ARCO and Sohio had liaison personnel based in Barrow. However, most employment in this sector in 1982 was derived from construction activities associated with the Barrow gas fields and with clean-up work in NPR-A.

UNEMPLOYMENT AND SEASONALITY OF EMPLOYMENT

There are no reliable statistics available which document rates of unemployment in Barrow or any other North Slope Borough community. The figures published by the Alaska Department of Labor for the North Slope Borough include Prudhoe Bay where everyone is employed and where most jobs in the region are located. As a result, conditions in the region's traditional villages are obscured.
As part of the Barrow employment survey, employers were asked to indicate if the number of jobs in their individual operations changed seasonally. Except for jobs derived from tourism and construction, Barrow appears to have a low degree of employment seasonality, mainly because such a large share of the jobs in this community are in government and government-sponsored occupations or are associated with the Arctic Slope Regional Corporation's central office. The number of jobs in these occupations does not change significantly from season to season. (Schoolteachers are counted as year-round employees, even though most are not physically present in Barrow in the summer months, because they are paid on a year-round basis).

Unemployment data specifically for Barrow is generally sketchy. In 1982, there were 2.1 persons for every job in the Barrow urban area, a relationship suggesting that there is very little unemployment here. However, a significant proportion of Barrow's non-Native population is made up of persons living in institutional housing or construction camps who have almost no dependents locally. In addition, a large share of the remaining whites who live in town are here strictly for job-related reasons and also have few dependents, with the most extreme example being Federal Aviation Administration employees whose families live in Fairbanks and who are rotated in and out of Barrow every few weeks. If whites were excluded, the relationship between population and employment would probably be closer to 4 persons for every job, indicating at least some under-employment for a segment of Barrow's Eskimo population.
Two factors should be taken into account when assessing apparent discrepancies between Inupiat population and employment in Barrow (and other North Slope villages). First, a significant proportion of Barrow females is outside the labor force (i.e. they are not seeking employment), although this proportion is believed to be lower in Barrow than in the smaller villages. Another factor which must be taken into account is the amount of time devoted to subsistence activities. Such activities can temporarily remove individuals from the labor market. The availability of a worker at a given time is conditioned by that individual's perception of the need to spend time on a subsistence-related activity. Temporary construction work, especially that which is close to home, provides the part-time employment and sufficient cash income to fit well into the cash/subsistence economy which exists for a segment of Barrow's population.

Weather conditions cause some seasonal variations in temporary construction employment in Barrow, as they do in other villages in this region. However, the main variations in this type of employment are related to the number and type of capital improvement projects being constructed locally. For example, uneven scheduling of construction work from year to year can result in local unemployment. Or, the use of contractors who bring in much of their own labor rather than hiring locally can also lead to a loss of jobs for Barrow residents.
INCOME LEVELS

The 1980 Census found the median household income for the North Slope Borough to be $31,378. The median household income for Alaska was $25,421, and the mean household income for Alaska Natives Statewide was $21,865.

A comprehensive housing survey conducted for the North Slope Borough in 1980 obtained income information for individual communities. In Barrow, this information was based on a sample of 405 out of a total of 703 households surveyed. It found the median household income in Barrow to be $30,137, with that for local Alaska Native households being $26,277 compared with $37,357 for non-Native households (see Table 57).

The purchasing power of the dollar in remote communities such as Barrow is greatly diminished by high local prices for goods and services. Barrow is more easily accessible by water than most villages in the region. However, this accessibility is limited to a very short season because of ice conditions and a high proportion of freight into Barrow is brought in by air, a situation which adds significantly to costs. As a result, store-bought food prices here appear to be about double those in Anchorage and subsistence hunting and fishing activities remain an economic as well as a cultural necessity for most local Inupiat residents.

Housing costs in Barrow are unlike those in the smaller villages of the region in that utilities costs are generally low because gas prices are
### TABLE 57

**HOUSEHOLD INCOME DISTRIBUTION a/**

**BARROW**

1980

<table>
<thead>
<tr>
<th>Household Income</th>
<th>Race</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alaska Native</td>
<td>Non-Native</td>
<td>Total</td>
</tr>
<tr>
<td>Under $1,000</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>$ 1,000-$ 1,999</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>$2,000-$ 2,999</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>$3,000-$ 3,999</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>$4,000-$ 4,999</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>$5,000-$ 5,999</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>$6,000-$ 6,999</td>
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<td>2</td>
<td>8</td>
</tr>
<tr>
<td>$7,000-$ 7,999</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>$8,000-$ 8,999</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>$9,000-$ 9,999</td>
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<td>3</td>
</tr>
<tr>
<td>$10,000-$ 10,999</td>
<td>7</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>$11,000-$ 11,999</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>$12,000-$ 14,999</td>
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<td>6</td>
<td>22</td>
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<tr>
<td>$15,000-$ 19,999</td>
<td>27</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>$20,000-$ 24,999</td>
<td>27</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>$25,000-$ 34,999</td>
<td>47</td>
<td>26</td>
<td>73</td>
</tr>
<tr>
<td>$35,000-$ 49,999</td>
<td>43</td>
<td>35</td>
<td>78</td>
</tr>
<tr>
<td>$50,000-$74,999</td>
<td>35</td>
<td>35</td>
<td>70</td>
</tr>
<tr>
<td>$75,000 or more</td>
<td>5</td>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>248</td>
<td>157</td>
<td>405</td>
</tr>
</tbody>
</table>

**Median Income**

- Alaska Native: $26,277
- Non-Native: $37,357
- Total: $30,137

**Mean Income**

- Alaska Native: $29,156
- Non-Native: $39,473
- Total: $33,155

**Standard Deviation**

- Alaska Native: $19,202
- Non-Native: $25,280
- Total: $22,350

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a/ Figures exclude 298 households (199 Alaska Native and 99 non-Native) for which no income information was obtained.

currently heavily subsidized by the federal government. However, for people who rent units or who construct their own homes using standard materials, housing costs can be high. For example, the cost of three bedroom homes currently being built in Barrow by the North Slope Borough is slightly in excess of $300,000 per unit. Private rentals in the $1,000 to $2,000 per month range are not uncommon. Such costs further reduce the spending power of household incomes in this community.

ECONOMIC GROWTH PROSPECTS

Barrow has the most complex economy of any of the North Slope Borough's traditional villages. Nevertheless, as in the other communities, the dominant economic force in Barrow is government spending, especially that by the North Slope Borough. Other sources of economic strength include the activities of the Arctic Slope Regional Corporation and the Ukpeagvik Inupiat Corporation (UIC), the regional and local village corporations established under terms of the Alaska Native Claims Settlement Act; other government agencies, primarily the U.S. Public Health Service which operates a regional health facility in Barrow and a modest amount of tourism during the summer months. The operation of the former Naval Arctic Research Laboratory (NARL), once a major employer in the Barrow area, is now a minor element in the community's economy.

As in all North Slope villages, the major employer in Barrow is the North Slope Borough. However, unlike the smaller villages, a large number of Borough employees in Barrow are permanent administrative
personnel, both for the general Borough government and the North Slope Borough School District. In addition, the Borough maintains a relatively large operations and maintenance staff in Barrow since it provides a higher level of service here.

Some analysis of the composition of Borough employment is necessary in order to assess prospects for future economic growth. In 1982, direct Borough employment in Barrow (including the North Slope Borough School District) amounted to 589 full-time job equivalents. Approximately 115 of these jobs were held by construction workers whose salary was paid directly by the Borough. Operations and maintenance personnel, including people involved in clean-up work, road maintenance, dredging, transit services, housing maintenance, utilities and local police protection services, plus teachers and culinary, maintenance and other jobs associated with the Barrow schools, employed another 219 persons on average annual full-time basis in 1982. The remaining 255 jobs were essentially administrative, although there is some overlap between administration and operations in several departments.

In the future, while the number of administrative and operations and maintenance positions could show some decline, such jobs are considered relatively permanent. By contrast, the number of persons employed directly by the Borough in construction fluctuates according to the level of construction activity in the community and the type of contract awarded for a particular project. Once the Borough’s capital improvements program winds down, however, this portion of Barrow’s local government sector employment should show a corresponding decrease.
Other government employment in Barrow is expected to remain at a relatively stable level in the future. The major government employer in the community after the North Slope Borough is the U.S. Public Health Service which operates a regional hospital facility here. While responsibility for management of this facility could change in the future, it is assumed that current staffing levels will continue to be maintained.

Contract construction employment in Barrow was second only to government in 1982. Aside from burial of the community gas distribution system, almost all construction employment in the community in 1982 was derived from North Slope Borough capital improvements projects. As a result, this sector of Barrow's economy can be expected to undergo a major decline in the future as the capital improvements program winds down. The three major Borough projects underway in Barrow in both 1982 and 1983 were the water and sewer utilidor system, the Barrow high school and public housing construction.

The activities of both the Arctic Slope Regional Corporation and the Ukpeagvik Inupiat Corporation (UIC) are significant elements in Barrow's economy and can be expected to become more so in the future, although the winding down of Borough capital improvements program construction activity is likely to have an impact on the construction subsidiaries of both corporations.

The Arctic Slope Regional Corporation employed an annual average of about 40 persons in its central office in Barrow in 1982. Corporation
activities in Barrow in 1982 included operation of the community gravel pit, a heavy duty equipment repair service, rental of heavy construction equipment, operation of a service station and local storage and distribution of fuel oil, gasoline and other petroleum products. One of its subsidiaries, Eskimos Inc., was engaged in a range of construction activities in 1982 in conjunction with two other firms which are now also wholly owned subsidiaries of the regional corporation. Tundra Tours, Inc., another subsidiary, owns and operates the 40-room Top of the World Hotel (although it contracts out the operation and management of the hotel restaurant).

The Arctic Slope Regional Corporation has no land holdings in the Barrow area except for a few lots in town. However, through its ownership of surface and subsurface estate elsewhere in the region, it has the potential to capitalize on future oil and gas development activities and, thus, contribute to future economic development in Barrow. As of June 30, 1982 the Corporation reported ownership of approximately 4.6 million acres of land, including about 1 million acres of "in lieu" and village subsurface lands. More recently, in August 1983, the Corporation completed a land swap with the Secretary of the Interior involving the transfer of 100,000 acres of surface estate adjacent to the Gates of the Arctic National Park and Preserve for 92,160 acres of subsurface estate underlying selections of the Kaktovik Inupiat Corporation in the Arctic National Wildlife Refuge. Industry interest in the petroleum potential of the Arctic National Wildlife Refuge is high and the regional corporation has reportedly received a number of proposals from companies wishing to undertake exploratory drilling.
there. While petroleum development would require Congressional approval, the Corporation stands to benefit from any petroleum activity involving its lands in that area.

The activities of the Ukpeagvik Inupiat Corporation (UIC) will also have an impact on Barrow's economy in the future. This corporation is the major landowner in the Barrow area and, as such, essentially controls development outside the original Barrow townsite. Aside from development of its lands, this corporation is involved in several local ventures including the main community store (Stuaqpak), management of which is presently contracted to the Alaska Commercial Company. Other local investments include a lumber products distributorship (Qiruktagvik and Company) and a construction firm (UIC Construction). The corporation is also involved in a tug and barge service joint venture (Bowhead Transportation) and a number of other activities outside the Barrow area. Depending on the success of these ventures, UIC could play a much larger role in Barrow's economy in the future.

Tourism is a highly seasonal element in Barrow's economy, with the tour season being essentially confined to the period between the beginning of June and the end of August. Almost all tourists visiting Barrow travel on organized tours marketed by Alaska Tour and Marketing Services. Three different tour packages which include Barrow are currently offered, two of which require tourists to spend a night in Barrow. Local transportation of tourists in the community is provided by a bus operated by Alaska Tour and Marketing Services.
No current statistics on the number of tourists who visit Barrow are available but they are believed to be in the range of 4,000 to 5,000 per year. Few tourists visit the community independently of tour groups. However, according to the Top of the World operators, some individuals do come to the community throughout the year, including a small number in winter who are attracted by phenomena such as total darkness and the northern lights.

There is a potential for increased tourism in Barrow. Nevertheless, it is likely to remain a significant but highly seasonal element in the local economy.

Although tourism has contributed to the recent proliferation of hotel space and a growth in the number of restaurants in Barrow, the primary contributor has been the presence of outsiders in the community, mainly those traveling to Barrow to do business with the North Slope Borough. As the North Slope Borough capital improvements program winds down, the number of these visitors can be expected to decrease and, with it, the number of persons employed in hotel and food service occupations.

Activities associated with the operation of the POW Main DEW Line station are not expected to change although staffing at that facility could decrease as a result of a higher level of automation. The future of NARL, on the other hand, is still a question mark. In 1982, aside from clean-up operations in NPR-A being conducted by Husky Oil (and which have since been completed), NARL’s only functions were maintenance of the base and operation of the Barrow gas fields. These functions
will cease on October 1, 1984 when ownership of the gas fields and responsibility for their operation will be transferred to the North Slope Borough. Possible options for the re-use of the NARL base are currently being examined by the Ukpeagvik Inupiat Corporation.

SUBSISTENCE ECONOMY

Since the 1930's, Barrow's subsistence economy has evolved somewhat differently than was the case in the smaller villages of the North Slope region. These differences can be largely attributed to Barrow's more rapid rate of population growth and a concurrent growth in local employment opportunities. The larger population of Barrow, as well as the availability of local employment over a longer period of time, has resulted in important differences in the subsistence economy. (The growth of Barrow as a regional center and, subsequently, as the seat of local government for the region is described elsewhere in this report).

As discussed in the overview of the region's subsistence economy, the technological innovations now commonly used on the North Slope for subsistence harvesting activities reflect significant increases in the purchasing power of the region's Inupiat residents as a result of improved local employment opportunities. These innovative tools, which led to a revolution in subsistence transportation techniques and patterns, have generally been available to most Barrow residents at an earlier date and in greater numbers than was the case for residents of other North Slope villages because the latter did not enjoy increased local job opportunities until more recently. As a result, some Barrow
families have accumulated more equipment than the residents of other villages, equipment which has enabled them to exploit their large, diverse harvest areas.

Because Barrow is the only community on the North Slope which actively hunts bowhead whales during both the spring and fall migrations, subsistence costs are higher for those whaling captains than captains in other villages (see Table 17). According to the interview data, the operational costs for a spring whaling captain average $4,500 a year. In Barrow, a whaling captain who also hunts bowheads in the fall must, on the average, add a further $3,000 to his subsistence costs. These figures represent the average operational costs for whaling under the quota system which began in 1978. If spring whaling continued until the end of May as it did prior to the quota, operating costs would be even higher as more food and fuel would be consumed. One added cost for fall whalers is the extra fuel required to tow a dead whale the long distance to shore. This can consume three drums of fuel. Thus, a Barrow whaling captain who hunts both in the spring and fall has the highest subsistence costs of any hunter in the study area, approximately $15,227 per year (see Table 17).

One expense peculiar to whaling captains is maintenance of the skin boats, now used almost exclusively for whaling. Aluminum boats are presently used for many activities which were previously undertaken in umiaks. Because the umiaks are now used only for whaling, it is not necessary to replace the skins as often and the maintenance costs for these boats have thus been reduced. One whaling captain stated that he
now only changed skins every four years as opposed to every year in the past. If possible, whaling captains hunt their own ugruk to cover the boat frames. However, if they do not have time or are unsuccessful, they must purchase the skins. It takes from six to nine ugruk skins to cover an umiak frame. Because the skins cost between $100 and $200 each, their purchase further increases a whaling captain’s subsistence costs.

One important factor when considering the differences in Barrow’s subsistence economy and that of the other villages of the study area is Barrow’s large Inupiat population (the 1980 Census counted 1,720 Alaska Natives in Barrow). This large population affects Barrow’s subsistence economy in several ways. First, there is diversity among families as to species they prefer to hunt which, in turn, affects timing and equipment costs. Second, the areal extent of subsistence use areas is greater for Barrow than any other study village, increasing operating costs and reducing equipment life. Finally, the large population of Barrow results in a wide range of economic and subsistence strategies among families and individuals.

The number of wildlife resources available to Barrow residents is not necessarily greater than those of the other study villages. However, "Barrow’s unique physical setting and large population affects familial and individual harvest patterns. One important factor in determining the target species for an individual or family is taste preference, which varies considerably in such a large community. Other equally important factors include cultural significance, species availability
and abundance, weather, ice conditions and the availability of employment. The variable nature of most of these factors demonstrates how the target species for a family or an individual may differ from year to year. The importance of Barrow's unique physical setting is demonstrated by the two season bowhead whale harvest. Barrow is the only village on the North Slope which can hunt the bowhead whale in both the fall and spring. The varying level of effort for these two harvest periods (discussed in Barrow's subsistence land use patterns) is largely the result of the above listed variables.

Barrow's large population also contributes to the enormous size of the overall harvest area used by village residents. The areal extent of Barrow residents' marine harvest area extends from Peard Bay in the west to Pitt Point in the east and as far as thirty miles offshore. Coastal activities do occur outside this area but usually in conjunction with trips to other coastal communities. While improvements in transportation technology have facilitated the use of such a large area, Barrow's large population necessitates a bigger harvest area than is required in the smaller study villages so that hunters do not exceed the carrying capacity of the local environment. For example, a local area can be fished out if there is too high a density of fishermen. One resident stated that he had to go far afield from Barrow in order to find a suitable fishing location which was not already occupied by a Barrow or an Atqasuk family. While the highly migratory nature of caribou and most sea mammals minimizes this problem, variations in weather and ice conditions require a large area for these species as well. This large area results in more wear and tear on subsistence
harvesting equipment, particularly boats, outboard motors and snowmachines, which increases subsistence costs.

Barrow's large population supports considerable variety in terms of economic and subsistence strategies within the community. Not all working age residents of Barrow are employed. Some prefer to spend all of their time engaged in subsistence activities. Other family members who are employed may supply these hunters with the necessary equipment and cash in trade for a share of the harvest product. As discussed below, other hunters who do not work are able to keep their expenses down by maintaining traditional harvest patterns. All 18 of the Barrow subsistence harvesters who were interviewed as part of the 1983 fieldwork were involved in the wage economy at least on a part-time basis. The following three examples from Barrow demonstrate different solutions to the high costs of subsistence activities:

- Two brothers alternate years as whaling captains to compensate for the high costs of operating a whaling crew. While many Barrow residents are able to earn the necessary cash to place a crew on the ice each spring, others find the costs prohibitive. By alternating years as captain, these two brothers are able to save money for other household and subsistence needs.

- One young hunter who was interviewed did not own a boat, three-wheeler or a snowmachine. Instead, he used his father's equipment. If both he and his father went hunting, they divided the operating costs for the trip. If the son went out by himself, he paid for the fuel and other expenses. In return for the use of his father's equipment, this young man supplied all of the meat for his parents'
household, resulting in a mutually agreeable division of subsistence costs. This agreement allows the young hunter to spend his money on house and land payments and other costs relating to his own nuclear family. In addition, his parents store food for his family in their ice cellar.

A final example demonstrates how costs of expensive items are distributed among family members. In this instance, a father and his sons have formed a collective subsistence hunting team and distribute the costs equally among themselves. All of the equipment is stored in a shed at the father's home, and each son has particular responsibilities. One takes care of the snowmachines and their repairs, another tends to the sleds and camping gear, and so forth. In this situation, not all members of the group own all of the necessary subsistence harvest equipment, and each has reduced his own costs while, at the same time, maintaining access to the equipment.

One of the negative aspects of Barrow's growth on local subsistence practices is the effects of urbanization on meat drying. High winds, relatively common in the area, now carry considerable amounts of silt and dust due to construction-disturbed permafrost and peat layers. This wind-blown material has made it difficult to dry meat in the community, forcing some families who used to stay in Barrow for spring and summer sea mammal hunting to establish camps along the coast. While this has increased the cost of subsistence activities for some residents, it is noteworthy that they are willing to expend the extra time and money to establish camps rather than discontinue the activity.
Barrow and Atqasuk are the only communities in the study area which have residents who rely on airplanes for subsistence activities. Atqasuk residents use the daily air service to travel to and from Barrow. Because some of these trips to Barrow are for sea mammal hunting, airplanes could be considered a subsistence tool for Atqasuk hunters. The extent of airplane use in Atqasuk is covered in the discussion of Atqasuk's land use patterns. Barrow residents' most common use of airplanes is for travel to and from inland fish camps. These inland camps play an important role in the subsistence activities of Barrow residents and are commonly used throughout the summer and early fall for fishing and caribou hunting.

Traditionally, there were two ways to get to fish camp. Barrow residents either traveled overland early in the summer when there was still sufficient snow cover, or, if their camp was in the lower portion of one of the larger rivers, they waited until later in the summer when the ocean was free of ice and then traveled by boat. However, each of these methods is limited in its flexibility. Those who travel overland must leave early in the summer and must remain in fish camp until there is snow cover in the fall or return to Barrow by boat. Those who wait until they can travel by boat are also dependent on the weather because they have to wait for the sea ice to leave the shore. While these methods are still practiced by some Barrow residents, the time constraints resulting from conflicts with employment necessitate some families using airplanes. These families are unable to spend the amount of time required by the vagaries of the weather in traveling to and from fish camp.
The airplane is a convenient method for solving time conflicts between employment and subsistence activities in Barrow. Knowing that the best fishing occurs in the fall, an employed hunter may decide to take two weeks of subsistence leave from his Borough job in the month of September but, because onshore winds hold the ice near the shore, he is unable to leave Barrow by boat. Rather than miss this important subsistence harvest, he will fly his family to camp. Unlike the other villages of the study area where there is relatively easy access to fishing areas, Barrow fishermen’s access to their camps can be restricted by the proximity of ocean ice. While traveling to fish camp by airplane is expensive (the average one-way charter is $300), the high value which residents place on this activity justifies the cost.

**Political Organization**

**FORMAL POLITICAL ORGANIZATION**

There are two primary local political or quasi-political organizations in Barrow. These are the City of Barrow and the Ukpeavik Inupiat Corporation (UIC), the local village corporation established under terms of the Alaska Native Claims Settlement Act. Although the latter is not a public body, its board is elected by corporate stockholders and the corporation is in fact a potent political force in the community. The North Slope Borough, the Arctic Slope Regional Corporation and the Inupiat Community of the Arctic Slope (ICAS) are all headquartered in Barrow and are also important political forces in the community. However, these organizations and their activities have been previously
described in the overview section of this report since they each have a regional mandate. Unlike other North Slope villages, the North Slope Borough does not have a village coordinator in Barrow.

**City of Barrow**

The City of Barrow was first incorporated as a fourth class city under Alaska law in 1959 and was reclassified as a second class city in 1972. In 1974, Barrow voters approved upgrading of the city to first class status in the same election that they approved the transfer of most municipal powers to the North Slope Borough. Funds for the city's operation are derived from a 3 percent local sales tax, State shared revenue, land purchases or lease agreements with the North Slope Borough and by occasional State or federal grants.

Barrow's corporate limits take in a 21 square mile area which includes three distinct areas of settlement - the traditional Eskimo community of Barrow, the former NARL base and portions of the POW/Maint DEW Line station. The city has adopted the council-manager form of government although it was temporarily without a city manager in the summer of 1983. The council consists of six councilmembers (one current member is a non-Native) and a mayor, all elected-at-large. Councilmembers are elected to three-year terms while the mayor's term is two years. The city manager, who is hired by the council and serves at its pleasure, directs day to day city operations, with policy direction from the mayor and council. A special election in the summer of 1983 was held to ask Barrow voters if they would rather have a mayor-council or a
council-manager form of government. Voters "chose the latter and the

Like other North Slope traditional villages, the City of Barrow has few
municipal powers since most have been assumed by the North Slope Borough
on an areawide basis. Nevertheless, the city does provide a variety of
recreation services and is also involved in scholarship programs for
young persons wishing to attend college. (The city program is open to
all Barrow residents since, as a State subdivision, the city cannot
legally discriminate by race). The city mayor usually attends North
Slope Borough assembly meetings so that he can keep apprised of Borough
activities. However, relations between the two government entities have
sometimes been strained, mainly over land issues.

City offices are located in the Browerville fire station, a building
constructed by the city when it still retained fire protection powers.
In 1982, the city had 7 employees, made up of a city manager, an
administrative assistant, a finance director, a recreation director, a
recreation aide, a city clerk and a receptionist.

**Ukpeagvik Inupiat Corporation**

The Ukpeagvik Inupiat Corporation (UIC) was created under terms of the
Alaska Native Claims Settlement Act and is the major land owner in the
Barrow area. Its stockholders are persons who enrolled as Barrow
residents and this, its landholdings and its business activities (both
inside and outside of the community) make it a strong political as well as an economic force in the city.

Aside from the development of its lands, UIC now owns, has an interest in or is joint venturing with others in a number of business ventures. Wholly owned UIC subsidiaries include UIC Construction, Umialik Insurance Company (a property insurance agency which operates Statewide) and Shontz, Inc. (which, while presently inactive, is considering the establishment of an operation to provide services to village stores). UIC is also active in the transportation industry through its joint ventures in Bowhead Transportation (a tug and barge service) and Alaska Terminals (which provides consolidating and warehousing services in Seattle). The corporation has interests in the communications industry through its participation in Kuparuk Communications and Prudhoe Communications firms. In addition, UIC is involved in the trade sector of Barrow's economy through a joint venture in Qiruktagvik and Company (a lumber products distributor) and Stuaqpak (the largest grocery and general merchandise store in Barrow). The latter is currently leased to the Alaska Commercial Company under an agreement providing UIC with a share of the operation's profits.

Other ventures of UIC include an interest in Boatel/Ukpeagvik which provides it with an entry into the catering industry. Also, UIC has recently joined with the Arctic Slope Regional Corporation and Pingo to organize the Piuniq Management Corporation which will provide management services for the Kuparuk industrial complex now under construction by the North Slope Borough. Finally, UIC is a participant
in Geo-Source/Ukpeagvik, a firm organized to develop compact transportable LNG plants to liquefy natural gas for consumption by North Slope villages. The State has provided a $200,000 grant for the firm to assess the feasibility of such an undertaking.

In 1982, UIC had 9 full-time and 6 part-time employees. At that same time, UIC Construction had an annual average of about 24 full-time employees and Stuaqpak employed about 20 persons on a full-time basis. UIC recently moved its offices from the second floor of the court building in downtown Barrow to new quarters on the outskirts of Browerville.

INFORMAL POLITICAL ORGANIZATION

Aside from the City of Barrow and the Ukpeagvik Inupiat Corporation and its subsidiaries and other business ventures, there are a number of groups in Barrow which have some political significance. These include the Presbyterian and Assembly of God churches, the National Guard, the Barrow Whaling Commission, the Mother's Club, the volunteer firefighting and search and rescue groups, the Chamber of Commerce and the Lions Club.

As in most other North Slope communities, the dominant religious group in Barrow is the Presbyterian church. The present minister is a white who lives in the manse adjacent to the church. According to an Inupiat leader within the church, the Presbyterian church in Barrow played an important role in village dynamics from the turn of the century until
recently, but this role has since declined. There is a group of 100 to 200 people who regularly attend services at the Presbyterian church, with about one-third of these being whites. Barrow also has an Assembly of God church which has a resident white minister and has regularly scheduled services, although it has a smaller congregation than does the Presbyterian church. In addition, there is a Roman Catholic church served periodically by a priest from Fairbanks. Other sects in town include the Baha'i Faith.

The National Guard has long been an important organization in Barrow as it has in several other North Slope villages. In the early years of its establishment, the Barrow unit was reportedly very active and membership was highly valued. Over time, interest in the Guard waned but it has apparently revived recently. The older generation of Barrow leaders generally had connections with the National Guard but this is not true of the younger leaders. It was suggested to Alaska Consultants, Inc. during the 1983 fieldwork that even greater interest in the Guard might result from decreases in capital improvements program construction employment. Draft registration requirements could also be a factor.

The Barrow Whaling Commission is an influential group in Barrow as it represents all whaling captains in the community. Furthermore, one representative from Barrow also serves on the full Commission. Meetings are held prior to the whaling season to discuss management of the hunt according to the agreements between the Alaska Eskimo Whaling Commission (AEWC) and the federal government. According to federal regulations, whaling captains must be registered with the AEWC in order for them to
be able to hunt the bowhead whale. Generally, the leaders within the community are also whaling captains. They are not necessarily more powerful or more respected simply because they are whaling captains, but captaincy certainly enhances their role within community political organizations (Alaska Consultants, Inc. 1983).

The Mothers’ Club is a long standing and respected group of Barrow Inupiat women. Money is raised through bingo and is contributed to good causes in the community, including assistance to the needy. Women who are active in the Mothers’ Club are generally “straight, good women” who exert considerable moral influence in Barrow. It would be difficult for a person to win political office in the community if he or she were strongly opposed by the Mothers’ Club. Although individuals who are active in this organization are not necessarily respected in the community because of their membership, membership does enhance public respect for them and thus increases their power. In addition, membership in the Mothers’ Club gives women a platform from which they can speak and present their ideas. Barrow’s “macho” male-dominated society provides few such opportunities.

Firefighting services in Barrow are provided by about 35 volunteers plus a salaried fire chief and two other staff who are North Slope Borough employees. Being a volunteer firefighter in Barrow is a highly valued position, with the result that a significant proportion of influential persons under the age of about 40, both Inupiat and white, are members of the force. Volunteers are issued with special royal blue parkas and

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many wear them on a daily basis, suggesting a certain amount of pride of ownership.

The Barrow Search and Rescue organization is a volunteer group which operates in support of the activities of the North Slope Borough Search and Rescue division in this community. The organization has between 35 and 40 members and owns the building in which the Borough Search and Rescue division's administrative offices are presently located. Like the volunteer firemen, search and rescue is regarded as a desirable "macho" group and it also includes a high proportion of influential persons as its members. Many of these people are also volunteer firemen.

The Barrow chamber of commerce had been inactive for a number of years before it was reactivated in 1982. At present, the local chamber has about 30 members and holds a luncheon meeting once a month. Its objectives are to promote Barrow generally and to promote Barrow's local businesses. In 1982, it organized the Barrow "Spring Festival", a 3-day event which featured a parade, dog races, snowmachines races and other competitions. It plans to hold similar festivals again, with the addition of cross-country skiing.

The Barrow Lions Club is a very active service organization. It currently has 22 active members, including both whites and Inupiats, and meets regularly once a week. The Lions have a clubhouse in Browerville which is used for meetings and bingo, the latter being the club's primary source of income. Money raised goes toward a variety of
activities including purchase of a pre-natal medi-vac unit, eye and ear clinics, the purchase of eye glasses and hearing aids, support for a Barrow Inupiat U.S. O’lympic diving candidate in California, provision of emergency funds for fire and disaster victims, funding to send the Wainwright dancers to the Lower 48, sponsorship of groups such as a softball team and boy and girl scouts, development of the Barrow ballfield behind the post office (including the installation of bleachers), and providing financial backing for installation of the Wiley Post memorial located across from the airport terminal.

**Land Use and Housing**

**Land Status**

**City of Barrow**

Barrow's corporate limits take in approximately 21 square miles which include the original 1963 townsite survey, previous and subsequent subdivisions, Townsite Trustee land, land interim conveyed to the Ukpeagvik Inupiat Corporation, land withdrawn for the Navy, State airport property and Native allotment applications.

Before the Barrow townsite was surveyed, the only surveyed parcels of land in the community were those associated with federal installations (the hospital, the old Bureau of Indian Affairs school and the Weather Bureau) and a former trading and manufacturing site originally owned by the legendary Charlie Brewer. The Barrow townsite was patented to the
Townsite Trustee in the Bureau of Land Management in 1965. At that time, Barrow residents were able to apply for title to land on which their structures were located. (In Barrow, many structures were moved from their original locations so that they would be on a separate lot in the new townsite and to permit the development of streets). A large number of Barrow residents chose to hold their land in a restricted status. This is an option available to Alaska Natives when they receive title to land in a Native Townsite. Restricted title retains some of the trust relationship between the federal government and Native citizens. Title conditions limit the Native owner’s ability to sell or transfer his or her property. On the other hand, land held under this type of ownership is not subject to taxation, nor can zoning, housing, building or other regulatory codes be enforced without the agreement of the Bureau of Indian Affairs.

Slightly in excess of 200 lots, accounting for about 34 acres of land, are presently held in a restricted status in Barrow. The remaining lands in the original townsite have been deeded by the Townsite Trustee in an unrestricted (i.e. fee simple) status to individuals, churches and government agencies.

Immediately outside the Barrow townsite to the south--i% the State-owned Barrow airport property. South of the airport, along the Chukchi Sea coast, is another portion of the Barrow townsite known as Block “B”. At the present time, this 424.3 acre tract is still owned by the Townsite Trustee although he was ordered to convey the property to the City of Barrow in August 1981. He has still not done so because of the issue of
unsubdivided lands in Native townsites raised by the Aleknagik case. The Ukpeagvik Inupiat Corporation filed suit in U.S. District Court in March 1983 to obtain title to Block “B”. The same suit challenged the right of the Townsite Trustee to convey a total of 242 lots and 3 blocks to the City of Barrow or the North Slope Borough (and, subsequently, to the Arctic Slope Regional Housing Authority) which were vacant and/or unoccupied on December 18, 1971, claiming that these lands plus those still held by the Townsite Trustee (Block “B” and portions of Block 11A) should instead be conveyed to UIC.

Another land status issue within the Barrow townsite area involves the old Bureau of Indian Affairs school site. This site is subject to a 3(e)(l) determination under the Alaska Native Claims Settlement Act. As a result, the Bureau of Land Management is charged with responsibility for determining if the Bureau of Indian Affairs school reserve in Barrow should be transferred to the Ukpeagvik Inupiat Corporation as a portion of its entitlement or if it should be retained in federal ownership. In addition, there is an agreement between the North Slope Borough and the Bureau of Indian Affairs to transfer title of the school site to the Borough.

Outside the Barrow townsite but within Barrow's corporate limits are two areas covered by Native allotment applications. Native allotments are essentially homesteads of up to 160 acres of non-mineral lands which were granted to Alaska Natives, generally for subsistence purposes. Indian allotment authority in Alaska was cancelled with passage of the Alaska Native Claims Settlement Act. However, applications which were
pending at the time of the Claims Act's passage are eligible for consideration. The provision for pending Native allotment applications did not originally apply to what is now known as National Petroleum Reserve-Alaska (NPR-A) unless potential allottees could prove use and occupancy of sites prior to the withdrawal of the Reserve in 1923. An attempt to rectify this problem was made by Section 905(1) of ANILCA but a January 1983 ruling by the Regional Solicitor found that ANILCA did not adequately address the subject and suggested that a previous court suit (Leavitt vs. Andrus) be reinstated for a final determination on this issue.

None of the Barrow Native allotment applications here has yet been officially surveyed. However, the most recently recorded Bureau of Land Management field surveys indicate the existence of a Native allotment application adjacent to the southern border of the airport and two Native allotment application parcels abutting upper Isatkoak Lagoon, the community's water source. The State has filed a protest against the allotment application near the airport to ensure that its interests are represented if the final location of that allotment application is determined to be on land patented to the State.

Other-lands within Barrow's corporate limits include those interim 'conveyed to the Ukpeagvik Inupiat Corporation, lands conveyed to UIC under the terms of ANILCA and lands still owned by the Navy. These lands are discussed in the following section which covers land status in the general Barrow area.
Barrow Area

Land tenure in the vicinity of Barrow but outside its corporate limits includes land interim conveyed to the Ukpeagvik Inupiat Corporation, land selected but not yet conveyed to the Ukpeagvik Inupiat Corporation, land withdrawn for the Navy and Native allotment applications.

The Ukpeagvik Inupiat Corporation's entitlement to land under terms of the Alaska Native Claims Settlement Act, as amended, totals 161,280 acres under Section 12(a) and 48,130 acres under Section 12(b). The conveyance of village selected lands is limited to the surface estate. Normally, the regional corporation would receive title to the subsurface estate. However, the Claims Act retained for the federal government all subsurface rights in the former Naval Petroleum Reserve No. 4 (now NPR-A) and, instead, provided the Arctic Slope Regional Corporation with selection rights to alternative lands outside the Reserve. An exception to the rule was created by the Alaska National Interest Lands Conservation Act (ANILCA). Section 1431(0) of this legislation enables the regional corporation, at its option, to exchange subsurface estate of lands it has previously selected for subsurface rights beneath village corporation lands in NPR-A, provided that public lands in the Reserve within 75 miles of lands selected by a village corporation have been opened for purposes of commercial development (not merely exploration) of oil or gas. The Arctic Slope Regional Corporation took advantage of this provision of ANILCA to obtain subsurface rights to an area near Cape Halkett. However, the opportunity has not yet arisen near Barrow.
Three tracts of land in the immediate Barrow area were withdrawn by the Navy to conduct "arctic research and associated purposes" on April 24, 1961. One of these parcels, totaling approximately 422 acres in area, is a portion of the Barrow gas fields and was transferred from Navy to Interior jurisdiction in 1976. The status of portions of the remaining 4,551 acres under Navy control will change as a result of ANILCA which instructed the Secretary of Interior to convey portions of the surface estate of the Navy withdrawal to the Ukpeagvik Inupiat Corporation (see Figure 32). An Air Force withdrawal for military purposes in this same area was originally issued on August 5, 1959 and was excluded from the Navy withdrawal, although 3 of its original 268 acres were subsequently transferred to the Navy on December 27, 1971. These Air Force lands are still occupied by the POW/MIA DEW Line station.

The final disposition of remaining Navy properties in the Barrow area is still not clear. The Navy has contracted for planning services to undertake an environmental documentation for the possible demolition of the NARL base. However, the Navy has indicated that no action will be taken to begin actual dismantling the base until March 1984. In the meantime, the Calista/ITT joint venture has had its contract for operation of the base and the gas fields for another year, until such time as responsibility for operation of the gas fields is scheduled to be assumed by the North Slope Borough. The Ukpeagvik Inupiat Corporation is actively pursuing acquisition of the NARL property as it feels that the facilities could be put to some type of community use.
Under terms of an agreement between the Secretary of the Interior and the North Slope Borough in September 1983, subsurface rights to the Barrow gas fields and the Walakpa gas discovery site will be transferred to the Borough. Under the same agreement, sand and gravel subsurface rights to these gas fields will be conveyed to the Ukpeagvik Inupiat Corporation. This agreement, which has yet to be ratified by the U.S. Congress, is part of a settlement with the North Slope Borough which has agreed to assume responsibility for operation of the gas fields on October 1, 1984.

Other lands in the immediate Barrow area outside the city include several Native allotment applications. This type of land holding was described in the previous section covering land status within the City of Barrow. Beyond lands selected by the Ukpeagvik Inupiat Corporation, both the surface and subsurface estate remains with the U.S. Department of the Interior.

SUBSISTENCE LAND USE PATTERNS

Barrow's physical setting is unique among all villages of the study area. The community is only a few miles southwest of Point Barrow, the demarcation point between two distinct physical provinces of the North Slope - the Beaufort and Chukchi Seas. The morphology of the marine and coastal environment east of Point Barrow is dominated by the Beaufort Sea while the environment west of the Point is governed by the Chukchi Sea. The unique location of Barrow allows local residents to exploit a diversity of environments unavailable to other communities within the
study area. These include: two seas, a vast lagoon system, and four major as well as numerous minor rivers and streams.

Sea ice, the most important physical parameter in the marine subsistence patterns of Barrow residents, is largely controlled by the effects of wind and ocean currents. The North Alaska littoral current, the pervasive northwest shore current of the Chukchi Sea, continues up the coast as far as Point Barrow. The warmer waters of this current are instrumental in the annual deterioration of the pack ice in the Chukchi Sea but are unable to invade the Beaufort Sea because of colder opposing currents. The Beaufort Sea is dominated by colder onshore currents of the Arctic Ocean which limit the melting of the pack ice and hold the ice much closer to shore. The proximity of the colder ice-covered waters of the Beaufort Sea limits the extent to which the Chukchi Sea becomes ice-free in the Barrow area. For example, the extent of open water north of Point Hope during a summer of average ice retreat is several hundred miles, whereas the ice is rarely more than 20 to 30 miles offshore at Point Barrow. Thus, the area of open water during the brief summer months increases from Barrow south towards Point Hope.

Wind also affects the pack ice. While the direction and velocity of the wind does not vary dramatically from the Beaufort to the Chukchi Sea side of Point Barrow, the effect of the wind is different because of the nature of the ice in these two seas. The perennial ice of the Beaufort Sea is generally thicker and more stable than the seasonal ice of the Chukchi Sea. Consequently, the Beaufort Sea is less susceptible to lead formation or movement due to shifting winds. This results in fewer
leads and areas of open water in the Beaufort Sea. During the summer, sections of broken pan ice are moved by the prevailing winds and, because of the proximity of the pack ice, are often driven to the coast by onshore breezes. Thus, summer travel is very unpredictable as ice sufficient to block travel is never more than a day away with a strong onshore wind (Sonnenfield 1956:6).

Sea mammal as well as human distribution patterns are affected by the different physical characteristics of the Chukchi and Beaufort Seas. Both the scientific community as well as local hunters have noted that the availability and concentration of marine resources are greater in the Chukchi Sea than in the Beaufort Sea. The seasonal nature of the ice in the Chukchi Sea results in a greater number of leads and open water for use by marine mammals throughout the year. Similarly, the warm currents of the Chukchi Sea transport many of the marine mammals into the area each spring. As a result, human population densities have traditionally been greater along the shores of the Chukchi Sea.

The physical differences between the Chukchi and Beaufort Seas also affects the adjacent coastal areas. That part of the Chukchi Sea coast utilized by Barrow residents (i.e. from Point Barrow to Peard Bay) consists of an extremely regular series of bluffs which have a southwest bearing. Although the continental shelf of the Chukchi Sea is wider than that of the Beaufort, strong coastal currents have scoured the bottom and, because there are few inflowing streams, a minimal amount of sediment is deposited. Consequently, the Chukchi Sea coast has relatively narrow beaches which drop off into fairly deep water.
conditions conducive to near-shore lead formation. On the other hand, the Beaufort Sea coast east of Barrow consists of a highly irregular shoreline enclosed by a series of barrier islands. These islands form Elson Lagoon, the most extensive lagoon system (other than Kasegaluk Lagoon near Point Lay) on the North Slope. Fluvial sediments from the numerous rivers which flow into the Beaufort Sea provide source material for the barrier islands. The combination of onshore currents which hold the Beaufort ice near shore and the annual flooding of these rivers, makes the Beaufort Sea shallow in the near-shore area. Elson Lagoon and the associated Dease Inlet and Admiralty Bay provide Barrow residents with access to a vast inland area with four major river systems. The Lagoon is also an important transportation link; during the summer it allows residents to travel even when the ice has been pushed onshore and in the winter it provides a smooth roadway for snowmachines.

In summary, Barrow residents are strategically located at the juncture of the Beaufort and Chukchi Seas. The Chukchi Sea, with its seasonal ice and warm currents, provides access to sea mammals throughout the year. With the exception of fall bowhead whaling, Barrow sea mammal hunting activities are generally concentrated in the Chukchi Sea west of Point Barrow. The Beaufort Sea, while not as important in terms of sea mammals, provides Barrow hunters with access to numerous salt and fresh water fishing areas, waterfowl areas, caribou areas and a safe summer route for travel. This diversity of environmental features allows individual Barrow residents to vary their seasonal subsistence cycle more than most villages.
**Bowhead Whale**

Bowhead whale is the preferred food of the majority of Barrow residents (Alaska Consultants, Inc. and Stephen Braund & Associates 1983). Unlike the other villages of the study area, Barrow residents hunt bowheads during two distinct seasons, during the whales’ annual migration north through open leads in the spring and again in the fall as the animals migrate south, usually in open water. The areas used to hunt the bowhead and the intensity of effort are different for each season. In 1982, Barrow hunters did not land any bowheads, while in 1983 they landed two.

**Spring Whaling.** Spring whaling from open leads in the pack ice was traditionally the high point in the yearly subsistence cycle of Barrow residents. Prior to the imposition of the bowhead quota in 1978, Barrow residents set up whaling camps on the ice as early as the third week of April (several weeks later than Point Hope hunters) and stayed at these camps until the first week of June when the passage of most of the bowheads and deteriorating ice conditions ended the season. Presently, due to the International Whaling Commission quota on strikes which limits Barrow residents to fewer strikes than they desire, the whaling season is much shorter and usually lasts only several weeks.

The general harvest area for the spring bowhead whaling season is in the Chukchi Sea and extends from Point Barrow to the Skull Cliff area (see Figure 33). The distance offshore depends on the lead.
formation which is different each year. While the lead commonly runs parallel and close to the coast, occasionally it breaks directly from Point Barrow to Point Franklin forcing Barrow residents to travel as far as ten miles offshore to find the necessary open water. Barrow hunters' intensive use area for bowhead whaling is smaller and closer to shore than the general use area. In most years, the lead breaks from Point Barrow parallel to the coast and is only 1 to 3 miles from shore. Prior to the bowhead quota, Barrow spring whaling camps extended from near the Point to Nulavik, with groups of four or five crews setting up camp in close proximity to one another. Due to the limited number of strikes now available, approximately 30 Barrow crews currently concentrate their hunting effort in one area in order to minimize the chances of losing a whale once struck. The location of whaling camps depends on ice conditions and current and, because of the strong currents and numerous leads which often form near the Point, crews rarely locate there. Instead, they presently camp adjacent to and south of the community as far south as Walakpa Bay. Once a whale is struck, however, hunters will chase the animal in either direction along the lead.

Recent changes in-technology have nondramatically affected Barrow's spring whale hunt. Skin boats are still the predominant means of transport and, while snowmachines have increased access to the whaling camps, they have not affected the actual harvest. The narrow leads in which Barrow residents hunt during the spring are not conducive to the use of aluminum boats with powerful outboard
motors which are presently used with success by Wainwright whalers. However, once Barrow hunters have killed a whale, they sometimes use boats with outboard motors to retrieve the animal and tow it to shore.

Barrow residents also harvest other wildlife species while at whaling camp. However, the hunters realize that the bowhead is extremely sensitive to noise and use citizens' band radios to collectively limit extraneous hunting activity to periods when there are few bowheads in the area. Belukha whales, while generally available at this time, are rarely harvested because their migration usually coincides with the migration of bowheads, and local hunters do not want to jeopardize their bowhead chances with unnecessary noise. Seal and ugruk are occasionally taken while at whaling camp, but the majority of the ugruk hunting occurs later in the summer when this species becomes more abundant. The major hunting activity which takes place in conjunction with whaling is waterfowl hunting, specifically for eider. During periods when there are no whales migrating, hunters actively pursue these migratory birds to supplement the food supply at camp.

There is some evidence that the present shortening of the whaling season has altered harvest patterns for other marine species. When whaling continued until the first few weeks of June, other sea mammals, especially ugruk, became readily available and were harvested at whaling camp. Now, most residents leave the ice after the quota has been reached and harvest ugruk later in the summer in
conjunction with walrus. Other residents, once relieved of their obligations as whaling crew members, spread out along the coast in smaller family groups to hunt seal, ugruk and waterfowl. Still others travel inland immediately after the shortened whaling season to hunt geese which return at this time and are more abundant along the rivers.

In summary, spring bowhead whaling continues to be an integral part of Barrow residents' seasonal round. Despite the quota and the resultant abbreviated whaling season, no other activity enjoys the community participation and support given to spring whaling. The number of participants necessary to man thirty crews demonstrates the intensity of this hunt. Finally, the shortened season has reduced the amount of time available for the harvesting of other marine species at whaling camps.

Fall Whaling. Barrow residents also hunt bowhead whales in the fall. While the fall whaling effort is rarely as successful as the spring whale hunt, it is an important aspect of many Barrow residents' seasonal round. Unlike the spring bowhead harvest season, other wildlife resources (i.e. caribou and fish) are also available during the fall season, and some residents-concentrate on these species rather than on whales. The harvest area used by the fall whalers is generally east of Point Barrow (see Figure 34). According to the 1983 fieldwork, recent technological advances (aluminum boats and powerful outboard motors) as well as a lack of
Barrow/Atqasuk Subsistence Use Areas:

- Maximum Use Area
- Intensive Use Area

Scale 1:1,000,000

Source: Stephen R. Braund & Associates 1983
whale sightings near shore (i.e. along the barrier islands which form Elson Lagoon) have expanded the harvest range in recent years.

The level of effort and success of fall whaling in Barrow is limited by several factors, including the availability of other wildlife resources, the reduced number of crews which participate, the diffused nature of the fall whale migration and the restrictions of the quota system. The large population of Barrow combined with the smaller crew size of fall whaling (three to four crew members per boat), enables Barrow residents to launch a viable whale hunt without the entire community's participation. As stated above, Barrow residents engage in a variety of subsistence activities each fall and not all whaling crews participate in fall whaling. Based on the data collected in the whaling survey (Alaska Consultants, Inc. and Stephen Braund & Associates 1983), as many as 11 to 15 crews may participate in fall whaling under good conditions. As this number is significantly lower than the approximately 30 crews which participate in the spring whaling effort, the chance of success is decreased. In addition, the whales migrating south to wintering grounds are dispersed over a large area of open water, further reducing the probability of a successful strike. Finally, since the initiation of the quota system, the potential for a successful fall whale harvest has become dependent on the number of approved strikes remaining. This has resulted in a complete curtailment of the fall season in some years when no strikes are available.
The timing of the fall whale harvest is dependent on the migration schedule of the bowhead as well as on weather conditions. The fall whaling effort usually begins during the last few days of August or the first week of September and continues until ocean boat travel is made impossible by the final encroachment of the pack ice, usually around the first of October. The actual number of days that whalers are able to hunt often is less than this entire period as drifting and wind-blown ice can force them to shore at any time. In fact, because of the variable nature of the ice conditions at this time of year, fall whaling can be extremely dangerous. The success of this harvest is therefore dependent on both the timing of the animals' migration and on ice and weather conditions during the month of September.

The harvest area and hunting techniques for fall whaling are entirely different than those used during the spring. The fall bowhead migration usually occurs in open water as opposed to the narrow leads in which the animals are forced to travel during the spring migration. Consequently, the fall whale hunters use aluminum and wooden boats powered by outboard motors in order to travel freely over large areas in search of whales, an entirely different technique than the man-powered umiaks lined up on the edge of the narrow lead during spring whaling. The area used for fall whaling extends from the Barrow vicinity in the Chukchi Sea to Cape Simpson in the Beaufort Sea (see Figure 34), with hunters traveling as far as 30 miles offshore. Because most of the hunting range is in the Beaufort Sea, they are in close proximity to the
pack ice. In this case, the limited amount of open water in the Beaufort Sea is an advantage to whale hunters as it tends to limit the dispersion of the bowheads. Once the whales have reached the Chukchi Sea, they become hopelessly spread out, minimizing any chance of a successful hunt. For this reason, fall whaling is the only Barrow marine mammal hunting activity concentrated in the Beaufort Sea.

Technological changes in the boats used for fall whaling have markedly extended the hunting range for bowheads at this time of year. While wooden boats have been used for fall whaling since the turn of the century (Sonnenfield 1956), recent changes in the type of boats and motors used have provided fall whalers with more flexibility and speed. The typical fall whaling boat today is an 18 to 22 foot aluminum boat with a 50 to 75 horsepower outboard motor as well as a small “kicker” or auxiliary motor for emergencies. Lighter than the launch with an inboard engine used in the 1950’s, these aluminum boats are better adapted (i.e. faster) to the variable ice conditions common at this time of year.

Traditionally, and currently, the fall whaling effort has been a land based activity; the hunters search for whales during the day and return to land-based camps at night. Historically these shore camps were located at the very tip of Point Barrow but in the more recent past they have been situated on Cooper and Tapkaluk Islands, two of the islands which form Elson Lagoon. During the 1983 fieldwork, Barrow whalers noted that bowheads are no longer migrating near shore but now pass by Point Barrow well offshore.
The high-powered, quick motor boats are ideally suited for hunting at this time of year because the hunters can cover large distances and still hasten back to shore if ice conditions and weather become unfavorable.

In summary, because fall whaling occurs during the month of September when other resources are available and many residents have been able to stock up considerable amounts of other foods during the summer, it is not as communally important as the spring bowhead hunt. However, if the spring whale hunt was unsuccessful or Barrow has some strikes left on its quota, the fall hunt can be an important source of the highly preferred bowhead whale meat and muktuk. In addition, Barrow residents hunt bowheads primarily in the Beaufort Sea in the fall, and recent technological improvements in boats and motors have increased the hunting range.

**Belukha**

Unlike the village of Point Lay which relies upon the harvest of belukha whales each spring as a major source of food, Barrow residents consider this species to be of secondary importance. As a result, the harvest of belukhas is opportunistic in nature rather than the planned organized hunt practiced in Point Lay. As noted previously, belukha whales commonly migrate with the bowheads during April and May but, because of the shortened whaling season as well as the unofficial community decision to limit belukha harvesting at this time (for fear of scaring bowheads), few are taken.
Belukha are commonly available from the beginning of whaling season through the month of June and are occasionally spotted in the ice-free months of July and August. The belukha which Barrow residents harvest are usually taken after the bowhead whaling season has ended when some families may stay out on the ice or establish seal, ugruk and waterfowl camps in the latter part of May and

Harvest areas for belukha include the area used for spring whale hunting, as the animals are occasionally taken at this time, or by families who remain out on the ice (see Figure 35). In addition, belukha hunting occurs from spring camps established along the shore of the Chukchi Sea between Point Barrow and Skull Cliff. Some families establish spring camps near Peard Bay and harvest belukha in this area. Later in the summer, belukha are occasionally harvested on both sides of the barrier islands of Elson Lagoon as they feed on anadromous fish. Unlike Kasegaluk Lagoon near Point Lay, the numerous passes as well as the large size of Elson Lagoon make herding belukha difficult. In summary, the Barrow residents' harvest of belukha whales usually occurs incidental to other activities. In addition, because belukha are available at the same time as more desired-species (seal, ugruk, bowhead and waterfowl), they are of secondary importance in the local subsistence economy.

Seal and Ugruk

Barrow residents' harvest area for hair seals and ugruk is shown in Figure 36. The maximum use area for these species is greater than that
of any other marine resource harvested by Barrow hunters. However, the size of the harvest area is largely a result of the opportunistic nature of the Inupiat hunters, who commonly harvest these animals while they are engaged in other subsistence activities. The intensive use areas discussed below are more representative of the harvest areas commonly used for these species. Barrow residents hunt two species of hair seals on a regular basis, the ringed seal common throughout the winter and present in proximity to ice, and the spotted seal which is only available during the ice-free summer months.

Use of hair seals has declined for several reasons which include the limited need for dog food, the limited effectiveness of snowmachines on the ice, and the abundance of alternative resources, i.e. caribou, in the region (see the discussion of the subsistence economy in the regional overview). The ugruk or bearded seal remains an important marine mammal resource, important as food and necessary for umiak covers. Despite the reduced level of use for these species at the present time, the harvest area has remained large because of improved hunter mobility resulting from technological advances such as the snowmachine and outboard motor.

Traditionally, hair seals, particularly the ubiquitous ringed seal, were the main staple of the Eskimo diet, a desired source of meat and oil for both humans and dogs, as well as an important source of fuel. One important reason for seals' prominence in the Eskimo diet was their general abundance; they were readily available throughout the year. However, changes in technology as well as the recent abundance of other
resources have changed both the quantity of seals harvested as well as
the timing of the harvest. While some Barrow residents continue to
harvest ringed seal throughout the winter, especially during February
and March when sufficient light has returned to the area, many Barrow
hunters now engage in caribou hunting at this time of year. Some ringed
seals are taken each year from the ice during spring whaling, but the
majority of sealing now takes place in the late spring and early summer.
Spotted seals are harvested throughout the summer and early fall
incidental to other subsistence activities.

In general, ringed seal hunting is concentrated in the Chukchi Sea, but
some seal hunting takes place directly off of Point Barrow and along the
barrier islands which form Elson Lagoon (see Figure 36). After spring
whaling, many families move to camps along the Chukchi Sea coast as far
as Peard Bay. At these camps, local hunters harvest waterfowl and, when
ice conditions are favorable, seal and ugruk. The intensive use areas
directly off of Point Barrow and the nearby barrier islands are good for
seal hunting later in the summer. At this time, the necessary ice pans
and floes are more abundant in this area than along the Chukchi Sea.
Winter lead formation in the area immediately adjacent to Barrow north
to the Point makes this area a favorable sealing location during the
winter. Those families who continue to harvest a significant number of
seals during the winter harvest more ringed seals than the spring and
summer hunters who concentrate on ugruk. Spotted seals are also
occasionally taken off of Barrow and the barrier islands of Elson
Lagoon. The most important spotted seal harvest area identified by
The ugruk, or bearded seal, always an important subsistence resource because of its dual role both as food and in the equipment and clothing of coastal Eskimos, presently appears to be the most important seal harvested in Barrow. This probably results from the change in winter subsistence emphasis from seal to caribou and fish, as well as the present importance of spring and early summer waterfowl and sea mammal hunting camps. Ugruk are not usually available in significant numbers during the winter. They are more common during the spring and summer because they are associated with broken ice margins of pack ice. For this reason and because of the larger size of ugruk (resulting in a higher catch per unit effort), Eskimo hunters concentrate on this species at their early summer camps along the Chukchi Sea coast. In addition, Barrow whaling captains need six to nine skins each for their skin boats. Ugruk are also harvested on sea mammal hunting trips initiated in Barrow throughout the summer. The large harvest range is made possible by the improved speed and durability of modern boats. Barrow-based ugruk hunting continues throughout the open water season. Walrus hunters as well as fall whaling crews often harvest ugruk. Ugruk are also available in Dease Inlet and Admiralty Bay on occasion.

In summary, seal and ugruk are present throughout the Barrow hunting range and are often harvested incidental to other activities. With the changes in hunting emphasis, ugruk has become the more important seal resource. The quantity of seal or ugruk harvested varies from family to
family, but all Barrow residents interviewed expressed a continued need and desire for seal oil. Barrow whaling captains, who must regularly replace the skin covering of their umiaks, harvest ugruk in greater numbers than most residents who need only a few to supplement their diet and to provide the necessary seal oil. Dependence on seals could change with fluctuations in the population and local availability of caribou and other inland resources.

Walrus

Although the walrus harvest has declined since replacement of the dog team by the snowmachine, it remains an important wildlife resource for some Barrow families. Barrow's large population, as well as the diversity of resources available, has resulted in differences in dependence on particular resources among family groups within the community. Thus, while some families are harvesting walrus, others are at inland fish camps stocking up on whitefish, salmon and grayling. The average harvest of the eight hunters interviewed in Barrow who indicated that they regularly go walrus hunting was one to three animals per hunter per year. One hunter who was also a fall whaling captain stated that he usually harvests six walrus a season. According to Stoker (1984), Barrow's nine year average harvest for walrus (1970-1979) was 57 animals per year. Thus, while some families spend considerable time and effort pursuing walrus, other families do not participate in this activity.
Barrow residents hunt walrus from boats, often the same ones used for fall whaling. The hunters travel in and among the ice floes searching for walrus resting or sleeping on the ice. The timing and seasonality of this harvest is therefore dependent on broken ice conditions and, as the boats must be launched from the shore, upon the dispersal of the shorefast ice. The landfast ice usually breaks free during mid-July, and the potential walrus hunting period continues from this time until September when the last of the walrus migrate south. Similar to fall bowhead whaling, the success of the walrus hunt depends on ice conditions which vary from year to year. For example, if onshore winds bring the pack ice in close to shore, it limits the hunters' range; or worse, if the ice is driven to the shore, the hunters are not even able to launch their boats. Thus, the timing and success of walrus hunting depends on good weather and ice conditions. Barrow hunters noted that ice conditions were generally best suited for walrus hunting during the month of August, particularly the middle two weeks.

The harvest area which Barrow residents use for walrus is immense, second only to the area used for seal and ugruk (see Figure 37). Barrow hunters stated that they generally travel further in the pursuit of walrus than they do for ugruk and seal but noted that the latter are often taken when hunters are pursuing walrus. Walrus hunting rarely occurs east of Point Barrow but the range extends west of the Point all the way to Peard Bay. The distance offshore varies from hunter to hunter, depending on the individual's knowledge of the ice as well as the reliability of his boat. However, most hunters stated that 15 to 20 miles offshore was usually the maximum distance necessary for walrus.
Figure 37
Because of the variable concentrations of both ice and walrus within this area, the hunters did not note any intensive use areas. Similar to fall whaling, the walrus harvest area has increased in recent years. The modern boats and powerful motors which hunters now use enable them to cover greater expanses of walrus habitat and still return to the village by evening.

In summary, walrus hunting usually begins in July once the ice has broken free from shore and continues until mid-September when the last of the walrus migrate from the area. The harvest is not concentrated areally but is seasonally concentrated in the month of August. The harvest area extends from Point Barrow to Peard Bay and to a distance of 20 to 25 miles from shore. Finally, not all Barrow residents participate in walrus hunting as it coincides with inland fishing.

Fish

Barrow residents’ dependence on fish fluctuates with the availability of other more desired resources. While both coastal and riverine fishing activities regularly take place, Barrow residents rely on freshwater fish to a greater extent than marine fish. Much of the marine fishing which does take place is the harvesting of anadromous fish at inland locations. Fish which Barrow residents harvest include capelin, char, cod, grayling, salmon, sculpin, trout and whitefish. As in the case of many other wildlife resources, dependence on fish as a food resource varies among family groups.
Most fishing takes place during the summer and fall months, with the greatest concentration of activity occurring from September through October. Marine fishing is often done in the summer in conjunction with other subsistence activities. For example, residents who have established coastal camps for ugruk and seal during July and August often set a gill net near their camp, checking it daily when they return from marine mammal hunting. Fishing is also a common secondary activity during fall caribou hunting. Barrow residents traveling by boat along the shores of Elson Lagoon and other coastal areas often set a net when they camp. Barrow residents also take fish during the winter months (December through March) by jigging through the ice.

The subsistence use area for fishing is extensive, primarily because it is a common practice among local residents to supplement their camp food supply with fish whenever they are out hunting. The marine fishing use area extends from Peard Bay west of Barrow to east of Pitt Point on the Beaufort Sea coast (see Figure 38). Fishing along the coast between Barrow and Peard Bay is a common secondary subsistence activity at the spring and summer waterfowl and sea mammal hunting camps concentrated in this area. Fishing along the Beaufort Sea coast and within Elson Lagoon, Dease Inlet and Admiralty Bay occurs during the summer and fall from caribou hunting camps, fall whaling stations and other temporary camps as residents travel to and from the rivers which flow into Admiralty Bay. In addition, there are some families who annually establish fish camps at traditionally important coastal areas. These camps are usually located on points of land, at the mouths of rivers or other strategic fishing locations.
The intensive marine fishing spots are primarily in the Barrow vicinity. The area of the Chukchi Sea immediately adjacent to Barrow is heavily used for fishing. During the summer months, people jig for fish in the small cracks and breaks in the ice, and during the winter they fish from ice holes in the same area. The shore of Elson Lagoon nearest Barrow and both sides of the barrier islands which enclose this lagoon are also intensive marine fishing areas. Gill nets are placed in these areas during late summer and fall to harvest salmon, char and whitefish. During the fall when fishing is best, some residents engage in fishing as their primary subsistence activity.

While marine fishing can be an important source of fish, especially for those families whose seasonal rounds are more marine oriented, most fishing, both in terms of quantity and effort, occurs at inland fish camps. Some families spend their entire summer and fall at fish camps in the Inaru, Meade, Topogoruk or Chipp river drainages. These inland fish camps are often traditional family sites located to take advantage of plentiful fish resources. Commonly, these camps are located at the mouth of tributary streams or at deep sections of the major rivers so that as the fish migrate out of the numerous lakes and shallow streams to winter in areas that will not freeze, they can be harvested in quantity. In addition to offering successful fishing, these inland camps also provide Barrow residents with access to caribou and migratory birds.

In summary, marine fishing is not as important in the subsistence economy of Barrow as inland freshwater fishing. Most marine fishing
takes place in conjunction with other subsistence activities during the summer and fall. Concentrated use areas for marine fishing are relatively close to Barrow and the common fishing techniques used are set gill nets and jigging.

Migratory Birds

Migratory birds, especially eider ducks and geese, are an important part of Barrow's subsistence economy. Local residents noted that the harvest of geese was more successful inland along open rivers, whereas eider and other ducks were most successfully harvested on the coast. As noted in the section on spring whaling, waterfowl often provide an important food supplement at whaling camps. Snowy owls, once harvested in substantial numbers, are now rarely taken. Eggs are still gathered occasionally, especially on the offshore islands where fox and other predators are less common. The extent to which waterfowl hunting is pursued differs among family groups, with this hunting being most zealously practiced by the younger male members of the community.

Migratory bird harvesting begins out on the ice at whaling camps during late April or early May. Once the bowhead whaling season is over, the harvest of waterfowl increases as do the number of birds migrating through the area. Both geese and ducks are heavily hunted during the second half of May and the month of June. Some birds are harvested during the rest of the summer, but usually incidental to other subsistence activities. Hunting pressure increases during a brief period in late August and early September as the ducks and geese migrate.
When the last of the waterfowl migrate out of the area in late September, migratory bird hunting is over until the following spring.

Figure 39 shows Barrow's harvest area for migratory birds. As noted above, migratory bird hunting is divided into general areas, depending on the species desired. Most goose hunting occurs inland, while most eider and other ducks are hunted on the coast. The coastal hunting area for migratory birds extends from Point Franklin (southwest of Barrow) to the waters of Admiralty Bay. Once spring whaling is over, families disperse and some go inland to concentrate on geese while others spread out along the coast. Waterfowl are initially the most important resource at the numerous spring camps along the Chukchi Sea coast, with ugruk and seal becoming more important later in the season. While most birds harvested in this area are ducks, some geese are also taken along the coast. In addition, Barrow residents take waterfowl along the shores of Dease Inlet and Admiralty Bay as they engage in other subsistence activities. Concentrated harvest areas occur along both shores of the major barrier islands of Elson Lagoon. Depending on the wind direction, ducks and geese can be harvested by hunters traveling in this area.

The most important coastal migratory bird hunting area is the "shooting station" located at the narrowest point of the barrier spit which forms Point Barrow and separates the Chukchi Sea from Elson Lagoon. During both the spring migration north and the fall migration south, this area is a highly successful hunting area. The proximity of this area to Barrow makes it readily accessible to all members of the community.
Many families have cabins in this area and spend evenings and weekends there during the bird migrations.

In summary, migratory birds, especially geese and eider, are important supplements to the meat supply for many Barrow families. While bird hunting is ancillary to other activities in most of the harvest area, the "shooting station" and nearby barrier islands are concentrated waterfowl harvest areas. The most important migratory bird hunting occurs in May and early June and again in the first two weeks of September.

VILLAGE LAND USE PATTERNS

Although Barrow is located at the edge of a large, almost featureless Arctic plain, land is a commodity in short supply in this community. The Barrow townsite is hemmed in by the Arctic Ocean to the west, by Tasigarook and Isatkoak Lagoons to the north and east respectively, and by the State airport to the south. Browerville lies across Tasigarook Lagoon to the north of Barrow proper and has recently seen a good deal of development. However, expansion of Browerville has been restricted by the presence of water on three sides and, until very recently, by federal withdrawals, such as that for the former Naval Arctic Research Laboratory, on the fourth.

Barrow's overall land use pattern has changed dramatically since the early 1960's. At that time, the town's development was tightly clustered between the Chukchi Sea coast and the government hospital and
school complexes. Very little development had taken south of the Weather Bureau property or in Browerville.

Since the early 1960's, several events have promoted changes in Barrow's overall land use pattern. The first was the 1963 townsite plat which established a system of streets and individual lots in the community for the first time. One result was a more dispersed development pattern as structures were removed from street rights-of-way and relocated on separate lots. However, although the 1963 plat resulted in a major expansion of the amount of land in use, most of this growth took place in Barrow proper. According to the Barrow Community Development Study (1964) prepared by the University of Alaska, of the 607 lots then platted, about 50 percent were either occupied or spoken for, compared with only 16 percent of the lots in Browerville.

Installation of the community gas distribution system in 1964/65 also had an impact on land use patterns. The availability of "cheap" gas heat made it financially possible for parents and their adult children to live in separate housing. As a result, the number of housing units in the community underwent a significant increase; the average number of persons per unit began to decline and additional land was needed for residential use.

By 1970, development in Barrow had spread southward to the northern boundary of the airport. Some additional development had also taken place in Browerville although most lots in that area remained vacant.
Since 1970, additional infilling of development in the original Barrow townsite has taken place so that almost the only lands now vacant here are unused portions of the Weather Bureau property and portions of Block A, plus lands along the Chukchi Sea coast which are either subject to erosion or are part of an historic site. Except for some single family units and two apartment buildings constructed by the North Slope Borough in Block A, most residential development in Barrow since the mid 1970's has taken place in Browerville and in new subdivisions immediately northeast of Browerville.

Because most of Barrow/Browerville has only recently been developed for urban use, lot sizes in the community are generally fairly large. Except in the older sections of town where there are a number of very small lots, almost all lots in Barrow proper are more than 7,000 square feet in area. Browerville has no lots smaller than 6,000 square feet except for the Borough subdivision south of the 12-plexes where single family homes have been built on 3,000 to 4,500 square foot lots.

In terms of relationships between the various land uses, Barrow has a fairly simple overall land use pattern (see Figure 40). Agvik Street has become established as the commercial center of the community. Most of the town's institutional (Borough office, hospital, BUECI and school) uses are immediately east of the business district and extend to the shore of Isatkoak Lagoon. The remainder of Barrow proper is primarily residential although there are commercial uses scattered throughout town and there is a concentration of industrial storage activities at or adjacent to the airport. In fact, the only major land use anomalies in
Land use
Barrow
August 1982

Legend
- Single-family Residential
- Multi-family Residential
- Public and Semi-public
- Commercial
- Industrial and Storage

Alaska Consultants, Inc.
Anchorage, Alaska

Adapted from cartography by Northwest Cartography, Inc.
Seattle, Washington

Figure 40
Barrow proper are the Weather Bureau property and the cemetery. Both of these uses were originally located on the outskirts of town but have been surrounded by residential development during the past fifteen years. Browerville is almost exclusively residential except for fuel distribution and heavy equipment storage and maintenance facilities operated by the Arctic Slope Regional Corporation and the Borough. However, a significant share of the housing in Browerville is in rental single and multi-family units constructed by the North Slope Borough.

A tabulation of occupied land in the Barrow/Browerville surveyed area (defined as including all subdivided areas of Barrow and Browerville north of the airport, the new UIC subdivisions and the warm storage subdivision northeast of Browerville, the airport and related property, and Block B south of the airport runway) indicates that a total of close to 871 acres was in use during August 1982 (see Table 58). Of this, almost 85 percent was occupied by industrial and storage uses, primarily the Barrow airport plus gravel extraction and other industrial activities in Block B. The largest share of the remaining lands in use in August 1982 was taken up by residential development (80.7 acres), followed by public and semi-public uses (46.4 acres). Commercial development accounted for a relatively insignificant area (8.7 acres).

The August 1982 land use survey indicated that slightly more-than 40 percent of Barrow's surveyed area was vacant. However, well over half of this area is located within Block B south of the airport runway, an area where heavy industrial development activities (gravel extraction and drying and oil tank farms) are concentrated and where no residential
### TABLE 58

**EXISTING LAND USE a/ BARROW - SURVEYED AREA b/ AUGUST 1982**

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Land Area (acres)</th>
<th>Percent of Developed Area</th>
<th>Percent of Surveyed Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One and Two Family</td>
<td>69.9</td>
<td>0.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Multi-Family</td>
<td>10.8</td>
<td>1.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Commercial</td>
<td>8.7</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Industrial and Storage</td>
<td>662.7</td>
<td>84.4</td>
<td>49.4</td>
</tr>
<tr>
<td>Airport</td>
<td>51.9</td>
<td>6.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Block B</td>
<td>20.7</td>
<td>2.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Public and Semi-Public</td>
<td>15.6</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Cemetery</td>
<td>30.8</td>
<td>3.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Total Developed Area</td>
<td>871.1</td>
<td>100.0</td>
<td>58.5</td>
</tr>
<tr>
<td>Vacant Land</td>
<td>617.5</td>
<td></td>
<td>41.5</td>
</tr>
<tr>
<td>Airport-Related Property</td>
<td>36.4</td>
<td></td>
<td>2.4</td>
</tr>
<tr>
<td>Block A</td>
<td>66.4</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Block B</td>
<td>371.3</td>
<td></td>
<td>24.9</td>
</tr>
<tr>
<td>Browerville Addition</td>
<td>45.2</td>
<td></td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>98.2</td>
<td></td>
<td>6.6</td>
</tr>
<tr>
<td>TOTAL SURVEYED AREA</td>
<td>1,488.6</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

---

**Notes:**

a/ Existing land use figures exclude streets except in Block A, within the airport property and access routes within Block B.

b/ Barrow surveyed area includes the Barrow townsite, U.S. Surveys within the Barrow townsite, Block A, Block B, the Barrow airport and related property, and additions to the Browerville subdivision, including the warm storage subdivision.

Source: Alaska Consultants, Inc.
development except for a construction camp has taken place. Another 36 acres of vacant land are related to the airport and are therefore not available for conventional community development. Of the remaining 210 acres, a significant share is dedicated as a municipal reserve and is also not available for general community development. With a portion of the remaining vacant lands in the Block A and the Browerville addition areas scheduled for residential development by the North Slope Borough in 1982, Barrow actually had a paucity of available vacant and developable land until the Ukpeagvik Inupiat Corporation held lotteries in 1982 and 1983 and distributed 68 and 207 lots in Browerville Subdivisions #2 and #3 respectively to its stockholders. In each case, one additional lot was also awarded as a door prize.

HOUSING CONDITIONS

It was not possible to undertake a detailed housing survey in Barrow specifically for this study. As a result, data from the 1980 North Slope Borough housing survey have been used, supplemented where possible by observations of development since that time.

Although no units were built in Barrow by the Alaska State Housing Authority (as they were in Point Hope, Wainwright, Kaktovik and Anaktuvuk Pass), a number of different groups have constructed homes in this community in the past. The most notable of these were units financed through the Farmers Home Administration and what are referred to locally as Capp homes and Lampert homes. Federal agencies, primarily the Public Health Service, the Bureau of Indian Affairs and the Weather
Bureau also made substantial investments in Barrow to provide housing for their employees. However, most individuals in Barrow lived (and continue to do so) in privately constructed units, a significant proportion of which were inadequately constructed or were built from makeshift materials.

At the time of the 1980 housing survey, a total of 747 housing units was counted in Barrow. Only 41 of these units (0.05 percent) were vacant, with all but 10 of the vacant units determined to be severely substandard and unsuitable for human habitation (see Table 59).

Of the 706 occupied units counted in 1980, 315 were judged to be in good condition. Included in that category were all 152 North Slope Borough rentals and 71 low-rent units built by the Borough which were completed at that time. Most of the remaining units in good condition were associated with federal government facilities (the Public Health Service hospital, Barrow Utilities and the Weather Bureau). However, this group also included a number of privately built units. Another 115 units were judged to be in average condition and a further 105 in fair condition. Most units owned by the Arctic Slope Regional Corporation fell into these two categories, as did the Capp and Lampert homes and those financed through the Farmers Home Administration, plus a large number of individually constructed units.

Not surprisingly, Barrow has a much wider range of housing types than do the smaller villages of the region. At the time of the 1980 housing survey, slightly more than one-third (270) units of the community's
### TABLE 59

**EXISTING HOUSING CONDITIONS a/**

**BARROW**

**JUNE 1980**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Good</th>
<th>Average</th>
<th>Fair</th>
<th>Poor</th>
<th>Very Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupied</td>
<td>315</td>
<td>115</td>
<td>105</td>
<td>106</td>
<td>65</td>
<td>706</td>
</tr>
<tr>
<td>Vacant</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td>20</td>
<td>41</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>318</td>
<td>121</td>
<td>106</td>
<td>117</td>
<td>85</td>
<td>747</td>
</tr>
</tbody>
</table>

*a/ Excluded 6 private units under construction and 120 Borough units planned or under construction in 1980.

Source: Alaska Consultants, Inc.
housing stock was in multi-family units. Traditionally, housing associated with the hospital and school has been in multi-family structures. However, the North Slope Borough has greatly increased the proportion of this type of housing in the community. The Arctic Slope Regional Corporation has also built several multi-family structures as have some private concerns, the most notable being the 19-unit Barrow Apartments.

Also unlike the smaller villages of the region, Barrow has a relatively high proportion of whites, many of whom do not intend to become long term community residents and prefer rental housing to home ownership. On the other hand, most Eskimos in Barrow who were interviewed as part of the 1980 housing survey indicated that they would prefer to own their housing rather than to rent, an option which has been available only on a very limited basis under Borough housing programs in this community.

The North Slope Borough has had a major impact on the number and type of housing units available in Barrow. Since it began constructing housing in this community, it has built 22 single family units and 49 multi-family units (one 29-unit and five 4-plexes) of low rent housing, and 21 single family units and 145 multi-family units (a second 29-unit, nine 12-plexes and an 8-plex) of general rental accommodations. An additional 76 units of single family housing, of which at least 25 will qualify for the HUD Mutual Help program are currently nearing completion, while materials for a further 72 units of multi-family housing (two 32-units and an 8-plex) were shipped to Barrow in the fall of 1983.
As part of the 1983 fieldwork, Barrow residents were asked about their perceptions of housing conditions in the community. Comments made by persons in 1980 during the housing survey were also considered. In general, a high proportion of non-low income rental units built by the North Slope Borough in Barrow are occupied by non-Native Borough or School District employees. Most Inupiats in Barrow profess not to be interested in living in multi-family units, especially those with children. A great deal of resentment was expressed to Alaska Consultants, Inc. in 1980 over the construction of housing which appeared to Inupiats to be built for whites rather than the community's long term residents. (It should be noted that HUD's Mutual Help program was not made available in Barrow until very recently because top priority was given to the smaller Borough villages where previously existing housing was more inadequate and where the incomes of most residents were low enough or temporary enough for them to qualify under this program).

While established Inupiat families have generally not moved into Borough rental units, this is less true of younger Inupiats, especially single persons or married couples. These people are usually glad to have the opportunity to move away from the rest of their families. However, they view living in Borough rentals as merely a step toward eventual ownership of a single family unit.
Community Facilities and Utilities

Administrative and Miscellaneous Public Buildings

Barrow has a large number of administrative and miscellaneous public buildings, only a few of which are described here. The major structures include the North Slope Borough administration building, the North Slope Borough School District central office, the Matsutani building occupied by the Borough Health and Social Services Agency, the Borough Housing department administrative offices, the Science building used by the Borough's Environmental Protection Office, City of Barrow offices and several buildings used to house other Borough employees or used for heavy equipment storage and maintenance functions.

The North Slope Borough administration building is located on Agvik Street, next to the Christian Education building. This two-story wood frame structure was built in 1975. As originally designed, the building contained 24,034 square feet of floor space. Since then, the amount of space has been increased both internally and externally, with a 1,571 square foot structural addition being built in 1979. The building has clerestory lighting and provides space for Borough assembly and other meetings, as well as offices for Borough employees. The main problem with this building is a lack of space and a high proportion of Borough employees now work in other structures around town. This problem is planned to be resolved through the construction of a new and much larger administration building, beginning in the summer of 1985.
The North Slope Borough School District central offices house School District administrative personnel. This is a two story wooden building located at the corner of Aivik and Kiogak Streets. The structure contains approximately 7,000 square feet of floor space and has been occupied since June 1975.

The Matsutani building is a one story wooden structure at the corner of Kiogak and Nachik Streets which was built in the 1960's by the Barrow veterans as a post office and was later purchased by the North Slope Borough. It serves as administrative offices for the Borough's Health and Social Services Agency, as well as being used to provide certain health programs (which are discussed later).

The Borough's central housing office is located on Stevenson Street in what was originally a demonstration home built in 1976. This 984 square foot wood frame structure provides office space for administrative personnel in the Borough Housing department. (Housing maintenance personnel offices are in the North Slope Borough administration building).

The Science building is located on Laura Madison Street in Browerville. It is a two story wood frame structure which is 1,600 square feet in area and was built in 1982 to provide space for scientific research and storage, primarily that related to bowhead whale issues.
City of Barrow offices are housed on the second floor of the Browerville fire station on Laura Madison Street. The building was built in 1979 and includes 1,280 square feet of office space for use by the city.

Other administrative or miscellaneous public buildings in Barrow include a National Guard armory, a quonset hut formerly owned by the Office of Environmental Health and now used by the Borough's dredging operation, two Borough equipment maintenance shops (one a light duty and the other a heavy duty shop), a Borough sanitation building and associated garage for the storage and maintenance of Borough utility and transit vehicles, a new Borough shipping and receiving warehouse, the old NARL incinerator building planned to accommodate Borough utility vehicles (the present sanitation building will then be taken over by the North Slope Borough School District) and a Borough parts storage warehouse and maintenance shop plus a gravel screening and drying plant. In addition, several privately owned buildings are currently rented by the North Slope Borough to provide additional office space for its employees or for storage.

PUBLIC SAFETY

Police Protection

Police protection services in Barrow are provided by the North Slope Borough Department of Public Safety. The public safety building is located on the corner of Agvik and Kiogak streets across from the Top of the World Hotel. The 13,224 square foot, two story wood frame building
was completed in 1981. The first floor houses a public lobby, an area
for handling drivers tests, a communications room, a conference room,
four private offices with an area for the secretarial pool, a storage
area and a garage. The second floor includes five offices, locker
rooms, a training room, temporary sleeping quarters for officers, a
small lounge with a kitchenette, bathrooms, a jailer’s office and a nine
cell jail.

The original design for the public safety building included an elevator
which was later deleted although space to accommodate one remains. This
lack of an elevator has made the task of moving prisoners in and out of
the second floor jail difficult. Further, the design of the jail itself
makes it difficult to separate male and female inmates and to keep
juvenile inmates isolated from all others. This problem has been made
more difficult by a relatively high average daily inmate population
(9.57 inmates per day for the fiscal year ending June 30, 1983).

The public safety staff in Barrow is made up of 13 officers (including
the department’s director and his deputy), an investigator and eight
correctional officers, an administrative coordinator and eleven civilian
support personnel (records, dispatch and maintenance). As is the case
for officers in the other North Slope villages, all Borough public
safety officers in Barrow meet the training requirements specified by
the Alaska Police Standards Council. Borough officers are eligible for
training at the State Police Academy in Sitka.


<table>
<thead>
<tr>
<th>Category</th>
<th>1980</th>
<th>1981</th>
<th>1982</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homicide and Negligent Homicide</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Rape and Sex Offenses</td>
<td>29</td>
<td>46</td>
<td>52</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Assault</td>
<td>85</td>
<td>180</td>
<td>209</td>
</tr>
<tr>
<td>Burglary</td>
<td>100</td>
<td>59</td>
<td>65</td>
</tr>
<tr>
<td>Larceny</td>
<td>123</td>
<td>133</td>
<td>118</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>205</td>
<td>182</td>
<td>177</td>
</tr>
<tr>
<td>Vandalism</td>
<td>89</td>
<td>114</td>
<td>90</td>
</tr>
<tr>
<td>Narcotics</td>
<td>40</td>
<td>26</td>
<td>22</td>
</tr>
<tr>
<td>Driving While Intoxicated</td>
<td>55</td>
<td>94</td>
<td>82</td>
</tr>
<tr>
<td>Liquor Law Violations/Disorderly Conduct</td>
<td>297</td>
<td>416</td>
<td>419</td>
</tr>
<tr>
<td>Traffic Accidents</td>
<td>77</td>
<td>96</td>
<td>99</td>
</tr>
<tr>
<td>Animal Problems</td>
<td>371</td>
<td>286</td>
<td>56</td>
</tr>
<tr>
<td>Domestic Problems</td>
<td>285</td>
<td>369</td>
<td>516</td>
</tr>
<tr>
<td>Premise Security</td>
<td>179</td>
<td>212</td>
<td>68</td>
</tr>
<tr>
<td>Disturbing the Peace/Noise</td>
<td>451</td>
<td>556</td>
<td>589</td>
</tr>
<tr>
<td>Other a/</td>
<td>4,066</td>
<td>3,541</td>
<td>2,066</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>6,453</td>
<td>6,312</td>
<td>4,634</td>
</tr>
</tbody>
</table>

a/ This category identifies non-criminal public safety activities. It includes service requests, agency assists, public assists and other responses to non-criminal situations.

Source: North Slope Borough Department of Public Safety.
While a city ordinance prohibits the sale of liquor in Barrow, the Department of Public Safety reports that law enforcement problems here are primarily related to liquor abuse. Table 60 summarizes the Department’s activities in Barrow between 1980 and 1982, indicating that a substantial portion of time is spent on non-criminal activities.

As of January 1, 1984, all persons arrested in the Prudhoe Bay area will have to be arraigned in Barrow. A State Trooper is scheduled to be assigned to Barrow, replacing an officer who was stationed at Deadhorse until about May 1983.

Fire Protection

The North Slope Borough has provided fire protection services on an areawide basis since 1981. However, in Barrow the Borough contracts with the City of Barrow for fire protection services. The city, in turn, contracts with the Barrow Volunteer Fire Department.

There are two fire stations in Barrow: a three bay unit located on Kiogak Street adjacent to the National Weather Service facilities and the Browerville station on Laura Madison Street adjacent to the city playground. The Browerville station was expanded to a three bay capacity in 1983. (The City of Barrow’s administrative offices are located on the second floor of the Browerville station). The station on Kiogak Street houses a 1982 tanker equipped with a 3,000 gallon water tank and a 500 gpm pump; a 1971 tanker with a 1,000 gallon water tank and a 1,000 gpm pump; plus a 1982 ambulance. The Browerville station
houses a 1979 tanker with a 4,000 gallon water tank and a 1,000 gpm pump; a 1978 tanker with a 4,000 gallon water tank and a 500 gpm pump; plus a 1983 ambulance. An older ambulance which is still in working condition is being assigned to the Search and Rescue division for storage at its new hangar.

The Alaska Department of Transportation and Public Facilities also maintains two vehicles at its Barrow airport maintenance shops for emergency response to plane incidents. Equipment includes a crash truck and a small quick response vehicle. The crash truck carries 500 pounds of dry chemicals, 500 gallons of water and 30 gallons of other suppressants. The quick response vehicle carries 500 pounds of dry chemicals and 50 gallons of pre-mix light water under pressure. The Borough has an agreement with the State to support the State's crash and fire response at the airport.

The Barrow Volunteer Fire Department attempts to keep a total of 35 trained volunteers to man the firefighting equipment and provide ambulance service. (About 15 of the volunteers are EMT trained, the training being provided by the Borough's Health and Social Services Agency). The chief of the Borough Fire department is also chief of the Barrow Volunteer Fire department. In addition, membership in the Barrow volunteer group includes membership in the Borough's volunteer firefighting force, a technical arrangement providing Borough insurance coverage for the Barrow volunteers.
There have been a series of fires in the Barrow area in recent years, including the old NARL laboratory, the old Top of the World and Brewer's hotels, the old co-op building housing Al's Eskimo Cafe and the Arctic Slope Regional Corporation's offices, the Barrow Utilities and Electric Cooperative office building and a number of residences. A total of 15 Barrow residents have died in building fires since 1970, including 6 in 1973 alone. No lives have been lost in fires in Barrow since 1977.

Search and Rescue

While the North Slope Borough has combined the volunteer firefighting and search and rescue organizations in the smaller villages (a move coinciding with the completion of new village fire stations housing both firefighting and search and rescue equipment), the Barrow search and rescue organization remains independent of the Barrow Volunteer Fire department. The Barrow search and rescue organization has 35 to 40 members. It owns a building in Browerville which presently houses the Borough Search and Rescue division's administrative offices. However, the Barrow search and rescue organization does receive financial support from the Borough.

The North Slope Borough Search and Rescue division is an organization within the Department of Public Safety but remains an independent unit insofar as administrative functions are concerned. It maintains a full-time staff in Barrow including pilots and mechanics for its two helicopters and its fixed wing aircraft. The Division is responsible for all Borough search and rescue activities, and it cooperates with the
Borough Health and Social Services Agency on emergency medi-vac cases. The Division is also responsible for providing training and support to the combined firefighting/search and rescue volunteer groups in the smaller Borough villages.

The division's aircraft are currently housed in a hangar rented from the DEWLine station at the NARL airstrip. Construction is underway on a new hangar facility at the Barrow airport which will provide space for the housing and maintenance of the division's aircraft and also provide it with administrative offices.

HEALTH AND SOCIAL SERVICES

Health Services

Primary health care services in Barrow are provided through the combined efforts of the Alaska Area Native Health Service (U.S. Public Health Service) and the North Slope Borough Health and Social Services Agency. The Public Health Service continues to operate the Barrow Public Health Service hospital, with assistance from the Borough, while the Health and Social Services Agency's present primary goal is to supplement existing health programs and provide needed new programs. Although the North Slope Borough assumed the areawide 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 community health aide and emergency medical services programs. In 1978, the mental health, eye care, community health representative

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and dental services programs were added and the health education program was implemented in 1979. In 1980, the Borough assumed responsibility for maintenance of the Barrow hospital, while the public health nursing program (State contracts) and environmental health services were added to the Borough's functions in 1981.

The Barrow Public Health Service hospital is the only hospital in the North Slope Borough. It is an accredited institution which provides acute care services including emergency care, internal medicine, pediatrics, minor surgery (lacerations), orthopedics, gynecology and normal obstetrics, plus X-ray, laboratory, pharmacy, social services and mental health services. 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. Table 61 includes a listing of the services provided by this hospital. The North Slope Borough now provides a portion of the hospital's staffing. In fiscal year 1982, 15 of the 61 hospital positions were staffed by Borough personnel.

The primary emphasis of health care at the Barrow hospital is on outpatient services, with the outpatient clinic providing the only access to physician services in the community. Accidents and injuries, upper respiratory disease and otitis media are currently the leading causes of outpatient visits, while accidents and injuries, infant births and alcohol abuse are listed as the leading causes of hospitalization.
### TABLE 61
HEALTH AND SOCIAL SERVICES PROGRAMS
BARROW

<table>
<thead>
<tr>
<th>North Slope Borough</th>
<th>Barrow Public Health Service Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greist Center</strong></td>
<td><strong>Outpatient Clinic</strong></td>
</tr>
<tr>
<td>Eye Care</td>
<td>Ambulatory Care</td>
</tr>
<tr>
<td>Dental Care</td>
<td>Emergency Care</td>
</tr>
<tr>
<td>Mental Health</td>
<td>Standard Laboratory and X-Ray Services</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>Pharmacy Services</td>
</tr>
<tr>
<td>Alcohol and Drug Abuse</td>
<td>Specialty Clinics:</td>
</tr>
<tr>
<td>WIC (Women/Infants/Children)</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>Public Assistance</td>
<td>Medicine</td>
</tr>
<tr>
<td>Youth Services</td>
<td>Gynecology</td>
</tr>
<tr>
<td>Social Services</td>
<td>Orthopedics</td>
</tr>
<tr>
<td>Public Health Nursing</td>
<td>Surgery</td>
</tr>
<tr>
<td>Matsutani Building a/</td>
<td>Ear-Nose-Throat</td>
</tr>
<tr>
<td>Health Education/Media</td>
<td>Radiology</td>
</tr>
<tr>
<td>Arctic Women in Crisis</td>
<td>Ophthalmology</td>
</tr>
<tr>
<td>Children's Receiving Home</td>
<td></td>
</tr>
<tr>
<td>Community Health Aide</td>
<td></td>
</tr>
<tr>
<td>Community Health Representatives</td>
<td></td>
</tr>
<tr>
<td>Infant Learning</td>
<td></td>
</tr>
<tr>
<td>Senior Citizens</td>
<td></td>
</tr>
<tr>
<td>Emergency Medical Services</td>
<td></td>
</tr>
</tbody>
</table>

| **Hospital**        | Inpatient Care                       |
|                     | Primary Acute Care                   |
|                     | Emergency Care                        |
|                     | Internal Medicine                     |
|                     | Pediatrics                            |
|                     | Minor Surgery                         |
|                     | Orthopedics                           |
|                     | Gynecology                            |
|                     | Obstetrics (Normal)                   |
|                     | Medical Records                       |
|                     | Laboratory and X-ray Services         |
|                     | Social Services                       |
|                     | Mental Health                         |
|                     | Pharmacy Services                     |
|                     | Labor/Delivery                         |

*Not Available:*
Emergency or
Elective Surgery
Diagnostic or
Therapeutic
Procedures

---

Administrative personnel only except for Senior Citizens.

Source: North Slope Borough Health and Social Services Agency.
The 21,450 square foot hospital is a one story wood frame building. It has 14 beds, 10 of which are reserved for acute medical/surgical/pediatric cases, 2 for labor and another 2 for post-delivery care. 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. Also attached to the hospital are staff housing and the Borough's Greist Family Services Center. The facility lacks adequate space for both hospital and outpatient clinic functions. Associated problems include declining federal funding and a high staff turnover rate. A feasibility study was recently undertaken to assess the possible direct operation of the Barrow hospital by the North Slope Borough, a move which would be welcomed by the federal government. However, the Borough assembly has, after receiving the feasibility study, shown little enthusiasm for assuming the responsibility. A major concern is the increased financial burden that such a move would place on the Borough.

The Greist Family Services Center, which is attached to the Barrow hospital, was built in 1981. It is owned and operated by the North Slope Borough and houses a number of health and social service programs administered by the Borough's Health and Social Services Agency (see Table 61). 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, offices for optometry including an examination room and eye glass dispensary, a dental suite with 4 operatives, a laboratory, X-ray facilities and reception areas. Staffing of this facility includes 3 Borough public health nurses.
(including a maternal/child care nurse), 2 Borough health aides (one of whom is an interpreter), 3 State social service workers and 2 Borough 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 Public Health Service optometrist or a private optometrist sponsored by the Lions Club, plus a Borough eye coordinator who is trained to repair and fit eye glasses. The dental care unit is staffed by two dentists.

**Social Services**

The North Slope Borough provides a series of social service programs, all administered by the Health and Social Services Agency (see Table 61). Like the health care programs, the social service programs were instituted gradually over a period of years. Assistance to Barrow senior citizens was initiated in 1977; youth services were added in 1978; the Arctic Women in Crisis program was adopted in 1979; the Women/Infants/Children (WIC) nutrition program began in 1980; and the alcohol referral and residential treatment program was started in 1981.

The main administrative offices of the Health and Social Services Agency are located in the Matsutani Building. This building also serves as the senior citizens activity center. Employees of the Health and Social Services Agency now number close to 90 in Barrow, with an additional 12 or so in other North Slope villages and 3 each in Fairbanks and Anchorage.
The Health and Social Services Agency's responsibilities include the operation of several facilities in Barrow other than the Greist Family Services Center and the Matsutani building. These include:

- **Barrow Animal Clinic.** The clinic is located in a rented structure and houses the Borough veterinarian and his assistant who are responsible for environmental health education as well as animal control and care programs. These services are also provided to the other Borough villages on an itinerant basis.

- **Friendship House.** The Friendship House is an adult center for counseling on substance abuse problems. Its activities include individual counseling, group therapy and other open meetings. No sleeping facilities are provided.

- **Youth Drop-in Center.** The center provides recreation activities in a safe, alcohol-free environment for Barrow young people. Sponsored by Alternatives for Youth, activities include a jail diversion program which provides alternative sleep-off space for youths arrested for being intoxicated. Minimum security is provided, with juveniles being kept there on an honor system which, if violated, can lead to a return of the violator to jail. The center is open until 10 pm each evening for regular recreation activities. The City of Barrow has a curfew for young people and an evening patrol is initiated at that time for curfew violators. The center also sponsors an Arctic survival program for youths who do not have an opportunity to go camping with their families.
Women in Crisis Center. The facility houses women who have been physically abused. It can house from 7 to 13 women who are allowed to stay up to 30 days, with extensions being granted when needed.

Children's Receiving Home. This facility is a State-licensed residential emergency shelter for children from birth to 18 years of age. The maximum stay is for 90 days. Unfortunately, there is no alternative shelter in Barrow after the 90 days have expired and, on occasion, 30-day extensions have been approved. The building is located in Browerville and is a single story, wood frame building about 2,214 square feet in area plus an addition for water storage. It includes six bedrooms (one of which is a nursery), a living/dining room, a study, a kitchen and pantry, a bathroom and a laundry, plus a utility room.

Day Care Center. Barrow presently has no government-sponsored day care facilities. However, a day care center designed to house 65 children is included in the North Slope Borough's capital improvements program with construction scheduled to get underway in July 1984. This project has strong community support.

EDUCATION

The North Slope Borough School District provides education services from Early Childhood Education (ECE) and kindergarten through the 12th grade in Barrow, as it does in other villages of the region. In addition, adult education and community school programs are provided with State
funding assistance when school facilities are not being used for regular education activities.

Until the beginning of the 1983/84 school year, all school students in Barrow were housed in one school plant located on Momegana Street. However, as of September 1983, students from grades 6 through 12 have been located in the new high school complex on Okpik Street, within Block "A". The following discussion of Barrow school facilities describes the use of school space and staffing levels as of the 1982/83 school year; however, a description of the new high school complex is also provided.

During the 1982/83 school year, the school physical plant in Barrow was a disjointed one. A portion was built by the Bureau of Indian Affairs (BIA) when that agency was responsible for local education services, a few units were initially constructed for other purposes and then converted to school use, and still other buildings have been constructed by the Borough subsequent to its assuming responsibility for education services in 1974.

The Bureau of Indian Affairs constructed a new Barrow school in 1965. The facility could accommodate 1st through 9th grade students, but students continuing on through high school were obliged to attend education institutions either in other parts of Alaska or in other states. Grades 10 through 12 were first made available locally in the 1974/1975 school year by the North Slope Borough.
The Fred Ipalook Elementary School houses classrooms for kindergarten through grade 6, with two classrooms designated for the Early Childhood Education program (3 and 4 year olds). The facility is also used after school for recreation programs and continuing education programs sponsored by the community school program. The school lies between Momegana Street and the Isatkoak Lagoon. During the 1982/83 school year, its facilities included the primary classroom building, a kindergarten building, a multi-purpose/cafeteria facility, two other classroom buildings and an ECE building.

The elementary school's professional staff for the 1982/1983 school year totaled 34, including 22 classroom teachers, 4 special education teachers, 2 resource reading teachers, a music teacher, an enrichment program teacher, a special education counselor, a physical education teacher and 2 administrators.

In addition, the elementary school employed another 19 persons for administration and support services. It also received assistance from the 43 School District employees who provided maintenance and cooking services and student transportation for the Barrow school system.

The Fred Ipalook School has a number of physical problems. The north portion is close to the power generation plant which is noisy. There have also been continuing maintenance problems with the plumbing, heating and electrical systems. However, the transfer of 7th through 12th grade students to new Barrow secondary school in the 1983/1984 school year will provide the School District with an opportunity to...
better organize the elementary school's use of the old school complex in order to eliminate the most inadequate portions and to minimize maintenance and operation problems.

During the 1982/83 school year, the Barrow high school was housed in several buildings which will be made available for use by the elementary school or other public purposes by the transfer of 7th through 12th grade students to the new secondary school in the 1983/1984 school year. The old secondary school complex included the junior/senior high school building (built in 1965) with classrooms and a gymnasium/multi-purpose facility, two temporary classroom buildings, a vocational education facility built in 1976 and a leased vocational education building. All told, the facilities housed 14 general classrooms, 2 bilingual rooms, 3 special education rooms and 5 vocational education rooms, a business classroom, an art room, a science lab, a photo lab, a home economics room, a shop, and a gymnasium, band room and library which were shared with the elementary school.

Staffing for the Barrow secondary school in 1982/83 totaled 34 professionals, including 27 classroom teachers, 2 special education teachers, 2 counselors, a librarian and 2 administrators. The secondary school also received support from spool of 43 School District employees providing maintenance, cooking and student transportation services.

The gymnasium and multi-purpose room were in constant use after the regular school programs ended. Supervised by three part-time recreation
aides, the activities included basketball and volleyball for both youth and adults. The weightlifting room was also available to adults.

The vocational education building which had been constructed in 1976 at the site of the new Barrow high school was, because of structural problems, never fully used. It has since been modified and incorporated into the new high school complex.

The breadth of the community education, special interest and recreation programs offered through adult vocational programs and community school programs (funded by the State as well as by monies from the City of Barrow but administered by the School District and offered for the most part in school facilities) can best be illustrated by a listing of the activities. The School District has a community school coordinator on its staff to coordinate community school programming for Barrow and other North Slope villages. Staff for the adult education and special interest courses are drawn from the School District as well as from the community. Following is an incomplete listing of courses and activities offered through the school system to Barrow residents in the 1982/1983 school year:

<table>
<thead>
<tr>
<th>Adult Programs</th>
<th>Youth Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning and Advanced Inupiat</td>
<td>Basketball</td>
</tr>
<tr>
<td>Drivers' Education</td>
<td>Volleyball</td>
</tr>
<tr>
<td>Secretarial Skills</td>
<td>Eskimo Games</td>
</tr>
<tr>
<td>Shorthand</td>
<td>Gymnastics</td>
</tr>
<tr>
<td>Accounting</td>
<td>Soccer</td>
</tr>
<tr>
<td>Investments</td>
<td>Roller Skating</td>
</tr>
<tr>
<td>Skin Sewing/Jacket Making</td>
<td>Model Building</td>
</tr>
<tr>
<td>Beadwork</td>
<td>Rocketry</td>
</tr>
<tr>
<td>Aerobic Dancing</td>
<td>Hair Styling</td>
</tr>
<tr>
<td>Pottery</td>
<td>Cooking</td>
</tr>
</tbody>
</table>
Also included in the offerings for adults were General Education Development (GED) courses which, upon completion, provide a certification equivalent to that of a high school diploma. The Inupiat cultural heritage program, funded through federal Indian education grants, is also integrated into the Barrow school curriculum. Instruction in the Inupiat language is required from the ECE level through 6th grade and is available on an optional basis for students in grades 7 through 12. The community school also offers instruction in Inupiat for adults. In addition, a cultural learning bank has been developed in the Barrow school system which has a variety of books, films, slides and other resource materials to assist the faculty with the task of integrating the subject of Inupiat culture into the regular curriculum.

The new secondary school (7th through 12th grades) will be available for occupancy during the 1983/1984 school year. It is the first Barrow school complex which will have been designed and constructed in its entirety by the North Slope Borough. Mounted on deep seated piling, the five wings are interconnected by enclosed corridors. The buildings are of wood frame design, with two of the wings being single storied and the remaining three having partial second floors. The academic wing contains 17 classrooms, including 2 science laboratories; the "hub" wing houses a 299-seat auditorium with a raised stage, plus a kitchen/
cafeteria, the home science department, a band/choral department, a library and the administration area; and the sports wing houses a full sized gymnasium with a 1,000 person seating capacity, a 30 by 50 foot swimming pool, lockers and showers, a weightlifting room and a wrestling/gymnastics room. The vocational education wing was developed by renovating and expanding the former vocational technology building. It now contains a construction shop, 2 classrooms, a metal working shop, an automotive repair shop, a small engine shop and a 5,000 square foot warehouse on the first floor. The mezzanine floor of this building contains a small TV studio, a small control room a photo lab, an arts and crafts room a drivers' education room and a drafting room. Finally, the utility wing contains boilers, generators and a water storage tank. This wing also includes a training facility designed to serve as a regional training center for operation and maintenance of generator facilities in other villages within the North Slope Borough. The training facility includes classroom space, an office/workroom and two generators (a 90 KW and a 210 KW diesel driven unit). The secondary school complex is connected to the new Barrow utilidor which will provide both potable water and sewage service.

It is anticipated that the new secondary school complex will be used by the Barrow community school program for continuing education and recreation activities. Certainly the new facilities could support a larger and more varied group of programs that has been offered to date.

Student enrollment in the Barrow school system reached a peak of 682 students in the 1972/1973 school year when the classes extended only
### TABLE 62

**SCHOOL ENROLLMENT TRENDS a/ b/**

**BARROW 1966/67 - 1982/83**

<table>
<thead>
<tr>
<th>School Year</th>
<th>Grades K-6</th>
<th>Grades 7-12 c/</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966/67</td>
<td>404</td>
<td>151</td>
<td>555</td>
</tr>
<tr>
<td>1967/68</td>
<td>427 &quot;</td>
<td>135</td>
<td>562</td>
</tr>
<tr>
<td>1968/69</td>
<td>380</td>
<td>112</td>
<td>492</td>
</tr>
<tr>
<td>1969/70</td>
<td>464</td>
<td>143</td>
<td>607</td>
</tr>
<tr>
<td>1970/71</td>
<td>508</td>
<td>138</td>
<td>646</td>
</tr>
<tr>
<td>1971/72</td>
<td>493 d/</td>
<td>141</td>
<td>634</td>
</tr>
<tr>
<td>1972/73</td>
<td>540 d/</td>
<td>142</td>
<td>682</td>
</tr>
<tr>
<td>1973/74</td>
<td>437</td>
<td>152</td>
<td>589</td>
</tr>
<tr>
<td>1974/75 e/</td>
<td>..</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1975</td>
<td>401</td>
<td>210</td>
<td>611</td>
</tr>
<tr>
<td>1976/77</td>
<td>374</td>
<td>244</td>
<td>618</td>
</tr>
<tr>
<td>1977/78</td>
<td>291</td>
<td>281</td>
<td>572</td>
</tr>
<tr>
<td>1978/79 f/</td>
<td>295</td>
<td>276</td>
<td>571</td>
</tr>
<tr>
<td>1979/80</td>
<td>312</td>
<td>228</td>
<td>540</td>
</tr>
<tr>
<td>1980/81</td>
<td>281</td>
<td>239</td>
<td>520</td>
</tr>
<tr>
<td>1981/82</td>
<td>277</td>
<td>218</td>
<td>495</td>
</tr>
<tr>
<td>1982/83</td>
<td>289</td>
<td>191</td>
<td>480</td>
</tr>
</tbody>
</table>

**Legend:**

- a/ Final enrollment figures.
- b/ ADM (Average Daily Membership) for school years 1980/81, 1981/82 and 1982/83 was 548.69, 523.3 and 513.05 respectively.
- c/ High school classes 1966/67 through 1973/74 limited to the 9th grade.
- d/ Elementary school enrollment includes students listed as ungraded.
- e/ No enrollment data available for 1974/75.
- f/ Figures for kindergarten enrollment estimated.

**Sources:** Alaska Department of Education. North Slope Borough School District.
through the 9th grade (see Table 62). That same year, the kindergarten through 6th grade enrollment peaked at 540 students. High school classes through the 12th grade were first offered in the 1974/1975 school year and student enrollment in the 7th through 12th grades peaked in the 1977/1978 school year.

The growth and decline of school enrollment in Barrow reflect the changes in the dynamics of Barrow's population. Since the early 1970's, there has been an out-migration of Alaska Native people from Barrow to the smaller villages of the North Slope and the total number of Alaska Natives in Barrow actually declined between 1970 and 1980. During the same period, non-Native community residents increased both in absolute numbers and as a proportion of total village population; however, this group tends to have few dependents.

Enrollment of non-Natives during the 1982/83 school year totaled 51 elementary and 38 high school students. There were also about 15 Alaska Native students from Barrow who attended high school at Mt. Edgecumbe in Sitka in that same year. The School District does not keep records for Barrow students attending other schools outside the Borough.

RECREATION

The City of Barrow retains the power of recreation and maintains an active recreation department, but the comprehensive recreation program now available to Barrow residents results not only from the city's
efforts but also from those of the North Slope Borough, as well as other organizations in the community.

Until very recently, the gymnasium and multi-purpose rooms of the old school complex constructed by the Bureau of Indian Affairs provided the central facilities for year-round indoor recreation activities in Barrow. However, the newly completed Barrow high school now provides additional recreation space, including a large gymnasium, a swimming pool and an indoor track. The gymnasium in the old school complex has been heavily used by the entire community after regular school hours during the school year and throughout the summer. Basketball is very popular locally and there is also an active volleyball program. The multi-purpose room in the old school complex has an elementary school size basketball court and can be used for roller skating and other informal indoor recreation activities. Both the old school complex and the new high school activity center have shower facilities which are open to the public during community recreation periods.

The Barrow Community Center (also called the Youth Center) is a recreation center open to Barrow residents of all ages. It is located on Nachik and Stevenson Streets and is used as a bingo hall, for club meetings, for special programs sponsored by the city such as movies for adults and children, and for Eskimo dances, church banquets and private receptions. The building was extensively renovated in 1982 and was brought up to State fire code at that time. When the renovations were completed, a portion of the building was occupied as offices for the city Parks and Recreation department.
The Barrow Teen Center, located on Kiogak Street near the airport, is operated by the city Parks and Recreation department and is open to all young people in the community. It was converted for its present use from the city liquor store which was closed in 1978. The Teen Center is managed by the elected officers of a teen club which raises funds to support the Center's activities through dances and concessions. Although it is not large (1,312 square feet), the Center houses a small snack bar as well as a large multi-purpose room with equipment which includes pool tables, a foosball table and audio equipment for tapes and records. The facility is operated as a drop-in center, and the city's Parks and Recreation department also sponsors classes here which emphasize activities related to Inupiat culture. The Center is open every night after school until 10 pm on weekends and during the summer. Teen dances are held here on the weekends.

An unusual recreation-related facility for Barrow young people is the Uqpiksuu summer camp located 45 miles from town. The camp is currently sponsored by the Mayor's Office of the North Slope Borough. Four two-week sessions are planned each summer, with 16 to 18 children participating in each session. The children are housed in tents and camp programs include training relating to the environment and living off the land, as well as more conventional recreation activities such as swimming in the shallow inland lakes.

In recent years, an effort has been made to develop outdoor recreation facilities in Barrow. Children's playgrounds have been constructed in both Browerville and Barrow, with the Browerville facility being
developed with assistance of the Barrow Women's Club and the State Division of Parks. Both are equipped with playground equipment.

Barrow has a very active men's and women's softball program something which often surprises summer visitors. The program is sponsored by the city Parks and Recreation department but receives support from merchants and others in the community. The Lions Club leases an open area on National Weather Service property for use as a softball field. It is in constant use during the short summer, despite frequent inclement weather.

The City Parks and Recreation department, in addition to administering community league sports -- softball, basketball and volleyball -- also sponsors such annual events as the ARCO Jesse Owens games, the Hersey Track and Field meet and the Claire Okpeaha Annual 10 Kilometer Run. In addition, the Barrow Chamber of Commerce has initiated a spring festival featuring, among other events, both dog and snowmachine races.

Barrow residents also participate in a variety of informal recreation events, often involving the entire family. Church groups and local civic clubs sponsor their own recreation-related functions. The Barrow Volunteer Fire-department and the Search and Rescue organization do likewise. While the snowmachine is essential for winter subsistence activities, its use also has elements of pleasure. The three-wheeler is a popular vehicle for local transportation and it, too, is used for recreational purposes. Finally, hunting, fishing and other subsistence activities have elements of pleasure for Barrow Inupiats although these
activities are not viewed from the Inupiat perspective as being of a recreational nature.

UTILITIES

Water

Barrow is the largest city in the State without a community-wide water system. There are presently several different water "systems" in the community. However, most Barrow residents purchase their water needs from private firms or they haul their own water in summer and melt ice in winter. A piped water system serves the hospital/BUECI/Fred Ipaalook school complexes. In addition, a major construction program is currently underway in Barrow to build a water and sewer utilidor system.

The hospital/BUECI/school piped water system was first developed in 1964. Originally, water from lower Isatkoak Lagoon was pumped to a plant in town operated by Barrow Utilities and Electric Cooperative, Inc. (BUECI), where it was distilled and chlorinated prior to distribution. This system has since been upgraded. A dam was recently built across Isatkoak Lagoon and the Upper Lagoon is now used as the city's water source. From an intake building with a heating plant at the dam site, a 7,500 foot transmission line runs to the water treatment plant and water is then stored in a BUECI 100,000 gallon tank and a Public Health Service 600,000 gallon tank. This system became operational in January 1978.
Development of the new Upper Isatkoak Lagoon water source and the upgrading of water storage capabilities made up the first phase of an overall upgrading of Barrow's water (and sewer) system. Development of the Barrow utilidor system got underway in October 1981. This is a multi-phase project, with construction currently scheduled to extend into 1990. It consists of a below ground utilidor system with associated water/sewage piping, force mains, electrical, telemetry and fire protection systems; plus a water re-circulation plant (and a number of other features described under sewage). By the end of the construction program, almost all of Barrow's presently subdivided area is proposed to be served by this system. No one in Barrow presently receives water service via the utilidor system as this will not be possible until completion of the water re-circulation plant, scheduled for the end of February 1984. However, 130 units in the Browerville addition (primarily the Borough 12-plexes and 8-plex plus some Borough single family units); Borough-constructed units in Block "A", the new high school, two Borough 29-unit apartment buildings, the North Slope Borough administration building and the old hospital/BUECI/Fred Ipalook school system will receive water via the utilidor early in 1984.

According to BUECI, water consumption rates in Barrow are presently very low, averaging about 35 gallons-per-person per day. For persons receiving their water via trucked delivery services, consumption rates are much lower, averaging around 9 gallons per person per day. By season, the summer is the "lowest" period of water consumption in the community, mainly because the school is not open during that period. During 1982, October was the peak water consumption month, with a total
of 225,000,000 gallons sold by BUECI. The effect of the utilidor system on water consumption rates in the community is still a matter of speculation.

The main problem associated with Barrow's present water service is that there is no communitywide system. The reliance on trucked water supplies is not only inconvenient but is believed to be a factor in the spread of communicable disease. In addition, the raw water supply line from the upper lagoon to the BUECI treatment plant is in poor condition and is scheduled to be replaced during 1984. The capacity of the Upper Isatkoak Lagoon reservoir has also been questioned.

**Sewage**

As with water, Barrow presently has no communitywide sewage collection or disposal system. Most village residents still use honeybuckets, the contents of which are emptied daily and are transported to the local dump either by North Slope Borough Department of Public Utilities vehicles or by a private operator. Until very recently, a piped sewer system served the hospital/BUECI/Fred Ipalook school complexes. In addition, a major construction effort is currently underway in Barrow to build a water and sewer utilidor system. This latter program is being accompanied by development of a sewage lagoon and outfall.

The hospital/BUECI/Fred Ipalook school piped sewer system was constructed in 1964 to meet the needs of this government complex. Sewage from these facilities was treated by extended aeration,
chlorinated and dumped into an outfall lagoon only 10 feet away from lower Isatkoak Lagoon, which was the community's primary water source until 1978. However, this system was decommissioned in May 1983 when the complex was hooked into the sewer portion of the utilidor system.

As previously mentioned, development of the Barrow utilidor system got underway in October 1981, with completion of the entire system currently planned for 1990. As described by the project engineers:

"The system includes a below ground utilidor system with associated water/sewer piping, force mains, electrical, telemetry, and fire protection systems; sewage pumping (lift) stations; a water re-circulation plant; an above ground dam crossing; a buried outfall line, a sewage treatment lagoon with a trucked sewage disposal building, and a fabrication and maintenance facility. Also included are lateral utiliducts and service connect on boxes for hook-up to residential and commercial facilities."

The sewage portion of the utilidor system is currently operational. Users presently include 130 units in the Browerville addition (primarily the Borough 12-plexes and 8-plex plus some Borough single family units); Borough-constructed units in Block "A", the new high school, two Borough 29-unit apartment buildings, the North Slope Borough administration building and the old hospital/BUECI/Fred Ipalook school complex. Wastes are transported via the system to a facultative lagoon at South Salt Lagoon. The lagoon was dredged during the summer of 1983 to deepen it, to dig the lagoon cells and to build containment dikes. However, until a permanent outfall line into the lagoon cells is completed, scheduled for the spring of 1984, no sewage treatment is provided.

Present Borough plans call for extension of the utilidor system in stages through about 1990, by which time all users within the developed...
area of town (excluding Block “B”) should be connected. Construction of a trucked sewage building to eliminate the present undesirable practice of dumping sewage wastes at the community landfill is scheduled to take place in 1984.

**Solid Waste**

The disposal of solid wastes in the arctic is inherently difficult, particularly when both sewage and garbage are dumped at the same site. Traditionally, wastes in Barrow were burned or were left out on the ice to be carried out to sea at break-up. However, that practice is no longer considered acceptable and the present dump site at South Salt Lagoon, which was originally developed by the Navy, has been used since 1958.

The Barrow dump has never been satisfactory as a landfill site, due in part to the dumping of sewage as well as garbage. In the early 1960's the dump was reportedly well maintained and wastes were covered with gravel and soil. However, a shortage of gravel subsequently resulted in wastes not being covered and dumping was uncontrolled beyond the leading edge of the lagoon. Prior to its being deepened in 1983 for use as a facultative sewage lagoon, the lagoon was only 3 to 4 feet deep and the entire lagoon had been used for dumping. The dump is also unfenced, with the result that wind-blown trash spreads over this area, including the nearby beach. According to Alaska Department of Environmental Conservation officials, the present dump constitutes a severe health and environmental hazard.
Construction of a trucked sewage building, currently scheduled for 1984, should eliminate some of the present hazardous conditions associated with the existing dump. In addition, some clean-up of the lagoon occurred during the summer of 1983 as part of the dredging program for development of a facultative sewage lagoon here. The State wants the present dump to be abandoned and a new landfill site, with a honeybucket trench, developed. The Borough is working on the problem and has developed tentative plans for a new dump site in the gravel pit in Block "B", south of the airport runway. In the meantime, it plans to fence the present site and it has acquired the necessary heavy equipment to maintain the dump in a more satisfactory manner.

Garbage is picked up regularly from individual homes and businesses in Barrow by the North Slope Borough. Equipment includes a compactor-type hydraulic garbage truck, a smaller compactor-type truck for emergency use and a 2.5 ton open dump truck and front end loader for the pick-up of bulky items. In addition, the Borough operates a range of equipment for operation of the dump itself.

Electric Power and Gas

Unlike other traditional North Slope villages, electric power in Barrow is gas-generated. The history of electric power and heating facilities in the immediate Barrow area is long and complicated. For many years, Barrow residents used driftwood or coal hauled from a mine near Atqasuk as their primary fuel source. However, following discovery of the South Barrow gas field by the Navy during its 1944-53 exploration program in
NPR-4 and the successful conversion from fuel oil to natural gas by NARL, several government agencies (Bureau of Indian Affairs, Public Health Service, Weather Bureau and the Bureau of Standards) requested permission from the Navy to use gas at their facilities in town. Approval was granted and the conversion to natural gas was undertaken in 1958.

The City of Barrow petitioned Congress in 1959 to request that the community be allowed to purchase natural gas from the Navy. Congress passed a bill making this possible in 1962 and the federal agencies in charge of the Barrow pipeline were authorized to transmit the gas for non-government consumption. Installation of the gas distribution system in town was carried out in 1964-65 by Barrow Utilities, Inc. (BUI), a non-profit utility corporation which was later renamed Barrow Utilities and Electric Cooperative, Inc. (BUECI). Also during this period, an electric distribution system was installed in the community by the Golden Valley Electric Association at the request of the City of Barrow. Thus Barrow residents obtained natural gas and electric power services at about the same time.

The Bureau of Indian Affairs assumed responsibility for operation and maintenance of the central utilities in Barrow in 1964, while BUI purchased the local assets of the Golden Valley Electric Cooperative, Inc. in 1965 and became the sole distributor of electricity and gas for non-government areas of the community. Gas was purchased from the Navy and electricity was purchased from the Bureau of Indian Affairs.
Subsequently, BUI assumed responsibility for operating and maintaining the Bureau's utility facilities in Barrow on a cost-reimbursement basis.

The availability of "cheap" fuel resulted in major social change in Barrow. Previously, it had not been uncommon for as many as 12 to 14 people to live in a one room house because of the high cost of heating. However, after natural gas became available, many families enlarged their homes and, because it became financially possible for parents and young adults to live separately, a building boom took place. This boom was accelerated by a severe storm in the fall of 1963 which damaged a number of structures in town and their replacement was assisted by low interest federal disaster funds. The result was a dramatic increase in energy consumption in Barrow.

Today, electric power and natural gas are provided by BUECI to all users in the immediate Barrow and Browerville area except NARL and the POW Main DEW Line station. Gas from the South and East Barrow gas fields is purchased from the U.S. Department of the Interior and transported to Barrow via a 6 inch all-welded steel pipeline at a pressure of 200 lbs per square inch. Pressure is reduced in two stages using pressure reducing valves to 80 lbs per square inch and down to 20 lbs per square inch before entering the community-distribute-on system.

According to BUECI officials, the 6-inch gas transmission line is in good repair. However, the original community gas distribution system was constructed under the supervision of the Bureau of Indian Affairs with surplus Navy pipe mounted on top of 55-gallon drums which were sawn
in half. Significant leakage problems were experienced and there was always a threat of interrupted service resulting from snowmachines and other vehicles crashing into the lines. Replacement of the entire community distribution system with a buried system was undertaken by the Bureau of Indian Affairs and was completed in the spring of 1982.

Barrow's electric power is gas-generated. However, BUECI's main generators are two 2,500 KW dual-fuel units which were purchased by the North Slope Borough and which permit a switch to liquid fuel if gas supplies are disrupted. The power plant also houses two 750 KW gas turbines which were added by the Bureau of Indian Affairs in 1968 and which are used for standby power. In addition, a 450 KW unit installed by the Bureau of Indian Affairs in 1964 is retained for use in emergencies. A third 2,500 KW dual-fuel unit was purchased by the North Slope Borough in 1983 and is currently being installed.

NARL's electric power and natural gas distribution system are independent of those for Barrow. Gas is transmitted from the South Barrow field via a 4-inch line mounted on barrels and drums. The line is reportedly in poor condition. Electric power is provided by four 750 KW dual-fuel generators.

The separation of federal government and community utilities systems in Barrow is no longer warranted. In June 1975, BUI agreed to operate and maintain the Bureau of Indian Affairs' Barrow facilities at no charge to the government except for major repairs. In September of the same year, as a means of phasing the Bureau of Indian Affairs out of the utility
business in the community, a tri-party agreement between the Bureau, BUECI and the North Slope Borough was entered into. Under the terms of this agreement:

- BUECI agreed to a voluntary foreclosure for the cancellation of all debts owed to the Bureau of Indian Affairs. (These debts were unrepaid loans made by the Bureau to BUI when the utility was first getting established).
- The Bureau of Indian Affairs agreed to upgrade the Barrow gas distribution system.
- The Bureau of Indian Affairs agreed to transfer the entire utility, once upgraded, to the North Slope Borough which, in turn, will contract with BUECI for the operation of these facilities.

The demands on Barrow's electric power system have increased rapidly during the past few years. In 1978 peak loads approached 1,850 KW. By 1982, peak loads had more than doubled to around 4,000 KW. Continued rapid growth in power consumption in Barrow is expected over the next few years as planned and proposed Borough structures and housing units, plus pumping and heating facilities, associated with the planned Barrow water and sewer utilidor system come on line.

The adequacy of gas supplies to meet long term heating and electric power demands of both Barrow and NARL has long been a matter of concern. Current proven reserves in the South Barrow fields are located in two distinct areas about six miles apart and separated by an apparently unproductive, highly faulted area called a disturbed zone. As of
January 1, 1983, total production from the South field had amounted to 14.8 billion cubic feet, with remaining gas reserves estimated at 10.4 billion cubic feet. Total production from the East field as of January 1, 1983 had amounted to 0.7 billion cubic feet, with remaining gas reserves estimated at 11.6 billion cubic feet. Deliverability tests in these fields indicate a decline in production capabilities.

Projections of gas requirements to meet heating and electric power demands of the Barrow and NARL systems through the year 2002 were developed by Coffman Engineers, Inc. for the North Slope Borough in November 1983. Based on the findings of additional deliverability tests, Coffman estimates that 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. These dates could be pushed out another couple of years with the addition of heat recovery equipment. Nevertheless, it is apparent that the remaining life of the Barrow gas fields is limited.

The North Slope Borough has been investigating alternative sources of energy. One option which is currently receiving further study is the possibility of obtaining natural gas from the Prudhoe Bay/Kuparuk area, constructing a power plant (probably at Kuparuk), and transmitting electric power from the plant to Barrow plus Nuiqust, Atqasuk and Wainwright. Development of the Walakpa gas discovery site near Barrow is another possibility; however, the reserves of this area have not been proven to be sufficient to meet community needs.
A further complicating factor is the desire of the U.S. Department of the Interior to cease operating the Barrow gas fields, a situation of concern to all Barrow residents since current rates for gas in the community are highly subsidized. In September 1983, the North Slope Borough and the Secretary of the U.S. Department of the Interior signed an agreement covering this issue. Subject to ratification by the U.S. Congress, the North Slope Borough agreed to take over operation of the gas fields on October 1, 1984. In return, the U.S. Department of the Interior agreed not to raise gas prices in the interim, to transfer the actual Barrow gas fields and the Walakpa gas discovery site to North Slope Borough ownership, to transfer ownership of subsurface gravel resources in these areas to the Ukpeagvik Inupiat Corporation (UIC) and to pay the Borough a total of $30 million to be spent for the purpose of satisfying the energy demands of North Slope Borough residents. Other clauses in this agreement included waivers of the National Environmental Protection Act (NEPA) regulations for rights-of-way for gas pipelines or the transmission of electricity across federal lands, a clause which could be significant if a transmission line system is built from the Prudhoe Bay area.

Fuel Storage

Unlike other traditional North Slope villages, Barrow does not have to store large quantities of fuel for power generation. Instead, natural gas is piped directly to the power plant and to space heating customers. The primary uses of stored fuel in Barrow have been for construction...
projects and emergency power generation. Fuel is also stored for use by vehicles and airplanes.

Except for some aviation fuel, all fuel transported to Barrow is shipped by barge during the late summer. Fuel is dispensed to the tank farms via permanent fill lines from the beach. The major fuel distributor in the community is Eskimos Inc., a subsidiary of the Arctic Slope Regional Corporation. It sells fuel to individuals for use in vehicles, as well as bulk fuel to major consumers. Deliveries are made by truck.

There are several major tank farm facilities in Barrow. On State airport property, Wien Air Alaska, Cape Smythe Air Service and the Alaska Department of Transportation and Public Facilities each have associated fuel storage tanks for aviation gas, with only Wien storing any jet fuel.

Eskimos Inc. has two fuel storage tank farms in Barrow, one located in Browerville and other in Block “B”, south of the airport runway. The Browerville tank farm is now used primarily to store gasoline. The tanks here are bermed and lined and in generally good condition. In March 1983, this tank farm included one 330,673 gallon tank of diesel fuel, one 330,673 gallon tank of regular gasoline, and one 145,000 gallon tank of unleaded gasoline. Three additional 25,000 gallon tanks normally used for unleaded gasoline were not filled and were possibly moved later in the year.
The Eskimos Inc. Block "B" tank farm is located near the Arctic Slope-Alaska General (ASAG) camp on the south side of the airport runway. In March 1983, this facility contained 14 tanks for storing diesel fuel, aviation gas and gasoline. The tanks are fully contained with berms and liners and are in good physical condition, but the site is not fenced. As of March, this tank farm housed two 350,000 gallon tanks of regular gasoline, two 350,000 gallon tanks of diesel fuel, two 308,377 gallon tanks of diesel fuel, three 49,000 gallon tanks of unleaded gasoline, two 49,000 gallon tanks of diesel fuel and three 49,000 gallon tanks of aviation gas.

The North Slope Borough tank farm also located in Block “B”, contains four recently constructed tanks for the storage of diesel fuel, each with a 250,000 gallon capacity. These tanks are fully bermed and lined and are in good condition, but this site is also not fenced.

Barrow Utilities maintains two 2,000 gallon storage tanks for diesel fuel. These tanks have occasionally been used in the past when work in the gas fields has necessitated switching the power plant over to the use of diesel fuel. Major fuel storage capabilities are maintained at the former NARL base and some fuel storage tanks are also located at the POW-Main DEW Line station.

COMMUNICATIONS

Local telephone service in Barrow is provided by the General Telephone Company of Alaska, with Alascom being responsible for long distance...
telephone service (via satellite). Both NARL and the DEW Line station near NARL are served by General Telephone but are also served by the military communications network. General Telephone acquired the Barrow franchise for telephone service in 1966. There were less than 300 telephones in the community in the early 1970's but there has been a rapid expansion in the number of telephones in recent years, an expansion accompanying that of both the North slope Borough and the Arctic Slope Regional Corporation.

General Telephone constructed a new central office in 1978, using digital equipment which eliminated the need for regular telephone operators. The plant is capable of handling over 3,000 telephone numbers if expanded. New underground cables were laid in Barrow and into Browerville. There has been some disruption of the underground cable system with construction of the Barrow utilidor system necessitating the temporary construction of some overhead lines. Long distance telephone traffic into and out of Barrow is heavy. A total of 24 outgoing and 18 incoming local trunk lines are dedicated to long distance service. Presently there are more than 2,000 telephones in Barrow with about 1,100 lines in use.

The basic charge for residential telephone service in Barrow is $16.00 per month while that for commercial service is $23.00 per month. However, there is considerable uncertainty over future local rates for all rural telephone systems in Alaska because of the changes now being considered nationally in the proportion of interstate telephone fees which will be allocated the subsidy of local telephone systems.
particularly remote rural systems. The final impact of these changes upon the rates which must be charged by Alaska bush systems to consumers for local service will depend on federal legislation and upon regulations of the Federal Communications Commission.

Local telephone services for other North Slope villages are provided by the Arctic Slope Telephone Associated Co-op, Inc. (ASTAC). This non-profit cooperative corporation was organized under State statutes with the encouragement of the Arctic Slope Regional Corporation. ASTAC's basic funding has come from the U.S. Rural Electrification Administration. In most of the small villages, its switching equipment is housed in facilities which are leased from the North Slope Borough. As part of its plan to provide improved telephone service throughout the North Slope region, ASTAC has proposed acquisition of the Barrow local telephone franchise.

Barrow is serviced by a private TV cable company which offers a number of channels. Barrow TV owners can also receive a State-funded education channel and a State-subsidized bush channel.

The North Slope Borough has instituted several innovative communications systems and has plans to implement other systems which will provide a broadly effective and less expensive alternative to travel of personnel and to other existing message transmission systems. The Borough has already established a manned "bridge" unit in Anchorage capable of handling teleconferencing links both within the Borough and from within the Borough to stations outside the Borough. In addition, the health
Clinics in the smaller villages of the North Slope are being linked with the Borough's Health and Social Services Agency administrative offices in Barrow, the Barrow Public Health Service hospital and the Alaska Native Medical Center in Anchorage by a slow-scan TV system which will facilitate conferences on health care matters among these stations. The slow-scan system operates via telephone circuits.
FORECAST METHODOLOGY

This study has attempted to identify and analyze in an integrated manner the major components of socioeconomic systems which structure economic processes in the Chukchi Sea region. The descriptive analysis has been provided in a manner which, hopefully, facilitates the development of a methodology for anticipating impacts and changes likely to occur as a result of the proposed Barrow Arch outer continental shelf lease sale, particularly the effects of increased economic activity and employment opportunities in the study area. What follows are suggestions for developing the methodology itself.

When Alaska Consultants, Inc. originally submitted its proposal for this project, it noted with respect to development of a forecast methodology that emphasis would be placed on North Slope Borough revenues which could be expected to accrue "with" and "without" OCS development in the Chukchi Sea area. These "gains" would then be viewed in terms of direct community impacts and in terms of subsistence lifestyles and traditional Inupiat values. Subsequent study and the fieldwork have sustained the validity of this emphasis upon changes in Borough revenues as an important and appropriate means for measuring the impact of oil industry activities on the North Slope generally and in the Chukchi Sea area in particular. North Slope Borough revenues have been the primary factor in providing traditional villages of the North Slope with their new facilities, public services and improved local economies. Industrial development has been concentrated in established enclaves remote from the region's villages. The scenario currently envisaged by the Minerals
Management Service for petroleum development in the Chukchi Sea area calls for similar industrial enclaves, although located physically closer to Wainwright and Barrow than the Prudhoe Bay area development is to Kaktovik or Nuiqsut.

Direct participation of North Slope Inupiat residents in oil and gas-related activities has thus far been minimal. In the opinion of the Institute for Social and Economic Research (September 1983), “OCS development in general ... is likely to have relatively little effect upon Inupiat employment in the oil industry”. Given the form of oil industry development anticipated for the Chukchi Sea area and noting the low probability of any major change in the degree of Inupiat employment in the industry, it is believed that the flow of revenues into the Borough coffers remains the most significant factor to be assessed and forecasted insofar as economic impacts of oil industry upon Inupiat life are concerned.

Projections of Borough property tax revenues do not hinge so much on forecasts of total assessed property values for the petroleum industry within the North Slope Borough’s tax jurisdiction as they do on anticipating the impact of State-imposed restrictions which either directly or indirectly limit the total tax revenues which the Borough may collect. Such State-imposed restrictions now limit the total property taxes which can be collected per capita for Borough operating purposes and efforts are being made to limit the Borough’s revenues for capital improvements purposes.
In addition to State-imposed limitations on the Borough's capability to manage its tax revenues, consideration also needs to be given to the Borough's ability to sell its bonds on the open market. The Borough's total outstanding bonded indebtedness and the rate at which it sells its bonds have a direct relationship to the bond rating bureaus' appraisal of the Borough's credit condition. (In making their credit appraisals, the rating bureaus are most certainly aware of the impact of State-imposed restrictions on the Borough's revenue raising capabilities and are sensitive to any efforts to impose more restrictive laws and regulations).

Assessment of socioeconomic change at the village level is severely handicapped by the absence of any system other than the U.S. Census for the regular measurement of phenomena. The State's system for measuring the labor force and employment does not provide detailed data at the village level, nor does it provide employment data by industry classification which shows the distribution of the workforce within the region. Further, the State system does not disclose any information as to resident participation, particularly that for Inupiats. This situation necessitates the establishment of some consistent system for regular surveys of those conditions in each village which has been identified as being particularly sensitive to the impact of petroleum industry activities.

From an economic viewpoint, it is believed that the measurement of village employment is vitally important. Measurements in terms of
average annual full-time job equivalents provide the best insight into the average Inupiat family's annual cash receipts.

When employment surveys are being made, changes in the villages' physical plant, in levels of public service and in costs of household operation can also be noted. The North Slope Borough has been taking regular annual censuses of village populations (except for Barrow). If continued, these will provide annual checks on total population. Furthermore, these Borough censuses could be made more comprehensive in certain years to provide information as to changes in the composition of village populations.

Changes in income, population, physical plant and services can be measured in discrete units -- dollars, people, buildings, gallons of water, condition and length of roads -- but measurement of sociological change becomes much more subjective. What standards should be used in appraising the impact of additional personal income (whether derived from Borough spending or from participation in oil industry activities), of changing demands upon workers' time, of new facilities and homes, of larger populations, of changes in the composition of the population? Present community values (values shared by the entire Inupiat society), can serve as standards. Although community values are subject to change as the community grows, as the composition of the population changes and as economic opportunities vary, community values evolve slowly and are the cultural characteristics least susceptible to change. The 1983 field interviews confirmed that the present Inupiat value system remains oriented to the subsistence or land use of the surrounding environment.
(and to associated kinship ties, sharing networks and cooperative hunting and fishing activities). It is believed that the significance of village change can be measured in terms of the opportunities which village residents have to realize their Inupiat objectives.

The present Inupiat subsistence economy is cash reliant, a reliance which has intensified as changes in hunting technologies, particularly in modes of transportation, have occurred over the past twenty years. Conflicts in use of time between work and subsistence pursuits are presently being resolved by evening and week-end hunting, by taking advantage of generous leave time provisions (paid or otherwise) and by capitalizing on the availability of temporary construction work. The present success of this dual cash/subsistence economy is dependent on the availability of well-paying local jobs. The Inupiats are investing significant sums of money in adapting Western technology to achieve their subsistence lifestyles. It will be useful to observe how changes in personal income, in the availability of local versus remote employment opportunities, and in the utilization of technology influence the subsistence harvest effort.

Changes in subsistence land use patterns may reflect changes in village socioeconomic conditions and may also provide clues to more slowly changing Inupiat values. There are four variables pertinent to present subsistence land use patterns: maximum use areas, intensive use areas, harvest quantity and species availability. Maximum and intensive use areas relate to areas used by active hunters. The maximum use areas delineate the harvest areas for given species in the hunter’s lifetime,
while the intensive use areas represent the areas which the hunter has used during the past five years. Both of these areal boundaries are available: the maximum use area is on a time scale of generations, and intensive use areas vary from year to year. Land use evolves over time in reaction to physical changes, e.g. weather and ice conditions in reaction to biological changes (relative species abundance) and to sociological changes (settlement patterns, hunting techniques and changes in regulations).

Fieldwork conducted in the summer of 1983 documented present use areas for this report. Species availability is known in general terms. However, few data exist on present quantities of wildlife resources harvested in the study area. Periodic measurement of all of these variables would facilitate the forecasting and measurement of change.

To a large extent, species availability dictates area use patterns. As a species becomes more or less abundant, the cultural value placed on that species will vary. For example, after the establishment of a limit on the harvest of bowhead whale, the Inupiat value of whale meat and muktuk has increased. Caribou, now common in the study area, have replaced the seal (possibly on a temporary basis only) as the mainstay of the local diet. The fluctuating nature of all wildlife resources, as well as the variable nature of hunter access due to physical conditions, requires flexibility on the part of the subsistence user. Long-term fluctuations in wildlife populations are not predictable. Therefore, continued re-appraisal of hunting patterns is necessary if accurate forecasts are to be made.
In summary, the development of a methodology for forecasting socioeconomic change in the Chukchi Sea area is dependent on the establishment of reliable baseline information which should be periodically updated so that changes can be monitored, the reasons for those changes evaluated, and their probable impact on the region and its people assessed. Much of this baseline information is currently either not available or is available only to a limited degree.
ANOTATED BIBLIOGRAPHY

A. MAJOR REFERENCES


This comprehensive plan report includes discussions of existing land use, population, resources, community facilities and transportation plus a plan for future community development. Maps of Wainwright are provided depicting land tenure, traditional land use patterns, existing village land use and the recommended village land use plan.


This report provides a description of the socioeconomic structure of Barrow, Nuiqsut, Kaktovik and the North Slope region, including Prudhoe Bay. It contains comprehensive analyses of population and economic data plus local facilities and services for the North Slope region generally, the Prudhoe Bay industrial area and Barrow, Nuiqsut and Kaktovik. Also included is a broad overview of the traditional culture of the North Slope region and recent modifications to that culture.


This report contains a description of the man-made environment of the Beaufort Sea region generally and of Barrow, Kaktovik, Wainwright and Nuiqsut in particular. An outline of the population and economy, selected community facilities and services, and local government organization is provided for the region, plus an indication of inter-regional and inter-community ties. Similar information is provided in detail for the communities. For Wainwright and Nuiqsut, additional information on land use, land status, utilities and transportation facilities and services is also included.


This report evaluates the impact of Outer Continental Shelf (OCS) development on the man-made environment in Barrow, Kaktovik, Nuiqsut
and Wainwright. Projections of population and employment were made under a non-OCS and four OCS scenarios. After estimating probable future community needs in a non-OCS case and taking Borough capital improvement plans into account, the added impact which each OCS scenario could be expected to have on population and employment, community facilities' and services, plus Borough finances, was calculated.


This document presents the findings of a 100 percent survey conducted in 1980 of households in all eight North Slope Borough traditional villages. The data collected covered a profile of the respondents, housing preferences and existing housing conditions.


This report, one volume in a series of nine prepared for each village in the North Slope Borough, is based on data collected in 1982 and 1983. It was written as a tool for comprehensive planning in Atqasuk. Information is provided on the local population and economy, land use, community facilities and transportation services, as well as a description of the village's history, physical setting and climate.


This report, one volume in a series of nine prepared for each village in the North Slope Borough, is based on data collected in 1982 and 1983. It was written as a tool for comprehensive planning in Barrow. Information is provided on the local population and economy, land use, community facilities and transportation services, as well as a description of the village's history, physical setting and climate.


This report, one volume in a series of nine prepared for each village in the North Slope Borough, is based on data collected in 1982 and 1983. It was written as a tool for comprehensive planning in Point Hope. Information is provided on the local population and economy, land use, community facilities and transportation services, as well as a description of the village's history, physical setting and climate.


This report, one volume in a series of nine prepared for each village in the North Slope Borough, is based on data collected in 1982 and 1983. It was written as a tool for comprehensive planning in Point Lay. Information is provided on the local population and economy,
land use, community facilities and transportation services, as well as a description of the village's history, physical setting and climate.


This report, one volume in a series of nine prepared for each village in the North Slope Borough, is based on data collected in 1982 and 1983. It was written as a tool for comprehensive planning in Wainwright. Information is provided on the local population and economy, land use, community facilities and transportation services, as well as a description of the village's history, physical setting and climate.


This study was conducted in response to questions raised by the International Whaling Commission on the cultural importance of bowhead whaling to Alaska Eskimos. The survey included a profile of respondents, experience and qualifications of whaling captains and crew members, meats eaten and meat preferences, as well as questions regarding the potential for substitution of the bowhead whale. The survey was conducted in 1982 in the bowhead whaling villages of Savoonga, Gambell, Wales, Kivalina, Point Hope, Wainwright, Barrow, Nuiqsut and Kaktovik.


This report summarizes the results of a special State-supervised census in the Prudhoe Bay/Deadhorse/Kuparuk and Pipeline corridor area in January/February 1982. It provides information in tabular form on "normal" residence of workers in these areas by State and, within Alaska, by census division. It also provides information on the number of males and females at oil-related worksites, the number of persons by type of camp and 1980 Census-defined residency status.


Based on data collected by a number of ethnographers from 1959 through 1978, this book presents a model of traditional Point Hope land use. The data were obtained from Point Hope residents 65 to 105 years after the study period had ended. Subsistence uses and land use areas, as well as annual subsistence cycles, are discussed. Also included is a description of the history of the Point Hope people.

This study was commissioned by the North Slope Borough to evaluate the Barrow gas fields, to assess their ability to meet future energy requirements for the Barrow area and to determine economic impacts of North Slope Borough ownership of the gas fields. It also makes a survey of the Barrow gas fields and describes how they may impact Barrow's future needs for energy and the Barrow area economically.


This ethnographic study presents the findings of fieldwork conducted during the fall and winter of 1982-83 in Nuiqsut, Alaska. The text includes a discussion of the interrelationship of the cash and subsistence economy, socio-political structures, values and social well being as well as a history of Nuiqsut and a framework for assessing sociocultural/socioeconomic change.


In 1976 and 1977, Ivie and Schneider worked with residents of the Wainwright area who were knowledgeable about past and present land use and subsistence practices in that area. This report presents information on the annual subsistence cycle, land use patterns, subsistence activities, land use mapping and history of the area, as well as a description of historic sites in the Wainwright area.


This study, based on data collected in 1982, provides a framework for estimating the impact of harvest disruptions of naturally occurring subsistence resources caused by Outer Continental Shelf oil and gas development on the local economy, social structure and culture of Wainwright. Included is detailed information on subsistence resources harvested in the Wainwright area.

In 1977, the University of Alaska's Institute of Social and Economic Research conducted a survey in six villages in the North Slope Borough. This volume is one of a series of four which came out of that survey. The study examines the responses of North Slope Inupiat to increased employment opportunities through the creation of the North Slope Borough and oil and gas development. Discussions include the general effects of new job opportunities on the North Slope Borough's Inupiat population, their participation in the labor force and particular adaptations to the wage economy.


In 1977, the University of Alaska's Institute of Social and Economic Research conducted a survey in six villages in the North Slope Borough. This report, the last volume in a series of four, is centered around questions of whether energy development has reduced the economic and social roles played by subsistence activities of the North Slope Inupiat.


This article examines the effects of oil development at Prudhoe Bay on the Inupiat population of Alaska's North Slope. It includes information on social and economic impacts of energy development on Inupiat individuals and households based on a survey conducted in six villages in the North Slope Borough in 1977.


One of four volumes, this report presents the findings of a survey conducted in six villages in the North Slope Borough in 1977 by the University of Alaska's Institute of Social and Economic Research. Analysis and interpretation of the findings are presented in other volumes. This volume concentrates on profiles of the Inupiat population, employment, income, hunting, fishing and village life.


In this document, Lowenstein presents patterns of sea and sea ice subsistence hunting among the Point Hope people from the turn of the century to the present. Subsistence use maps are given for each species, as well as a discussion of the annual subsistence cycle. Particular attention is placed on bowhead whale hunting and beliefs and ceremonies surrounding the whale hunt.

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This study assesses Alaska Native self-government within the context of American politics. Considerable attention is given to the development of Native leadership, the development of a Native land claims movement in Alaska and the formation and experiences of the North Slope Borough.


This document presents background information for the North Slope Borough's coastal management program. It includes information on coastal area boundaries, coastal resource use, subsistence activities, village growth, industrial development, and biological, physical and socioeconomic conditions. It also identifies coastal management issues in the North Slope Borough and areas meriting special attention, and describes implementation procedures.


Based on fieldwork conducted in 1955, this study describes Wainwright village life and assesses acculturation resulting from contact with Western society. Topics included are a history of the area, a description of the population, and discussions of the annual subsistence cycle, government and economy.


This document reviews debt capacity and debt management for the State of Alaska. Included are discussions of the national tax-exempt municipal bond market and the bond issuance process: a profile of Alaska's outstanding debt; market performance and reception of State general obligation bonds; and analyses of the market performance and management of local government debt.


This paper presents detailed information on Alaska Natives employed on the Trans-Alaska Oil Pipeline project. Statistical information on the sex, ethnic group, regional group, village or town, age, job levels, type of employment, length of employment and reasons for job termination are provided for Natives employed on the Pipeline project.

Nelson spent the winter of 1964-65 and the summer of 1966 at Wainwright studying the local Eskimo culture, with particular emphasis on their hunting techniques and the culture surrounding hunting. Also included is a detailed account of Eskimo life in Wainwright.


This report summarizes the Wainwright Inupiat way of life, with a focus on marine subsistence, coastal uses and activities in the Wainwright region. The data were collected during periods of fieldwork from 1964 to 1981. Included are subsistence use maps and a detailed discussion of each marine resource.


This report combines baseline information work undertaken between 1976 and 1978 by Alaska Consultants, Inc., CCC/HOK, Worl Associates and Dames and Moore to provide a basis upon which to project socioeconomic impacts of petroleum development on Beaufort Sea region villages. Villages described in detail in this study are Wainwright, Barrow, Nuiqsut and Kaktovik.


This document is a set of maps on a scale of 1:1,000,000 which synthesize information gathered on subsistence land use areas in the North Slope Borough.


Since 1971, Pedersen has been working with residents in Point Hope who were knowledgeable about past and present land use and subsistence practices in the Point Hope area. Information is presented on the annual subsistence cycle, land use patterns, subsistence activities, land use mapping and history of the area, as well as a description of historic sites.

Schneider and Bennett began this research in the Point Lay area in 1977. They worked with Point Lay residents who were knowledgeable about past and present land use and subsistence practices in the Point Lay area. This report presents information on the annual subsistence cycle, land use patterns, subsistence activities, land use mapping and history of the area, as well as a description of historic sites in the Point Lay area.


Schneider, Pedersen and Libbey combined their expertise with information gathered from residents in the Barrow-Atqasuk area to determine subsistence land use and annual subsistence cycles. Included is background information on the area, its history and its people. A description of historic sites is also provided.


This report describes current and projected economic and social conditions within the North Slope Borough. Included is an analytical framework for assessing changes in socioeconomic conditions due to Outer Continental Shelf development in the Diapir Field Lease Area, Sale 87. Topics include analyses of North Slope Borough revenues and expenditures, Inupiat employment and Inupiat perceptions of potential threats to subsistence resources posed by petroleum development. A general discussion of resource use is also included.


One of the earliest ethnographic descriptions of Alaska Eskimos, this book provides a detailed description of village life in Point Hope. The fieldwork was conducted from 1955 to 1966. In this book, VanStone describes the seasonal subsistence cycle, housing, the life cycle of villagers, social structure, community life, village economy and religion of the Point Hope people as it existed in 1955.

The comprehensive plan serves as a decision making tool for the North Slope Borough and contains policy bases for land use decisions. Issues covered include subsistence and biological resources, land status, cultural and historic resources and socioeconomic development factors, transportation, government, and petroleum and mineral development.


Utilizing previously collected information, this study presents an updated analysis of sociocultural systems of Barrow and Nuiqsut. Discussion centers on their social organization, the cultural system, political institutional systems and village/regional institutions.


This report presents a description and analysis of the sociocultural dynamics of the Beaufort Sea region. The analyses are based on data collected on political structures, subsistence issues and patterns and inter-ethnic relations. A description of the history of the Inupiat from the aboriginal to the contemporary period is also provided.


This report analyzes the overall effects of offshore petroleum development on traditional values and sociocultural systems in the Beaufort Sea region to ascertain if the Inupiat can integrate modernizing influences without significant disruptions of their sociocultural system.

B. OTHER REFERENCES RELEVANT TO STUDY


Prepared in 1973-74 to give the government of Greenland a view of an Alaska Eskimo village, this report includes a description of village
political organization, the natural environment, the village and its population.


Brewer originally arrived in Barrow as a commercial whaler in the late 19th century. This book is based on a journal kept throughout his lifetime in the Arctic. Information on bowhead whaling and Eskimo life in the Barrow area is included.


On the basis of a decade of research on the Arctic Inupiat, Burch has written this article which describes Inupiat world view and belief systems.


The research for this book is based on periods of fieldwork from 1960-1971 in ten Inupiat communities. The most definitive analysis of Inupiat kinship to date, this book describes and analyzes marital relationships, other-generation relationships, same-generation relationships, strategies of affiliation and patterns of affiliation.


This paper is an analysis of inter-regional relations in aboriginal North Alaska, with special emphasis on alliance mechanisms utilized by Alaska Natives to bridge the social gaps between regional groups.


This article is based on fieldwork conducted by Chance in the summer of 1958. The purpose of the research was to assess any changes which may have occurred in Kaktovik during the twelve years since an influx of whites into the area. Such aspects as changes in subsistence hunting and fishing activities, construction of community facilities, and social wellbeing were noted.


This brief article is based on Chance's research in Kaktovik in 1958. Briefly described are the changes in government which Kaktovik Inupiats were then experiencing.

The primary interest of this study, begun in 1958, was to determine the effect of rapid acculturation on self-identification and personality adjustment. A questionnaire, the Cornell Medical Index, was the instrument chosen to measure personality adjustment.


This book is a case study, based on research conducted from 1958 through the mid-sixties, of the modern North Alaska Eskimo. The setting in which they live and a history of their past is provided. Chance describes typical village life, child rearing, the annual subsistence cycle, cultural values and cultural change.


The North Slope Borough Energy Plan grew out of the Barrow Energy Study which indicated that local gas resources would soon be depleted and a framework for finding regional solutions to local energy problems was instead sought. The Borough energy plan projects local energy demands; examines, evaluates and analyzes resource options; compares the more feasible options; and makes recommendations for a Borough energy program.


This article presents the issues surrounding bowhead whaling and discusses research on the nutritional values of Alaska Native foods.


In this book Dumond presents the aboriginal history of Alaska Eskimos and Aleuts. Included is a summary of early expeditions to the Arctic, a description of the physical environment, and a brief description of the Eskimos/Aleuts and their languages.


The text is a chapter in a document prepared for the U.S. Atomic Energy Commission for Project Chariot. Started in 1958, the purpose of Project Chariot was to investigate problems and begin development of a nuclear excavation of an experimental harbor at the mouth of Ogotoruk Creek near Cape Thompson. The text is one of the
bio-environmental studies for the Project which was eventually suspended in 1962. The human geographic studies deal with the inhabitants of the region including the Tigaraqmiut, Kivalingmiut, Naupaktomiat and Moatagmiut. A description of their history and seasonal and subsistence activities from 1959-1961 is included.


Ford conducted archeological excavations in Barrow beginning in 1932, after spending many years in the Arctic, primarily on the North-Slope. This book documents the artifacts excavated in the Barrow area. Summaries of other archeological expeditions and Eskimo pre-history are also included.


From 1948 through 1964 Giddings conducted archeological expeditions in Alaska. Major excavations included those carried out in Point Hope, Cape Krusenstern, St. Lawrence Island, Onych Portage and Ambler Island. This book is a compilation of Giddings' major findings.


The papers assembled in this volume are the outgrowth of a symposium held in 1971. These papers describe and analyze kinship and non-kinship usages which operate as alliances in Eskimo society.


Based on a survey conducted in 1977, this document explores what Barrow high school students wanted from their high school education. Areas examined were: job and lifestyle plans and students' feelings of competency in pursuing these plans; curriculum priorities; interest in non-traditional high school education; and problems in the present high school programs.


This book documents Alaskan Eskimo ceremonialism both religious and non-religious. All culture groups are included, with regional distinctions made where necessary. Ceremonies are described and analyzed on the basis of their content and function.

Lantis' earlier work with the Nunivak Eskimos in the early 1950's provided the data for this analysis of Alaska Eskimo cultural values. This article attempts to demonstrate the interrelationship of cultural behavior, cultural values and personality.


Archaeologists Larsen and Rainey, accompanied by J. Louis Giddings, made important archeological finds in the Point Hope area during 1939-42. The discovery of the Ipiutak culture dated man's presence in Arctic Alaska to pre-historic times. In addition to extensive information on the culture and artifacts found at the sites, a general account of Nunatarmiut history is presented.

MacLean, Bryan, et al. 1971. Point Hope Project Report. University of Alaska. Funded by the National Science Foundation Division of Student Originated Studies, Grant No. 2 Dec 1/Y50-4603.

Written by a group of students, this report is based on field data collected in 1971. The topics covered are varied and not necessarily integrated. These include a description of resource utilization, moose range analysis, pesticides analysis and a description of Point Hope's physical environment.


Murdoch was a naturalist and observer on the International Polar Expedition to Point Barrow in 1881-1883. Murdoch's text includes information on the people, natural resources and culture and is illustrated with numerous drawings of artifacts.


This study is based on a year's field research in 1969-1970 among the Kutchin and Koyukon Indians. The book focuses upon their knowledge and techniques associated with hunting, fishing, trapping and general survival as they relate to their adaptive skills in living in a marginal environment. Included is a chapter on problems in adaptation with a comparative discussion of Eskimo and Athabaskan cultures.


This is a comprehensive description of the various Eskimo groups in Alaska. Topics covered include discussions of the population, cultural and linguistic boundaries, the environment, physiology, settlement patterns, subsistence, clothing, technology, community patterns, child rearing, kinship and religious patterns.

In addition to providing Census data for 1890, this volume includes miscellaneous ethnographic information regarding the population, lifestyle and culture of the North Slope and other Alaska regions.


In 1939-42, archeologists Rainey and Larsen conducted major excavations in the Point Hope area and discovered the Ipiutak culture. After spending a winter in Point Hope (Tigara), Rainey wrote this article describing village life with a particular emphasis on the annual subsistence cycle.


The purpose of this 1881 expedition to Point Barrow was to establish a permanent U.S. station to gather meteorological information. In addition, Ray has provided an ethnographic sketch of the Natives of Point Barrow, including a vocabulary and a list of ethnological specimens collected.


This is a compilation of Alaska census data from 1792 to 1970.


This report summarizes the setting of the Point Hope area and the history of previous anthropological investigations and their findings. Fieldwork, undertaken in 1977, was focused on the remains of Tigara Village which had been abandoned in 1977 for the new Point Hope townsite 2 miles to the east. The relocation resulted in the abandonment of a number of historic dwellings. The main purpose of the fieldwork was to determine the village's feelings about potential cultural preservation efforts for Old Tigara and for older archeological resources in the area.


Sonnenfield spent mid-May through mid-September 1954 in Barrow investigating subsistence patterns of Barrow Eskimos. A week was also spent in Wainwright and Meade River respectively. An historical
account of subsistence activities is presented as well as present day seasonal subsistence activities.


The aim of this research was to examine patterns of contemporary social behavior among the Eskimo of northern Alaska. Fieldwork was carried out in the summer and fall months of 1952 and 1953. Included in the book are detailed descriptions of the people, environment, housing, family and kinship, law, economy, associations, values and belief systems and ceremonialism.


This paper, based on field research conducted in Barrow in the late 1950’s, stresses alliances formed among maritime populations in the Arctic, specifically the whaling cultures. Alliances related to the whaling crew are described in detail.


This is a summary report of the U.S. Department of the Interior’s efforts to document the Eskimos’ need for bowhead whaling. Discussion is centered around the following factors: importance of the bowhead in the traditional diet; possible adverse effects of shifts to non-Native foods; availability and acceptability of other food sources; historical take of the bowhead whale; the integration functions of the bowhead hunt in contemporary Eskimo society and the risk to the community identity from an imposed restriction on Native harvesting of the bowhead; and, to the extent possible, ecological considerations.


These documents provide background information on each village in the region. Included is information on village history, economy, land tenure, religion and community facilities. Also provided is information on environmental considerations for community development and an annual subsistence calendar. In addition, a land use map of each village is included.

This report discusses the issues involved in the bowhead whale problem as it affects communities in rural Alaska which depend on whaling. It describes the formation and function of the Alaska Eskimo Whaling Commission and its activities. Also provided is a summary of the status of knowledge of the bowhead whale, important data gaps and research planned to provide the information necessary to protect the whale and the future of subsistence whaling in Alaska.


Using the model of the Alaska economy and population developed in the Man in the Arctic Program, forecasts of the economic, fiscal and population impacts of four alternative petroleum development scenarios are presented in this report.


This paper is a descriptive and analytical study of three contemporary Eskimo communities: Point Hope, Napaskiak and Eskimo Point. Each of these communities occupies a very different ecological niche. The communities are described in terms of their culture and society today. A comparison is made of the similarities and differences of the acculturation process in each village.


In response to the bowhead whaling quota instituted in 1977, this study was conducted to determine the effects of the quota on the community of Point Hope. Discussion concentrates on the impact on the harvest, distribution and utilization of the bowhead and a description of the cash and subsistence economies.


An expanded version of Worl's preliminary report of Point Hope (1979a), this report analyzes the impact of the bowhead whale quota on all of the bowhead whaling villages: Gambell, Savoonga, Wales, Kivalina, Point Hope, Wainwright, Barrow, Nuiqsut and Kaktovik. The impact categories used in this report are the harvest area, the distribution system and cultural values.
This paper focuses on the present day Inupiat whaling complex and describes the economic system of the bowhead whaling villages: Gambell, Savoonga, Wales, Kivalina, Point Hope, Wainwright, Barrow, Nuiqsut and Kaktovik. Also identified are the laws which govern the appropriation and ownership of the whale and the initial distribution patterns. The paper also reviews the inter-relationships between the subsistence and cash economies.